JI 19-DEC-72 13:29 13428

The MITRE Corporation
Westgate Research Park
1820 Dolly Madison Blvd.
McLean, Virginia 22102

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MEMORANDUM
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To: Principal Investigators

From: Jean Iseli

SNDMSG (ISELI@USC-ISI)

Subject: Information Survey

Date: 20 December 1972

On behalf of potential ARPANET users, MITRE requests your cooperation
in supplying the following information relative to your host:

(1) What data bases do you have (or plan to have) resident and available to network users? examples of such data bases include:

- o biological abstracts
- o chemical abstracts
- o ERIC files

(2) What access mechanism(s) are available (IS&R systems, Data Management Systems, etc.)?

(3) Availability and cost attributes (if applicable) for the above.

(4) Documentation availability and samples if possible.

(5) Local experts who we may contact.

(6) may we make your submitted information available to the NIC?

I would appreciate your prompt consideration and reply.

Jean Iseli..... 1

(J13428) 19-DEC-72 13:29; Author(s): Iseli, John/JI; Distribution: North, Jeanne B., Newell, Allen, McCarthy, John, Dines, Thomas R., Roberts, Lawrence G., Bobrow, Daniel G., Heart, Frank E., Glaser, Edward L., Marill, Thomas M., Cheatham, T. E., Stone, Duane L., Forgie, James W., Vorhaus, Alfred H., Pyke, Thomas N., Uncapher, Keith W., Weissman, Clark, Feigenbaum, Edward A., Kleinrock, Leonard, Harris, David O., Pratt, William K., Evans, David C., Engelbart, Douglas C., Raphael, Bertram, Slotnik, Daniel L./PI; Sub-Collections: NIC PI; Clerk: JI;

MAP 19-DEC-72 10:09 13429

A Somewhat Fouled Up Message

Hi there. I've never been used as a cadaver before; it feels fairly random. Do you sit on Dave's lap while getting your NLS lessons? (If there were a lot of weird characters between the last word or two, ignore them. I was just experimenting with what happened if I kept on typing to the end of the line. It didn't work right.) Will report on hockey game later. (Later may be tomorrow, or it may be whenever I get over the cold I woke up with this morning.)

Cheers, 1

MAP 19-DEC-72 10:09 13429

A Somewhat Fouled Up Message

(J13429) 19-DEC-72 10:09; Title: Author(s): Padlipsky, Michael A./MAP; Distribution: Lang, Bryna M./BML; Sub-Collections: NIC; Clerk: MAP;

NJN 19-DEC-72 11:27 13430

UCSB vs. Imlac

Hi, John. I haven't been able to deal with UCSB graphics for a while, due to trips, other work and the relevant Imlac representative being out of town. 1

I also was waiting for you to go on vacation. 1a

This is the current situation. I still can't get the remote clear screen to work on either of our Imlacs. 2

I told the Imlac people what I wanted to do, and they sent me two tapes and a patch to do a remote erase. They claimed that the code for remote erase is ctrl-N / (slash), and in fact this worked when I sent those characters from MIT-DMCG. 2a

But your programs still did not clear the screen. So I ran them through BBN-Tenex without the transparent mode toggle on to see exactly what you were sending. The appropriate pieces of code were all variations on ↑N.NADA↑N) . I tried sending these codes from MIT again, but this time it was not obvious what they did. Some positioning was going on but no screen clearing. 2b

What do you suggest that I do at this point? If you tell me what is supposed to happen, i.e. what you are sending to do the remote erase, then I could maybe play with the Imlac code here. There must be an easy way. 3

Any other goodies would also be appreciated. I hope I won't be ruining your Christmas vacation. Have a merry and a happy.
Nancy 4

NJN 19-DEC-72 11:27 13430

UCSB vs. Imlac

(J13430) 19-DEC-72 11:27; Title: Author(s): Neigus, Nancy J./NJN; Distribution: Pickens, John R./JRP; Sub-Collections: NIC; Clerk: NJN;

NJN 19-DEC-72 12:40 13431

Re TIPUG Note 3

Susan-- Something happened to my TIPUG Note file between the last time I looked at it at SRI and today. The tab settings keep messing up. I think it is correct now; I hope you haven't released the note already. When you have it printed out from the file <BBN-NET>TIPUGNOTE.NLS;11 check to see if the column s are straight. If not leave me a note and I will fix it again. It is ready for odp. Thanks, Nancy 1

NJN 19-DEC-72 12:40 13431

Re TIPUG Note 3

(J13431) 19-DEC-72 12:40; Title: Author(s): Neigus, Nancy J./NJN; Distribution: Lee, Susan R./SRL; Sub-Collections: NIC; Clerk: NJN;

NJN 19-DEC-72 12:49 13432

last? phone book memo

jon-- The final version of the Socket number list, as far as my corections go, is sitting in (BBN-NET, phonebook, 1: w). CMU sockets 5 and 7 were once for something special with Harvard, but no longer do anything; LL-67 and LL-TX-2 have only socket 1 for Telnet, and probably not anything else for a long while. They are rather isolationistic. Let me know if you need anything further. --Nancy 1

NJN 19-DEC-72 12:49 13432

last? phone book memo

(J13432) 19-DEC-72 12:49; Title: Author(s): Neigus, Nancy J./NJN;
Distribution: Postel, Jonathan B./JBP; Sub-Collections: NIC; Clerk: NJN;

RWW 20-DEC-72 11:26 13433

Some Thoughts on Our Capacity Problem and the Group Allocation Scheme

Some thoughts on our capacity problem 1

A number of issues have been raised as a result of the discussions on the group allocation scheme. The purpose of this document is to deal with some of these. 1a

The group allocation scheme (possibly modified) is an attempt to ration in some fair and understandable way a resource which during peak periods is scarce. My own feeling is that for the kind of work we do and the kind of experiment we are trying to be, we need more peak capacity (if this were an ideal world). 1b

There are a number of ways to get more capacity, some more feasible than others. 1c

Improve the efficiency of Tenex and NLS 1c1

There has been a steady improvement in the horsepower of Tenex and there are probably still improvements that can be made there. We have just begun to study NLS and my guess is that without impairing our needed flexibility etc. we will find areas which can be improved either now or during the conversion to MPS, but need more study to understand whats really going on. We should continue our efforts here and build into the MPS version measurement capabilities and training so that future evolution uses these tools on a normal day to day basis. 1c1a

At the seminar the use of more background capabilities was suggested for use with the output processor and other heavy compute jobs. We should examine this area seriously. 1c1b

Access to other Tenex's on the net 1c2

As an interim solution running NLS on other TEnex's which we can access free will help in some areas, compiling, catalog making, some documet production. But, this is probably just an interim solution as Larry Roberts is planning to set up a Network wide banking system, and make the use of all systems including ours a paying proposition (possibly subsidized in places). We are actively working on this problem and KEV estimates mid Jan before we'll be running on the ISI machine. 1c2a

Upgrade our configuration 1c3

Some Thoughts on Our Capacity Problem and the Group Allocation Scheme

There may be some additions or changes to our configuration which might help us. DIA has been looking at the printer and thinks some special hardware might buy us something in this area. Its my understanding that more memory isn't going to buy us much (Don Paul is this true). What other possibilities exist in this area I don't know. 1c3a

Replace KA10 with KI10 1c4

Smokey says this might buy us a factor of 1.5 or so which is not insignificant, but there is not much experience with KI10 and some indications (DIALDATA) that KI10 has some problems yet. Tymshare is going to get a KI10 and test it in Feb. It is my understanding that DEC is working on a new version called KL10 which is even faster. In any event a switch to a new system would cause some months of problems if immediately available and with plans for MPSS conversion we might think it better to wait. We'll probably go to a KI10 or KL10 at some point but it wouldn't be until late 73 at the earliest. 1c4a

Another PDP10 here 1c5

This seems unlikely in the next year or so for a number of reasons. 1c5a

The amount of money ARPA is now giving us for computing relative to our staff budget is already much higher than the normal ARPA or government contractor. This is justified on the basis of our providing NIC service. 1c5a1

New additional sources of funding will invest in the utility and support it needs (user interface, training, software mods needed by a service facility quality assurance administration etc.) 1c5a2

Use of Mini's as front ends 1c6

There is probably quite a bit we can do using mini's to support graphic consoles, command parsing, feedback, even doing simple editing, journal work, output processor work, printer support etc. We need to begin studies in this area to support ranges of DNLS terminals for utility users if for no other reason. The work

Xerox is planning to do on NLS in a Nova could be significant here. 1c6a

The Utility 1c7

When the Utility comes on the air (mid 73 at earliest) there will be some unused capacity there in the early stages which our local users can probably get and it should be used to support any new staff added to make that whole effort fly. 1c7a

All of the above schemes should be or are under study or active pusuit, but none of them except NLS on the ISI machine is likely to have any immediate impact on our present crunch. Most offer either temporary solutions or aren't feasible until mid to late 73 at the earliest. Therefore we need some solutions in the meantime. A number have been suggested. 1c8

Administratively assign people to work off the 8-5 time. 1c8a

I've thought alot about this and consider it a last ditch kind of thing which should only be done when we have exhausted other solutions. My own obsevation is that we are not even effectively using the whole 8-5 time. 1c8a1

Voluntarily move ourselves off the 8-5 time. 1c8b

This seems a reasonable thing to do and all of us should consider how we might do this. After the holidays and some negotiation with my family I plan to start trying this 2-3 days a week to start. 1c8b1

Examine the types of work we are doing on the system 1c8c

We are prototype users of an augmentation facility which includes a range of offline to online services. My guess is that we do not make as effective use of this range of facilities as we could and in fact probably haven't set up or trained ourselves in how to use these facilities as well as we can. 1c8c1

There is considerable resistance to thinking about this issue seriously for a number of reasons. 1c8c2

Some argue that our job is to be an online

community and use of offline capabilities is a step backwards. Another arguement is that whats important is people creativity and we should have the capacity to support our needs. These are both true to a point, but I think are highly subjective. Until we develop an analysis capability to help show the tradeoffs here, we cannot deal with the problem effectively on a more objective basis. 1c8c2a

In the future that I can see we are always going to have less than we could use one way or another. There is probably a Parkinsonian law at work here and just as bureaucrats always claim that their projects are augmented more by increasing the size of their resources we could get caught here. 1c8c2b

There is no escaping the very difficult and controversial job of trying to determine the best way to use what we have got. The problem is to try and determine what we can use effectively in some tradeoff with what we would like. 1c8c2c

There is a lot of talk about creativity and online use which which at some level I subscribe to heartily, but yet is pretty vague. For all we know, the activity and addiction to sitting in front of a console may in many cases impair creativity by lessening more quiet reflection. The problems or advantages to being online probably vary from individual to individual. Are we as a group less equal or more productive and creative than similar sized groups in our type of work? What is a reasonable improvement in productivity and creativity, how are these to be measured? Do we even need to worry about these questions (I think we do)? 1c8c2d

For example if the productivity of the group dropped 10% by more offline usage we might be benifitted by having more people working here overall, but if more people put such a crimp on resources that the project thrashed trying to get access to the system then we lose. Until we can measure more carefully the tradeoffs here, if ever, then we have to make intuitive judgements on the tradeoffs. My own present position is that we

are not using the people or computers that we presently have fully effectively to themselves or the project yet and have alot to learn about our present use . 1c8c2e

My own view briefly stated is that interactive problem solving by speeding up the thought processes and allowing more trials etc takes one out of "intellectual" mode and frees up the "intuition", but I honestly don't understand the processes involved or the tradeoffs. How many good ideas do people have offline around here versus online or are most innovative ideas had offline and then the details and implementation done online, or do people design offline best and only dialog and implement online; in other words how do we really work around here? 1c8c2f

Install a system such as proposed by Paul 1c8d

In parallel with trying to increase our capacity as described above, and learning to use our capacity better, we need some sort of rationing scheme to handle peak problems in a fair and understandable way. I think the Group Allocation Scheme modified to take into account CPU usage as well as number of connected terminals offers such a scheme. 1c8d1

It has a number of problems yet to be solved, but I think they are solvable with a reasonable expenditure of effort. 1c8d2

Who should be in what groups? 1c8d2a

How much capacity should each group get? 1c8d2b

How do you get on if your group has capacity but all the terminal are in use? 1c8d2c

How do we implement such a scheme with adequate user features so the user knows or can find out where he stands at any time. 1c8d2d

How do we implement such a scheme so that it is no a drain on the system. 1c8d2e

There is another motivation for trying such a scheme

and that is that future users of augmentation systems will have similar limitations in capacity to those we face and we need to have some experience in handling the problem. One comment I have heard says that we should be way out in front with lots of capacity so we'll know how to use such systems. This is true but how many years our front should we be and yet be able to understand the jproblems people just getting started will have. We are about 1-2 years out in front of prototype users, and probably 3-5 years for more normal use of what we have now. Is that a proper lead or should we be further out. How do we trade distance at any point in time for resources needed to get other people involved and thus invest in an attempt to increase significantly the interest and energy available to evolve our type of system. We haven't really gotten off the ground here although we are very close and the investment we are making in the NIC utility should pay off well in 2-3 years in all dimensions of our work. Thats my understanding of DCE's present stategy and jseems correct to me. 1c8d3

Install or use a Scheme diffeent from any we have thought of todate 1c8e

Has anyone any ideas which we haven't thought of yet? 1c8e1

RWW 20-DEC-72 11:26 13433

Some Thoughts on Our Capacity Problem and the Group Allocation Scheme

(J13433) 20-DEC-72 11:26; Title: Author(s): Watson, Richard W./RWW; Distribution: Agent, Station, Hoffman, Carol B., Lee, Susan R., Michael, Elizabeth K., Dornbush, Charles F., ARC, Guest O., Feinler, Elizabeth J. (Jake), Handbook, Augmentation Research, Kelley, Kirk E., Meyer, N. Dean, Byrd, Kay F., Prather, Ralph, White, James E. (Jim), Vallee, Jacques F., Kaye, Diane S., Rech, Paul, Kudlick, Michael D., Ferguson, Ferg R., Lane, Linda L., Auerbach, Marilyn F., Bass, Walt, Engelbart, Douglas C., Hardeman, Beauregard A., Hardy, Martin E., Hopper, J. D., Irby, Charles H., Jernigan, Mil E., Lehtman, Harvey G., North, Jeanne B., Norton, James C., Page, Cindy, Paxton, William H., Peters, Jeffrey C., Ratliff, Jake, Row, Barbara E., Van De Riet, Edwin K. (Ed), Van Nouhuys, Dirk H., Victor, Kenneth E. (Ken), Wallace, Donald C. (Smokey), Watson, Richard W., Andrews, Don I./sri-arc ; Sub-Collections: SRI-ARC SRI-ARC; Clerk: RWW;

BAH 20-DEC-72 15:11 13434

Dec 4-8 A Week In Review

Acting on a suggestion by Paul, I decided to make public portions of the weekly analysis I thought relevant to ARC. On a set day of each week (yet to be determined) I will publish in the journal a review of system use the previous week according to ARC user, amount of cpu time and console time consumed, the ratio of cpu to console time, and the percentage of total cpu time used for working days, 8-5 only. Let me emphasize that the purpose of this is solely to give a picture of ARC activity and not to expose the working habits of anyone for any other than useful reason. If this meets anybody's disapproval let me know. Below I have begun with the week of Dec 4-8, the week reviewed in Friday's seminar. 1

2

WEEK: December 4-8, 1972 3

3a

IDENT SYS	CPU HRS	CON HRS	RATIO CPU/CON	%	
					3b
(DIA)	.584	24.868	.023	1.7	3c
(MFA)	.341	8.378	.041	1.0	3d
(WLB)	1.105	17.312	.064	3.3	3e
(KFB)	.181	7.605	.024	.5	3f
(CFD)	.681	18.043	.038	2.0	3g
(DCE)	.789	23.476	.034	2.4	3h
(JAKE)	.741	15.248	.049	2.2	3i
(WRF)	.581	7.674	.076	1.7	3j
(BAH)	.821	21.025	.039	2.5	3k
(MEH)	.589	20.804	.028	1.8	3l
(JDH)	.726	11.463	.063	2.2	3m
(CHI)	.479	13.422	.036	1.4	3n
(MEJ)	.739	43.175	.017	2.2	3o

(DSK)	2.102	27.484	.076	6.3	3p
(KIRK)	.646	21.814	.030	1.9	3q
(MDK)	.534	8.865	.060	1.6	3r
(LLL)	.439	21.914	.020	1.3	3s
(SRL)	0.000	00.000	.000	0.0	3t
(HGL)	1.394	20.991	.066	4.2	3u
(NDM)	.521	12.980	.040	1.6	3v
(EKM)	.391	19.259	.020	1.2	3w
(JBN)	.329	11.890	.028	1.0	3x
(JCN)	1.248	21.673	.058	3.7	3y
(WHP)	0.000	00.000	.000	0.0	3z
(JCP)	1.867	31.298	.060	5.6	3a@
(JR)	0.000	00.000	.000	0.0	3aa
(PR)	.504	16.196	.031	1.5	3ab
(BER)	.299	13.268	.023	.9	3ac
(JFV)	.501	11.688	.043	1.5	3ad
(EKV)	0.000	00.000	.000	0.0	3ae
(DVN)	.829	17.162	.048	2.5	3af
(KEV)	.642	11.685	.055	1.9	3ag
(DCW)	1.175	28.136	.042	3.5	3ah
(RWW)	.248	8.287	.030	.7	3ai
(JEW)	1.186	19.590	.061	3.5	3aj

4
Highest CPU User: DSK 2.102 hrs Lowest CPU User: KFB .181 hrs 5

Highest Ratio User: DSK WRF .076 Lowest Ratio User: MEJ .017 6

Average Ratio Of Group: .043 Total % Sys By Group: 69.3% 7

BAH 20-DEC-72 15:11 13434

Dec 4-8 A Week In Review

(J13434) 20-DEC-72 15:11; Title: Author(s): Hardeman, Beauregard A./BAH ; Distribution: Agent, Station, Hoffman, Carol B., Lee, Susan R., Michael, Elizabeth K., Dornbush, Charles F., ARC, Guest O., Feinler, Elizabeth J. (Jake), Handbook, Augmentation Research, Kelley, Kirk E., Meyer, N. Dean, Byrd, Kay F., Prather, Ralph, White, James E. (Jim), Vallee, Jacques F., Kaye, Diane S., Rech, Paul, Kudlick, Michael D., Ferguson, Ferg R., Lane, Linda L., Auerbach, Marilyn F., Bass, Walt, Engelbart, Douglas C., Hardeman, Beauregard A., Hardy, Martin E., Hopper, J. D., Irby, Charles H., Jernigan, Mil E., Lehtman, Harvey G., North, Jeanne B., Norton, James C., Page, Cindy, Paxton, William H., Peters, Jeffrey C., Ratliff, Jake, Row, Barbara E., Van De Riet, Edwin K. (Ed), Van Nouhuys, Dirk H., Victor, Kenneth E. (Ken), Wallace, Donald C. (Smokey), Watson, Richard W., Andrews, Don I., Norton, James C., Rech, Paul/SRI-ARC JCN (I intended this to have a special interest for you) PR (I intended this to have a special interest for you) ; Sub-Collections: SRI-ARC; Clerk: BAH ;

colaberation?

Nancy,

It looks like we all are going to be using the netwok a bunch more and that I am going to have to do a number of things similar to what you are doing for your job. The most useful -- and painful -- project is the compilation of a "Network crib sheet notebook".

This would contain command summary lists, sockets, other wierd conventions, escape characters and other useful information all within one volume.

You interested?

1

DHC 20-DEC-72 14:37 13435

colaberation?

(J13435) 20-DEC-72 14:37; Title: Author(s): Crocker, David H./DHC; Distribution: Neigus, Nancy J./NJN; Sub-Collections: NIC; Clerk: BML;

DHC 20-DEC-72 13:20 13437

Hello, Bryna.

Your mission, should you decide to accept it (nowever hesitantly) is to learn NLS. After a while, you will probably feel that it would have been simpler and safer to have joined the Impossible Mission forse.

Cheers. 1

(J13437) 20-DEC-72 13:20; Title: Author(s): Crocker, David H./DHC;
Distribution: Lang, Bryna M./BML; Sub-Collections: NIC; Clerk: DHC;

JBN 20-DEC-72 15:18 13438

Online Files Maintained by NIC

One of NIC's principal services is the maintenance of online files of Network information. This memo records some topics related to such service. 1

Policies related to this service are: 2

- What information should be kept online? 2a
- How should this information be formatted? 2b
- How should the information be kept uptodate? 2c
- How should the Network be aided in use of this information? 2d

Internal policies related to the service are: 3

- How much online file space should be allotted to these files? 3a
- How should decisions be arrived at regarding files to be kept online and how should they be implemented? 3b

Limited space for online files makes it advisable to examine the present and potential usefulness of candidate NIC files to decide: 4

- Files presently online 4a
  1. Is a file presently online being accessed, and if so with what frequency? 4a1
  2. Is the file uptodate? 4a2
  3. Would updating the file increase its probability of use? 4a3
  4. Would reformatting the file make it more likely to be used? 4a4
  5. Would publicizing the file make it more likely to be used? 4a5
  6. Is the file one from which information will be needed quickly, as contrasted to one which is used for retrieval programs which can be scheduled? 4a6
- Files not presently online 4b
  7. Is a file not presently online a more likely candidate for use than one or more now online? 4b1
  8. What information could more profitably be put into online files created for Network access? 4b2
  9. How should files to be transferred or created be formatted? 4b3

NIC presently keeps the following files online for Network use: 5

- all files of Resource Notebook 5a
- Catalog indexes 5b

Some new files which are needed for Network access are: 6

- Lists of Group Documents 6a
  - Document series from Groups 6a1
    - SUR Group Notes 6a1a
    - CBI Notes 6a1b

Online Files Maintained by NIC

RFC's 6a1c
ASS Notes 6a1d
NM Notes 6a1e
Any other Group issuing series 6a1f
Format and content 6a2
Each series list should be arranged in reverse number order (latest document first). 6a2a
Online format should not wrap around. 6a2b
A suggested format: 6a2b1

```
RFC     DATE      AUTHOR          TITLE                                    7
xxxxx   33-JUL-72 Lastname        Title title title title title
        title
```

8
Lists of Group Membership 8a
Lists needed 8a1
Each Group on the Network should have an online membership list. 8a1a
Format and content 8a2
Lists should be arranged in order by organization Ident. 8a2a
View should be set to show first line (name and individual ident and organization Ident), with instructions for full view. 8a2b
A suggested format: 8a2b1

```
Firstname Lastname              indIdent    orgIdent
Organization
Street address
City, State Zip
```

8a2b2
Indexes to NIC Journal items 8b
Indexes needed 8b1
Number Index 8b1a
Author Index 8b1b
Format and content 8b2
Number Index should show latest number first. 8b2a
Proposed format for Number Index: 8b2b

```
NIC     DATE      AUTHOR          TITLE                                    8c
xxxxx   nn-LLL-nn Lastname        Title title title title title
title                                                                      8d
```

8d1
Author Index might be subject to weeding after some period. 8d1a
Proposed format for Author Index: 8d1b

```
AUTHOR          NIC     DATE      TITLE                                    8e
Lastname        xxxxx   nn-LLL-nn Title title title title title
title                                                                      8f
```

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Online Files Maintained by NIC

(J13438) 20-DEC-72 15:18; Title: Author(s): North, Jeanne B./JBN; Distribution: Agent, Station, Hoffman, Carol B., Lee, Susan R., Michael, Elizabeth K., Dornbush, Charles F., ARC, Guest O., Feinler, Elizabeth J. (Jake), Handbook, Augmentation Research, Kelley, Kirk E., Meyer, N. Dean, Byrd, Kay F., Prather, Ralph, White, James E. (Jim), Vallee, Jacques F., Kaye, Diane S., Rech, Paul, Kudlick, Michael D., Ferguson, Ferg R., Lane, Linda L., Auerbach, Marilyn F., Bass, Walt, Engelbart, Douglas C., Hardeman, Beauregard A., Hardy, Martin E., Hopper, J. D., Irby, Charles H., Jernigan, Mil E., Lehtman, Harvey G., North, Jeanne B., Norton, James C., Page, Cindy, Paxton, William H., Peters, Jeffrey C., Ratliff, Jake, Row, Barbara E., Van De Riet, Edwin K. (Ed), Van Nouhuys, Dirk H., Victor, Kenneth E. (Ken), Wallace, Donald C. (Smokey), Watson, Richard W., Andrews, Don I., North, Jeanne B./sri-arc nicsta ;
Sub-Collections: SRI-ARC NICSTA; Clerk: JBN;
Origin: <NORTH>NICONLINE.NLS;3, 20-DEC-72 15:15 JBN ;

JBN 20-DEC-72 16:30 13439

Notice of Meeting on Responsibility for NIC etc. Files

On Wednesday, Dec 27, time subject to MDK's schedule, there is to be a short meeting regarding procedures for trimming and saving varius user files (NIC, NIC-WORK, CATALOG, CATALOG-WORK, DOCUMENTATION, STATION-AGENT and any other files accessed thru LOCATOR). Anyone with interest is invited to look on the Board for time of the meeting. 1

JBN 20-DEC-72 16:30 13439
Notice of Meeting on Responsibility for NIC etc. Files

(J13439) 20-DEC-72 16:30; Title: Author(s): North, Jeanne B./JBN; Distribution: Agent, Station, Hoffman, Carol B., Lee, Susan R., Michael, Elizabeth K., Dornbush, Charles F., ARC, Guest O., Feinler, Elizabeth J. (Jake), Handbook, Augmentation Research, Kelley, Kirk E., Meyer, N. Dean, Byrd, Kay F., Prather, Ralph, White, James E. (Jim), Vallee, Jacques F., Kaye, Diane S., Rech, Paul, Kudlick, Michael D., Ferguson, Ferg R., Lane, Linda L., Auerbach, Marilyn F., Bass, Walt, Engelbart, Douglas C., Hardeman, Beauregard A., Hardy, Martin E., Hopper, J. D., Irby, Charles H., Jernigan, Mil E., Lehtman, Harvey G., North, Jeanne B., Norton, James C., Page, Cindy, Paxton, William H., Peters, Jeffrey C., Ratliff, Jake, Row, Barbara E., Van De Riet, Edwin K. (Ed), Van Nouhuys, Dirk H., Victor, Kenneth E. (Ken), Wallace, Donald C. (Smokey), Watson, Richard W., Andrews, Don I./SRI-ARC; Sub-Collections: SRI-ARC; Clerk: JBN;

LMM 20-DEC-72 19:42 13440

Two Questions

Nancy:

Thanks for your reply to my gripe. I've still been having trouble with the AMES-TIP lately; (i just tried a few min ago & got no response.

In any case, that is not the subject of this note. I saw the memo advertising the "network consulting service", and wonder if you might direct me to appropriate sources on two questions:

1) We have an Imlac (minimal configuration) & would like to be able to do some graphics things with it over the Net. I've heard rumor of several applications of Imlacs (MIT-DMCG, BBN, UCSB), but the NIC notes that I've read seem to indicate that these were developed for Imlac's with lots of goodies on them. The notes are also rather in the form of "this is what we've done" than "this is how to use it".

I'd be especially interested in an interface with BBN LISP. All I want to do is to draw a few vectors, but I'd rather use someone else's Imlac program than write my own.

2) A friend of mine, Frank Hilf (FDH/SU-AI) was looking for some statistical packages to use. Do you know of (a) programs for PDP-10 for the fairly standard statistical stuff (variance , confidence levels, etc)

and how to get hold of them, or better still (b) a package at some

other site to which he can FTP his data& run the stuff, & how to get

on & use the programs. I entered his ident, so you

dcan reply directly to him--- He asked me; I said I would try to find out

and am now passing the buck to you.

Thanks much,

d Larry Masinter

LMM 20-DEC-72 19:42 13440

Two Questions

(J13440) 20-DEC-72 19:42; Title: Author(s): Masinter, Larry M./LMM;
Distribution: Neigus, Nancy J., Hilf, Franklin D./NJN FDH;
Sub-Collections: NIC; Clerk: LMM;

RWW 20-DEC-72 8:43 13441

Reply to DVN on All Purpose Handout

Dirk, Iread your all purpose handout, and like the idea of such a thing; however I feel it still needs alot of work to accurately reflect my perception of whats happening in ARC, particularly the second half. I would be glad to sit down with you for more detailed discussion. 1

RWW 20-DEC-72 8:43 13441

Reply to DVN on All Purpose Handout

(J13441) 20-DEC-72 8:43; Title: Author(s): Watson, Richard W./RWW; Distribution: Van Nouhuys, Dirk H./dvn ; Sub-Collections: SRI-ARC; Clerk: RWW;

RWW 20-DEC-72 8:48 13442

Reply to 13417 for Network Information

The request for detailed netinfo from Univ. of Washington is the type of thing which is outside normal NIC service. It is the kind of thing that a Facilitator might do. There are three such in bay area Jim White, Vint Cerf, Bob Metcalfe. If its really important to ARC then Jim would be right person to go up for a day if he wanted to. 1

RWW 20-DEC-72 8:48 13442

Reply to 13417 for Network Information

(J13442) 20-DEC-72 8:48; Title: Author(s): Watson, Richard W./RWW; Distribution: Kudlick, Michael D., White, James E. (Jim), Norton, James C., North, Jeanne B./mdk jew jcn jbn ; Sub-Collections: SRI-ARC; Clerk: RWW;

SJL 20-DEC-72 11:21 13443

test mess

this is a test message 1

SJL 20-DEC-72 11:21 13443

test mess

(J13443) 20-DEC-72 11:21; Title: Author(s): Laube, Sheldon J./SJL;
Distribution: Laube, Sheldon J./SJL; Sub-Collections: NIC; Clerk: SJL;

RCC 21-DEC-72 17:35 13444

Attempt to send a message.

This may turn out to be a message. If so, it will be the first one I ever got through the NIC and champagne is in order. 1

RCC 21-DEC-72 17:35 13444

Attempt to send a message.

(J13444) 21-DEC-72 17:35; Title: Author(s): Clements, Robert C./RCC; Distribution: Murphy, Dan L., Tomlinson, Ray S./DLM RST; Sub-Collections: NIC; Clerk: RCC;

CFD 21-DEC-72 17:57 13445

NDDT Symbolic Debugger User'S Guide

This is a prelIminary edition of the soon to be released NDDT debugging system. Your comments and suggestions are appreciated.

1

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NDDT Symbolic Debugger User'S Guide

INTRODUCTION 3

A new version of the NDDT system is being released in stages. 3a

NDDT is a symbolic debugging routine for L10 programs written for the NLS system. It is designed to be easy to use, relieving the programmer from the typical "where am I now" syndrome of some debuggers. This document provides a description of the features currently implemented and supposedly working as advertised. This document will be kept current and should serve as a NDDT user's guide. Several addtional features are implemented in various stages of development, but users are cautioned against "playing" with them until their descriptions appear in this document. Your comments and suggestions are of course encouraged and most welcome. 3b

3c

NDDT COMMANDS 4

All commands to NDDT consist of single upper or lower case characters or sequences of single characters. 4a

Most commands are terminated with a CA or CR which may appear interchangably. NDDT echos the full text of each command, allowing the user to verify his command state. A command may be aborted prior to completion by typing in CD or RUBOUT. 4b

4c

KEYWORD commands 4d

Each keyword command defines a parse submode for NDDT and establishes the legal context for subsequent command input. 4d1

4d2

BREAKPOINT commands 4d3

The breakpoint commands allow the setting, clearing, and printing of breakpoints. Breakpoints may be unconditional, or may be conditioned by a relational expression or boolean procedure invocation. Breakpoints are numbered by NDDT beginning with zero and they may be referenced by this number or by their breakpoint address. 4d3a

The formal syntax of the command is: 4d3b

B[REAKPOINT] 4d3b1

C[LEAR] 4d3b1a

A[LL] CA - clear all breakpoints now in effect 4d3b1a1

num CA - clear only the indicated breakpoint 4d3b1a2

P[RINT] 4d3b1b

CA - print all breakpoints now in effect 4d3b1b1

num CA - print only the indicated breakpoint 4d3b1b2

S[ET] <addrexp> 4d3b1c

CA - set unconditional bkpt 4d3b1c1

C. 4d3b1c2

C[ALL] <procname> CA 4d3b1c2a

- the named procedure is executed at the breakpoint address, and the breakpoint is taken if the procedure returns TRUE. 4d3b1c2a1

R[EPLACES BREAKPOINT:] num CA 4d3b1c2b

- the specified breakpoint replaces a previous breakpoint. 4d3b1c2b1

T[EST] <addrexp> <relationop> <constexp> CA 4d3b1c2c

- the contents of the cell identified by the address expression is compared to the constant expression when control passes through the breakpoint location. If the relation is TRUE then the breakpoint is executed. 4d3b1c2c1

The relational opeator may be any one of the following: (=,#,<,>,<=,>=). 4d3b1c2c2

4d3b1c2c3

CONTINUE command 4d4

The CONTINUE command is used to proceed from a breakpoint and to return to NLS after entering NDDT via the Control-H trap. 4d4a

The syntax is: 4d4b

C[ONTINUE] CA - continue interrupted execution 4d4b1

4d4b2

DEFINE commands 4d5

The define command is used to create a new DDT symbol, or alter the value of any previously defined DDT symbol, including those created both by users and compilers. The command has two mode flavors, NEW and OLD for creating new symbols and redefining old symbols respectively. 4d5a

Note that the mark stack must not be empty in order for there to be space for new symbols to be defined. If there are no entries in the mark stack, the user may define one using the MARK command (i,e, M[ARK SYMBOL TABLE] S[ET AT] <newblockname> CA). 4d5b

Symbols defined with this command have a global scope, and may be used to satisfy external references for L10 user program compilations. 4d5c

The syntax of the command is: 4d5d

D[EFINE] 4d5d1

N[EW] <symbol> CA <enterexp> CA 4d5d1a

O[LD] <symbol> CA <enterexp> CA 4d5d1b

4d5d1c

FIND command 4d6

The FIND commad provides a mechanism for bounded and masked word content searches. A word value, mask value, and address limits are specified, and the specified range is searched for a masked equality with the specified value. The address and contents of each word which match are printed out. If a mask is not specified, then a mask of 36M (all ones) is assumed. 4d6a

After entering all of the requested information, an additional CA is required for validation of the command. 4d6b

The syntax is: 4d6c

F[IND CONTENT:] <enterexp> CA [MASKED BY:] <enterexp> CA 4d6c1

[LOWER ADDRESS:] <addrexp> CA [UPPER ADDRESS:] <addrexp> CA 4d6c2

[OK] CA 4d6c3

The syntax of the <enterexp> includes PDP10 instruction forms as well as all address expressions. 4d6d

4d6e

GOTO command 4d7

The GOTO command provides the capability for unconditional transfer to a specified location. Note

**that it is the users responsibility to provide a return path to the system (BREAKPOINT) if desired, as the GOTO mechanism is a uncontrolled transfer. 4d7a

G[O TO] <addrexp> CA - jump to the specified location 4d7a1

4d7a2

MARK commands 4d8

The MARK commands allows the user to control the searching of the DDT symbol table. A symbol table mark stack is maintained by NDDT and it controls the lookup process for identifying symbols used by NDDT. Entries in this stack are names of symbol table blocks corresponding to L10 FILES or user PROGRAMS. When a user program is compiled, its name defines a block in the ddt symbol table, and this name is automatically placed at the top of the mark stack. The top entry in the mark stack is known as the current symbol table block, and local as well as global symbols are known for this block only. 4d8a

The MARK command allows blocks to be added to and

deleted from the mark stack, and its current contents may be printed out. 4d8b

The syntax of the command is as follows: 4d8c

M[ARK SYMBOL TABLE:] 4d8c1

C[LEAR BLOCK] <blockname> CA - remove block from stack 4d8c1a

P[RINT CONTENTS OF STACK] CA - prints current contents 4d8c1b

S[ET AT:] <blockname> CA - add block name to stack 4d8c1c

4d8c1d

PROCEDURE commands 4d9

The PROCEDURE command allows a specified procedure to replace an existing one or allows a specified procedure to be called. 4d9a

A backup facility is provided to re-institute the original procedure in place of any replaced. 4d9b

The command syntax looks like: 4d9c

P[ROCEDURE] 4d9c1

B[ACK UP TO] <procname> CA - re-institute the named proc. 4d9c1a

C[all] <procname> 4d9c1b

CA - call named routine - no arguments 4d9c1b1

(exp1,...) CA - call the proc with an argument list 4d9c1b2

- the names procedure is called, passing a parameter list if specified, and the return value is typed out. 4d9c1b2a

R[EPLACE PROCEDURE] <oldprocname> [BY] <newprocname> CA 4d9c1c

- the <oldprocedure> is replaced by a <newprocedure> so that any calls on the old one go instead to the new one. The old procedure name is saved in a list and may be restored by the B[ACKUP TO] option. 4d9c1c1

4d9c1c2

SHOW commands 4d10

The SHOW commands open a cell for inspection and/or modification by NDDT. At any time a single address value is known as the current location, and the show command or any of its subcommands manipulate the current location. 4d10a

The mode specification on this command refers to the mode of the printed output, and if set, remains in effect until changed by a new mode specification. 4d10b

The syntax of the SHOW command is: 4d10c

S[HOW] <type> <showbody> 4d10c1

<type> - if given, sets the current type 4d10c1a

L[OCATION] - type is a memory location 4d10c1a1

S[TRING] - type is a NLS string 4d10c1a2

<showbody> - main body of the command 4d10c1b

<addrexp> <terminator> 4d10c1b1

<reladdrexp> 4d10c1b2

<terminator> 4d10c1b3

4d10c1c

whsre the preceeding syntactic forms are defined as: 4d10c2

<addrexp> - sets the current loc. to <addrexp> 4d10c3

<reladdrexp> - relative addressing, sets current loc. 4d10c4

↑ - show preceeding location 4d10c4a

LF - show next location 4d10c4b

N[EXT] - show next location 4d10c4c

TAB - set current loc to address field of current loc. 4d10c4d

<terminator> - terminates the show command 4d10c5

CA - show current location in current mode 4d10c5a

<modespec> - if given, sets new mode specification 4d10c5b

C. 4d10c5b1

N[UMERIC] - set mode to numeric 4d10c5b1a

S[YMBOLIC] - set mode to symbolic 4d10c5b1b

T[EXT] - set mode to text mode 4d10c5b1c

<enterexp> - <addrexp> or PDP10 instruction 4d10c5c

- changes the contents of the current location. 4d10c5c1

4d10c5d

TRACE command 4d11

The TRACE command is used to record each time control passes through a particular location. Every time control passes through an active trace location, that fact is noted by typing out the address of the location being traced. The syntax of the command is: 4d11a

T[RACE LOCATION] <addrexp> CA 4d11a1

4d11a2

VALUE command 4d12

The VALUE command is used to show the value of an address expression. The current typeout mode may also be set by this command. 4d12a

The syntax is: 4d12b

V[ALUE OF] <addrexp> 4d12b1

CA - print value in current typeout mode 4d12b1a

<modespec> CA - change typeout mode, then print value 4d12b1b

4d12b1c

Special character commands 4e

The special character commands are intended to allow high user interaction rates for commonly used functions by compressing the command syntax to a single character. The = command is used to type out the contents of the current location in numeric mode without changing the current mode specification, and the other commands are really subcommands of the SHOW command and are processed exactly as if they had been preceeded by the command S[HOW]. 4e1

The commands are: 4e1a

=	Show current location in numeric typout	4e1a1
←	Assign a value to current location	4e1a2
↑	Show previous location	4e1a3
LF	Show next location	4e1a4
TAB	Show location addressed by current location	4e1a5

4e1a6

Built in NDDT symbols 5

A certain set of symbols are built in to NDDT and are recognized in address expressions. These symbols and there significance are explained below. 5a

NDDT symbols 5b

M	frame base register	5b1
S	frame top register	5b2
P	record pointer register	5b3

A1	register A1	5b4
A2	register A2	5b5
A3	register A3	5b6
A4	register A4	5b7
R1	register R1	5b8
R2	register R2	5b9
R3	register R3	5b10
R4	register R4	5b11
FRAME	current stack frame description	5b12
F	current stack frame description	5b13
RET	current stack frame return address	5b14
SIG	current stack frame signal location	5b15
MARK	current stack frame mark location	5b16
PARMS	current stack frame parameters	5b17
LOCALS	current stack frame LOCALS	5b18
L	same as LOCALS	5b19
TOP	top stack frame in procudure stack	5b20
BASE	first stack frame in procedure stack	5b21

5b22

Using NDDT from DNLS/TNLS 6

NDDT is entered via a control-h interrupt in both DNLS and TNLS. The commands for enabling this interrupt mechanism are slightly different in each system. They are: 6a

From DNLS: G[O TO] N[DDT ARM CONTROL-H] CA 6a1

**From TNLS: G[O TO] D[DT] CR 6a2

After enabling the control-h mechanism, NDDT is initially entered by typing in control-h at any time. NDDT will respond with its command hearald character (>), indicating that NDDT is ready to accept a command. Control remanins in NDDT until the user leaves via the CONTINUE or GO TO commands. The CONTINUE command is normally given after setting breakpoints, replacing procedures, etc, and if NDDT was entered via a control-h interrupt, control will return to the DNLS/TNLS system. 6b

NDDT address expressions 7

The formal BNF syntax for address expressions is given below. Operators are evaluated left to right with no hierarchy, spcace is equivalent to the addition operator (+). 7a

7b

<addrexp> ::= <term> <addrexp> <op> <term> 7c

<term> ::= <symbol> <constant> 7d

<constant> ::= <normalconst> <halfwordconst> 7e

<normalconst> ::= <octal digit> <normalconst> 7f

\- <normalconst> 7g

<halfwordconst> ::= <normalconst>,,<normalconst> 7h

<octal digit> ::= 0 1 2 3 4 5 6 7 7i

<op> ::= SP + - * / 7j

CFD 21-DEC-72 17:57 13445

NDDT Symbolic Debugger User'S Guide

(J13445) 21-DEC-72 17:57; Title: Author(s): Dornbush, Charles F./CFD ; Distribution: Irby, Charles H., Watson, Richard W., Lehtman, Harvey G., Kaye, Diane S./CHI RWW HGL DSK ; Sub-Collections: SRI-ARC; Clerk: CFD ;

CFD 21-DEC-72 18:04 13446

The DDT Symbol Table and Utility Routines

This paper contains a description of the DDT symbol table as manipulated by the NDDT symbolic debugger, and also describes some DDT symbol table manipulation routinges.

DDT SYMBOL TABLE 1

GENERAL DESCRIPTION 1a

The DDT symbol table is a linear table. It occupies a contiguous region of address space. The symbol table is structured logically into blocks, and each block contains symbolic entries. The logical ordering of the blocks in the table occurs dynamically, and is accomplished by marking the symbol table. 1a1

THE LINEAR TABLE 1b

The dynamic extent of the symbol table is defined by user location 116B. The right half of this location contains the lowest address in the symbol table; the left half contains the negative of the word length of the table. This single linear table is divided into symbol table blocks, All cells in this table belonging to exactly one symbol table block. 1b1

SYMBOL TABLE BLOCKS 1c

The DDT symbol table is partitioned into sections called "blocks"; each block defines the scope of contained symbol table entries for a particular FILE or PROGRAM statement. 1c1

Each block has 4 words of header information; two words at the beginning (lowest address) and two words at the end of the block. 1c2

Separating the two two-word header structures are a variable number of symbol table enties. Each symbol table entry is two words long. The block headers define the scope and extent of the block. 1c3

Each word in the headers is defined as follows (assuming a block of length L whose lowest address is LOC). 1c4

Address	contents	
Address	contents	1c4a
LOC	0	1c4b
LOC+1	highest address value in block	1c4c
LOC+L-2	block name (RADIX50)	1c4d
LOC+L-1	lh: -length of block	1c4e

rh: lowest address value in block 1c4f

SYMBOL TABLE ENTRIES 1d

Each DDT symbol table entry consists of two adjacent words. The first (lowest address) contains the symbol in RADIX50 representation, and the second contains the associated symbol value (usually an address). 1d1

The symbol word contains a type code in the leftmost 4 bits of the word, and these type codes ase interpreted as follows: 1d2

value	symbol type	
		1d2a
00	block name	1d2b
04	global symbol	1d2c
10	local symbol	1d2d

MARKING THE SYMBOL TABLE 1e

The logical ordering of the blocks in the symbol table may be altered for search purposes by marking the symbol table. 1e1

Marking of the symbol table places a pointer to a symbol table block at the top of a push down stack. This stack is used to direct the symbol table lookup routine to search first the blocks indicated in this push down stack. The block at the top of this stack is called the "current block" and local as well as global symbols are known in this block. 1e2

1e3

Data structures used in implementing the marking mechanism. 1e4

The following global data items are used to implement the pushdown stack of marked symbol table blocks. 1e4a

NAME	CONTENTS	
		1e4b
ddmrkm	size of the mark stack	1e4c
ddmrkx	current depth of mark stack (IN[0,ddmrkm])	1e4d
ddmrk[ ]	array of block pointers (indexed	

IN[0,ddmarkx]) 1e4e

DDT UTILITY ROUTINES 1f

This following L10 routines are part of the running NLS system and are available to manipulate the DDT symbol table. All name strings are standard NLS strings, and must contain only upper case letters or digits. 1f1

1) SYMBOL TABLE LOOKUP 1f2

(bool) ← ddtlookup($name : value, address of value); 1f2a

If the symbol is not found, ddtlookup returns FALSE. 1f2a1

If found, it returns TRUE, the value of the symbol, and the address of the value in the symbol table. 1f2a2

2) SYMBOL TABLE MARKING 1f3

ddtmark($name); 1f3a

This routine places the named DDT symbol table block at the top of the mark stack. If the named block is not already defined, then a new block is defined and initialized. 1f3a1

ddtpop( ); 1f3b

THis routine deletes the top entry from tha mark stack (pops the stack). 1f3b1

3) SYMBOL DEFINITION 1f4

ddtenter($name, value, type); 1f4a

Ddtenter defines the named symbol in the block at the bottom of the DDT symbol table. Note that this does not necessarily correspond to the ordering imposed by the mark stack. 1f4a1

The normal sequence for defining a set of DDT symbols, is to first define a new block, using ddtmark, and then use ddtenter to add new symbol table entries to the new block. 1f4a2

The type codes are defined as follows. 1f4a3

TYPE	MEANING	1f4a4
0	define the symbol as a local symbol	1f4a5
1	define the symbol as a global symbol	1f4a6

CFD 21-DEC-72 18:04 13446

The DDT Symbol Table and Utility Routines

(J13446) 21-DEC-72 18:04; Title: Author(s): Dornbush, Charles F./CFD ; Sub-Collections: SRI-ARC; Clerk: CFD ;

CHI 20-DEC-72 10:41 13447

A Request for Feedback on the "You have Journal mail" message

For some time now we have had the "You have Journal Mail" message in DNLS and TNLS. I am now soliciting feedback about the usefulness of this feature. I personally find it very valuable in TNLS and marginally valuable in DNLS. Your feedback will be appreciated. -- Charles. 1

CHI 20-DEC-72 10:41 13447

A Request for Feedback on the "You have Journal mail" message

(J13447) 20-DEC-72 10:41; Title: Author(s): Irby, Charles H./CHI; Distribution: Hathaway, A. Wayne, Barnett, Barbara, Lee, Susan R., Michael, Elizabeth K., Moore, Julie B., Row, Barbara E., Petell, Marcelle D., Stone, Duane L., Slottow, Joan E., Peters, Jeffrey C., Jones, William P., Feinler, Elizabeth J. (Jake), Kelley, Kirk E., Prather, Ralph, Byrd, Kay F., Pucine, Gino, Merry, Diana L., Gray, Thomas B., Rosich, Raynor K., Knowlton, Prentiss H., Graham, Marvin L., Meir, Jaacov, Grossman, Gary R., Bouknight, W. Jack, Sher, Michael S., Madden, James M., Slotnik, Daniel L., Beaman, Kathy, Day, John D., Crocker, David H., Hardeman, Beauregard A., Roistacher, Richard C., Ferguson, Ferg R., Forman, Ernest H., Lane, Linda L., Engelbart, Douglas C., North, Jeanne B., McConnell, John W., Deutsch, L. Peter, Mitchell, James G., Kay, Alan C., Auerbach, Marilyn F., Hardy, Martin E., Irby, Charles H., Jernigan, Mil E., North, Jeanne B., Norton, James C., Page, Cindy, Van Nouhuys, Dirk H., Watson, Richard W., Crocker, Steve D., Lawrence, Thomas F., Heafner, John F., Murphy, Dan L., Foulk, Patrick W., Winter, Richard A., Van Zoeren, Harold R., McKenzie, Alex A., Madden, James M., Bhushan, Abhay K., Karp, Peggy M./TU; Sub-Collections: SRI-ARC TU; Clerk: CHI;

JCN 21-DEC-72 17:25 13448

reply to (13442,) about the U. of Washington Request

Dick: re (13442,) - your reply to (13417,) - It is important that we respond to the U. of Wash. request as an effective NIC, even if it means that what we tell them is that we can't do it ourselves, but who those people are who can. ARC really has no special interest in Washington that I can think of, other than as a courtesy to a resquester and as a favor to Doug and me, whose friend directed the question to us. We should call Golde with something. 1

JCN 21-DEC-72 17:25 13448
reply to (13442,) about the U. of Washington Request

(J13448) 21-DEC-72 17:25; Title: Author(s): Norton, James C./JCN;
Distribution: Watson, Richard W., Kudlick, Michael D./RWW MDK ;
Sub-Collections: SRI-ARC; Clerk: JCN;

LMM 17-DEC-72 18:28 13449

nls problem

The print Journal command must be setting some viewspecs funny, because after I do a PJ, every print i do after that tries to trace all links.

Larry Masinter

LMM 17-DEC-72 18:28 13449

nls problem

(J13449) 17-DEC-72 18:28; Title: Author(s): Masinter, Larry M./LMM;
Distribution: North, Jeanne B., Van Nouhuys, Dirk H./NICSTA DVN;
Sub-Collections: NIC NICSTA; Clerk: LMM;

SRL 29-DEC-72 15:47 13451

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13451
30 DEC 72

TRANSMITTAL TO: Mr. Daniel McAuliffe.
Rome Air Development Center, DCAT
Griffiss Air Force Base, New York 13441 1

FROM: Susan Lee (SRI-ARC)
Station Agent
2

At your request, we are sending you NIC 7147 The Host/Host Protocol for the ARPA Network. 3

enc. 4

Lee, Susan R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
Access Copy

SRL 29-DEC-72 15:47 13451

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13451
30 DEC 72

(J13451) 29-DEC-72 15:47; Title: Author(s): Lee, Susan R./SRL ;
Distribution: Agent, Station/SA ; Sub-Collections: SRI-ARC ; Clerk:
KIRK ;
Origin: <KELLEY>T51.NLS;3, 27-DEC-72 21:20 KIRK ;
--a-

SRL 12-JAN-73 20:27 13452

Transmittal to David J. Farber

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13452
26-DEC-73

1

2

TRANSMITTAL TO: David J. Farber
Associate Professor of Information and
Computer Science and of Electrical Engineering
Department of Information and Computer Science
University of California
Irvine, California 92664

3

FROM: Susan Lee (SRI-ARC)
Station Agent

4

5

At your request I am enclosing the following document: 6

NIC 7104 ARPA Network Current Network Protocols 6a

SRL 12-JAN-73 20:27 13452

Transmittal to David J. Farber

(J13452) 12-JAN-73 20:27; Title: Author(s): Lee, Susan R./SRL;
Distribution: Agent, Station/SA; Sub-Collections: SRI-ARC; Clerk: LLL;
Origin: <LANE>TRANSMITTAL.NLS;87, 12-JAN-73 20:25 LLL ;

SRL 12-JAN-73 20:18 13453

Transmittal to Michael Ondrasik

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13453
26-DEC-73

TRANSMITTAL TO: Michael Ondrasik
Hdqtrs. USAF (AFTAC/TD-2B)
Patrick Air Force Base
Florida 32925

FROM: Susan Lee (SRI-ARC)
Station Agent

At the request of Nancy Neigus, I am enclosing the following document:

NIC 11625 TERMINAL INTERFACE MESSAGE PROCESSOR -
Specifications for the Interconnection of Terminals
and the Terminal IMP

SRL 12-JAN-73 20:18 13453

Transmittal to Michael Ondrasik

(J13453) 12-JAN-73 20:18; Title: Author(s): Lee, Susan R./SRL;
Distribution: Agent, Station/SA; Sub-Collections: SRI-ARC; Clerk: LLL;
Origin: <LANE>LETTERTRANS.NLS;3, 12-JAN-73 20:17 LLL ;

SRL 26-DEC-72 10:16 13454

Transmittal to E. Forman

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13454
26-DEC-72

1

2

TRANSMITTAL TO: Ernest H. Forman
MITRE Corporation
Information Systems Dept., W140
Westgate Research Park
McLean, Virginia 22101

3

FROM: Susan Lee (SRI-ARC)
Station Agent

4

5

At the request of Jeanne North, I am enclosing the following documents:

6

NIC 9926	RFC 333, A PROPOSED EXPERIMENT WITH A MESSAGE SWITCHING PROTOCOL	6a
NIC 9931	RFC 338, EBCDIC/ASCII MAPPING FOR NETWORK RJE	6b
NIC 10594	RFC 352, TIP SITE INFORMATION FORM	6c
NIC 10607	RFC 365, A LETTER TO ALL TIP USERS	6d
NIC 11016	RFC 369, EVALUATION OF ARPANET SERVICES, January through March, 1972	6e

SRL 26-DEC-72 10:16 13454

Transmittal to E. Forman

(J13454) 26-DEC-72 10:16; Title: Author(s): Lee, Susan R./SRL;
Distribution: Agent, Station/SA; Sub-Collections: SRI-ARC; Clerk: LLL;
Origin: <LANE>TRANSMITTAL.NLS;85, 26-DEC-72 10:15 LLL ;

SRL 29-DEC-72 15:53 13455

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13455
30 DEC 72

TRANSMITTAL TO: Bill Glikbarg
Computer Science Teaching Laboratory
Mail Stop FC-10
University of Washington
Seattle, Wasington 98195 1

FROM: Susan Lee (SRI-ARC)
Station Agent
2

At your request, we are sending the The ARPA Network (NIC 12324) and Resource Sharing Computer Networks (NIC 11681). 3

There are no charges for these pamphlets. 4

encl: 5

NIC 12324 The ARPA Network Resource
NIC 11681 Sharing Computer Networks 5a

Lee, Susan R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
Access Copy

13455

SRL 29-DEC-72 15:53 13455

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13455
30 DEC 72

(J13455) 29-DEC-72 15:53; Title: Author(s): Lee, Susan R./SRL ;
Distribution: Agent, Station/SA ; Sub-Collections: SRI-ARC ; Clerk:
KIRK ;
Origin: <KELLEY>T55.NLS;1, 27-DEC-72 21:12 KIRK ;
--a-

SRL 29-DEC-72 14:06 13466

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13466
30 DEC 72

TRANSMITTAL TO: Louise S. Lanzetta
Committee on Information Sciences
The University of Chicago
Chicago, Illinois 60637 1

FROM: Susan Lee (SRI-ARC)
Station Agent 2

Enclosed you will find the documents from the 9000 series forward, which are marked by a back arrow in our catalog. Many of the earlier documents are obsolete and all documents not marked by a back arrow would have to be xeroxed. 3

Our list is designed to provide a bibliography of available material from which a person might specify particular documents. Therefore, if you have any specific requests in the future we will be glad to comply, but a list of this size is unreasonable. 4

encl: 5

NIC 8481
NIC 9413
NIC 9473
NIC 9991
NIC 9995
NIC 10507
NIC 10508
NIC 10509
NIC 10510
NIC 10511 5a

Lee, Susan R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
Access Copy

SRL 29-DEC-72 14:06 13466

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13466
30 DEC 72

(J13466) 29-DEC-72 14:06; Title: Author(s): Lee, Susan R./SRL ;
Distribution: Agent, Station/SA ; Sub-Collections: SRI-ARC ; Clerk:
KIRK ;
Origin: <KELLEY>T66.NLS;6, 29-DEC-72 14:04 KIRK ;
--a-

SRL 29-DEC-72 16:04 13467

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13467
30 DEC 72

TRANSMITTAL TO: Rayner K. Rosich
U. S. Department of Commerce
OTS/ITS
325 Broadway, Room 1-4528B
Boulder, Colorado 80302 1

FROM: Susan Lee (SRI-ARC)
Station Agent 2

Enclosed are most of the documents you requested. We do not have an extra copy of NIC 10168, but I have contacted UCLA and will forward it to you as soon as it arrives. 3

The documents requested by Mr. W. M. Roberts are being sent directly to him. 4

encl: 5

10530	10509	10354	10352	10276	10273	10166
10163	10162	10161	10160	10108	10106	9996-9989
9977	9794	9702	9046	8085	9181	6623
6619	6025	5646	4644			5a

Lee, Susan R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
Access Copy

13467

SRL 29-DEC-72 16:04 13467

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13467
30 DEC 72

(J13467) 29-DEC-72 16:04; Title: Author(s): Lee, Susan R./SRL ;
Distribution: Agent, Station/SA ; Sub-Collections: NIC ; Clerk: KIRK
;
Origin: <KELLEY>T67.NLS;2, 27-DEC-72 20:41 KIRK ;
--a-

SRL 29-DEC-72 16:15 13468

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13468
30 DEC 72

TRANSMITTAL TO: W. M. Roberts
U. S. Department of Commerce
OTS/ITS
325 Broadway, Room 1-4528B
Boulder, Colorado 80302 1

FROM: Susan Lee (SRI-ARC)
Station Agent

2

Enclosed are most of the documents you requested. We do not have extra copies of NIC 10659, NIC 10168, NIC 6149, and NIC 6033. I have contacted UCLA and MIT and will forward them to you as soon as they arrive. 3

encl: 4

10680	10477	10273	10166	10108	10106	10045
9977	9703	9627	9286	9181	9077	9050
9046	8300	7979	7140	6619	6523	6514
6025	5773	5638	4769	3530	3529	

4a

Lee, Susan R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
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13468

SRL 29-DEC-72 16:15 13468

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13468
30 DEC 72

(J13468) 29-DEC-72 16:15; Title: Author(s): Lee, Susan R./SRL ;
Distribution: Agent, Station/SA ; Sub-Collections: NIC ; Clerk: KIRK
;
Origin: <KELLEY>T68.NLS;4, 28-DEC-72 11:53 KIRK ;
--a-

SRL 28-DEC-72 19:26 13471

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13471
29 DEC 72

TRANSMITTAL TO: Yutaka Kuwahara
Liaison Scientist
Central Research Laboratory
Hitachi, Ltd.
437 Madison Avenue
New York, New York 10022 1

FROM: Susan Lee (SRI-ARC)
Station Agent
2

At the request of Vint Cerf (SU-ERL), your name has been added to the Network Measurement Group distribution list. 3

Enclosed are copies of NMG Notes 2, 6, 7, 8, and 11. Notes 1, 3, 4, 5, 9 and 10 have been superseded. You will receive all new NMG notes on regular distribution. 4

encl: 5

NIC 10352
NIC 10935
NIC 10942
NIC 11360
NIC 13470 5a

6

Lee, Susan R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
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SRL 28-DEC-72 19:26 13471

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13471
29 DEC 72

(J13471) 28-DEC-72 19:26; Title: Author(s): Lee, Susan R./SRL ;
Distribution: Agent, Station/SA ; Sub-Collections: SRI-ARC ; Clerk:
KIRK ;
Origin: <KELLEY>T13471.NLS;2, 28-DEC-72 19:23 KIRK ;
--a-

SRL 28-DEC-72 19:29 13472

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13472
29 DEC 72

TRANSMITTAL TO: Albrecht J. Newmann
System Development Division
Bldg. 225
National Bureau of Standards
Washington, D.C. 20234 1

FROM: Susan Lee (SRI-ARC)
Station Agent
2

At the request of Vint Cerf (SU-ERL), your name has been added to the Network Measurement Group distribution list. 3

Enclosed are copies of NMG Notes 2, 6, 7, 8, and 11. Notes 1, 3, 4, 5, 9 and 10 have been superseded. You will receive all new NMG notes on regular distribution. 4

encl: 5

NIC 10352
NIC 10935
NIC 10942
NIC 11360
NIC 13470 5a

6

Lee, Susan R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

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SRL 28-DEC-72 19:29 13472

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13472
29 DEC 72

(J13472) 28-DEC-72 19:29; Title: Author(s): Lee, Susan R./SRL ;
Distribution: Agent, Station/SA ; Sub-Collections: SRI-ARC ; Clerk:
KIRK ;
Origin: <KELLEY>T13472.NLS;3, 28-DEC-72 19:28 KIRK ;
--a-

SRL 28-DEC-72 19:32 13473

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13473
29 DEC 72

TRANSMITTAL TO: Chikafusa Hirano
Senior Researcher, 9th Dept.
Central Research Labaratory
Hitachi, Ltd.
Kokubunji, Tokyo 185 JAPAN

FROM: Susan Lee (SRI-ARC)
Station Agent

At the request of Vint Cerf (SU-ERL), your name has been added to the Network Measurement Group distribution list.

Enclosed are copies of NMG Notes 2, 6, 7, 8, and 11. Notes 1, 3, 4, 5, 9 and 10 have been superseded. You will receive all new NMG notes on regular distribution.

encl:

NIC 10352
NIC 10935
NIC 10942
NIC 11360
NIC 13470

Lee, Susan R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
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SRL 28-DEC-72 19:32 13473

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Menlo Park, California 94025

NIC 13473
29 DEC 72

(J13473) 28-DEC-72 19:32; Title: Author(s): Lee, Susan R./SRL ;
Distribution: Agent, Station/SA ; Sub-Collections: SRI-ARC ; Clerk:
KIRK ;
Origin: <KELLEY>T13473.NLS;3, 28-DEC-72 19:29 KIRK ;
--a-

SRL 28-DEC-72 19:33 13474

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13474
29 DEC 72

TRANSMITTAL TO: William Naylor, Coordinator
3804 Boelter Hall
Computer Science Dept.
University of California, Los Angeles
Los Angeles, Calif. 90024 1

FROM: Susan Lee (SRI-ARC)
Station Agent
2

At the request of Vint Cerf (SU-ERL), your name has been added to the Network Measurement Group distribution list. 3

Enclosed are copies of NMG Notes 2, 6, 7, 8, and 11. Notes 1, 3, 4, 5, 9 and 10 have been superseded. You will receive all new NMG notes on regular distribution. 4

encl: 5

NIC 10352
NIC 10935
NIC 10942
NIC 11360
NIC 13470 5a

6

Lee, Susan R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
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SRL 28-DEC-72 19:33 13474

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13474
29 DEC 72

(J13474) 28-DEC-72 19:33; Title: Author(s): Lee, Susan R./SRL ;
Distribution: Agent, Station/SA ; Sub-Collections: SRI-ARC ; Clerk:
KIRK ;
Origin: <KELLEY>T13474.NLS;3, 28-DEC-72 19:32 KIRK ;
--a-

JAKE 29-DEC-72 16:24 13475

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13475
30 DEC 72

1

Michael A. Padlipsky
Project MAC
545 Technology Square, Room 507
Cambridge, Massachusetts 02139 2

Dear Mike, 3

Here is the write-up we discussed. I have attempted to put the information in a slightly different format while still maintaining your essay style. 4

There are a few spots where we could use a little more information if you have it at hand (and if it applies to your system, which it may not) I have marked these with a red "x". When you are finished with it, send it back with pertinent comments and/or corrections and I will enter it online in query and send it out for the hardcopy version. 5

Hope you have had a nice holiday. Best wishes for 1973. 6

Sincerely,

Jake Feinler 7

JAKE/kk
enc.

8

P.S. Massachusetts bumper sticker slogans are finding their way out here now -- for ex.; "Don't blame me--I'm from Massachusetts" 9

Feinler, Elizabeth J. (Jake)
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
Access Copy

JAKE 29-DEC-72 16:24 13475

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13475
30 DEC 72

(J13475) 29-DEC-72 16:24; Title: Author(s): Feinler, Elizabeth J. (Jake)/JAKE ; Distribution: Agent, Station/SA ; Sub-Collections: NIC ; Clerk: KIRK ;
Origin: <KELLEY>JAKE.NLS;5, 28-DEC-72 11:48 KIRK ;
--a-

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

JBN 29-DEC-72 15:32 13476
NIC 13476
19 JAN 73

1

To: ARPA IPT Principal Investigators 2

From: Jeanne North
NIC Information and Station Agent Coordinator 3

Subject: NIC numbers for Papers for IPT Principal Investigators' Conference

4

As in previous years, NIC suggests that you include preassigned NIC numbers on your papers before reproduction for the Conference. 5

Attached is a list of Investigators and numbers assigned, from which you may take the number for your paper. These numbers will appear on copies distributed from NIC after the Conference, and will be used in NIC catalogs and indexes. 6

JBN 29-DEC-72 15:32 13476

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13476
19 JAN 73

ARPA/IPT PRINCIPAL INVESTIGATORS	NIC number	7
Mr. Robert P. Abbott	13528	7a
Professor Jonathan Allen	13529	7b
Dr. Robert Balzer	13530	7c
Dr. Roy Amara	13531	7d
Mr. Paul Baran	13532	7e
Professor Herbert Baskin	13533	7f
Mr. Morton I. Bernstein	13534	7g
Mr. Roland F. Bryan	13535	7h
Professor Thomas E. Cheatham, Jr.	13536	7i
Dr. Glen Culler	13536	7j
Dr. Douglas C. Engelbart	13537	7k
Professor David C. Evans	13538	7l
Professor E. A. Feigenbaum	13539	7m
Mr. James W. Forgie	13540	7n
Dr. Howard Frank	13541	7o
Professor Edward Fredkin	13542	7p
Professor Edward L. Glaser	13543	7q
Mr. Frank Heart	13544	7r
Dr. Anatol W. Holt	13545	7s
Professor Leonard Kleinrock	13546	7t
Professor Frank Kuo	14547	7u
Professor J. C. R. Licklider	13548	7v
Dr. Thomas Marill	13549	7w
Professor John McCarthy	13550	7x
Dr. Robert E. Millstein	13551	7y
Professor Marvin Minsky	13552	7z
Dr. James Mitchell	13553	7a@
Professor Charles E. Molnar	13554	7aa
Dr. Peter J. Neumann	13555	7ab
Professor Allen Newell	13556	7ac
Professor Michael O'Malley	13557	7ad
Dr. Melvin Pirtle	13558	7ae
Professor William K. Pratt	13559	7af
Dr. Bert Raphael	13560	7ag
Professor J. A. Robinson	13561	7ah
Professor John Savage	13562	7ai
Dr. June E. Shoup	13563	7aj
Professor Daniel L. Slotnick	13564	7ak
Professor Thomas Stockham	13565	7al
Dr. Bertram Sutherland	13566	7am
Mr. Keith W. Uncapher	13567	7an

Van Nouhuys, Dirk H.
Augmentation Research Center
Stanford Research Institute
Menlo Park, California 94025

To:
Van Nouhuys, Dirk H.

JBN 29-DEC-72 15:32 13476

ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025

NIC 13476
19 JAN 73

(J13476) 29-DEC-72 15:32; Title: Author(s): North, Jeanne B./JBN ;
Distribution: Agent, Station/SA ; Sub-Collections: SRI-ARC; Clerk: KIRK
;
Origin: <KELLEY>M76.NLS;10, 28-DEC-72 14:38 KIRK ;
--a-