

Collecting statistics at RADC

Much to our surprise, no statistics have been generated for Imlac users at Rome during the past week. (Of course I am assuming that people have been using the Imlac this week!)

1

We are not exactly sure why because the collection has proceeded without any major problems at ARC.

2

There is a possibility that measurements can be made at RADC using a command which is available at any time for command frequency studies, but we want to check it out on our Imlac first to be sure it will work.

3

I'll let you know the first of next week what we have found and if you have any other questions get in touch.

4

Collecting statistics at RADG

(J19879) 26-OCT-73 15:52; Title: Author(s): Susan R. Lee/SRL;
Distribution: /DLS PR(for your information) DVN(FYI); Sub-Collections:
SRI-ARC; Clerk: SRL;
Origin: <LEE>BLAP.NLS;1, 26-OCT-73 15:41 SRL ;

Paying DDSI, Problems with DELDIR

Jake just ran letter, which worked find, but she decided she didn't want the directives, so I told her to run deldir which on a couple of trials gave "error", "nls display error" and a blank screen. You've probably seen by now my letter to Spencer. Jim N wanted to pay the bill to keep them smiling.

1

Paying DDSI, Problems with DELDIR

(J19880) 26-OCT-73 16:26; Title: Author(s): Dirk H. Van
Nounhuys/DVN; Distribution: /NDM; Sub-Collections: SRI-ARC; Clerk: DVN;

An Invitation to Use The Journal

Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

Mr. Burns, RADG/PMA
Department of the Air Force
Headquarters Rome Air Development Center (AFSC)
Griffiss Air Force Base, New York 13440

Dear Mr. Burns:

Until recently we believed that contract F30607-73-C-0285 did not call for a monthly letter report. When we discovered our error, I reconstructed the bare minimum of information for the months of June through September. That accounts for the flurry of letters that came to you within the last few days. In the remaining reports, I will provide narrative information about the progress of work.

As you may know, NLS, the system we develop, includes provisions for creating, distributing, filing, cataloging and retrieving documents, including correspondence through the ARPA network or U.S. Mail. The reports we have mailed to you have gone to Duane Stone via the computer and are accessible to him online.

We could identify you to NLS. By default the system would then deliver the monthly reports by U.S. mail, but you might be able to arrange with the Information Science Branch at RADG to receive them online.

We identify users to the system by a few characters, usually their initials. If you wish this service, please choose your initials or some other letters in reply.

Sincerely,

Dirk van Nouhuys
Research Analyst
Augmentation Research Center

An Invitation to Use The Journal

dvN

An Invitation to Use The Journal

(J19881) 26-OCT-73 17:23; Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /DLS(By the way we've ordered extension of the NIC phones
in the Computer room. I'll let you know when there'r there.);
Sub-Collections: SRI-ARC RADG; Clerk: DVN;
Origin: <VANNOUHUYS>BURNS.NLS;3, 26-OCT-73 17:01 DVN ;

Re Problems with DELDIR (19880,)

DELDIR seems to work fine in TNLS. I compiled new REL files for DELDIR and SHOWDIR. Try them again in DNLS and let me know if they again fail you. Remember they are content analyzers, and should display empty when done. --Dean

1

NDM 27-OCT-73 13:37 19882

Re Problems with DELDIR (19880,)

(J19882) 27-OCT-73 13:37; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /JAKE DVN; Sub-Collections: SRI-ARC; Clerk: NDM;

test

28-OCT-73 0009-PDT : water

1

for marie... why are we buying mountain spring wwater????

1a

28-OCT-73 0011-PDT : boys

2

for marie... when are the kids leaving??? i have atough week
coming up . do you think we should drive them back? or would we
all be better off to let them take the bus??

2a

19883 Distribution
Edmund J. Kennedy,

test

(J19883) 28-OCT-73 01:44; Title: Author(s): Edmund J. Kennedy/EJK;
Distribution: /EJK; Sub-Collections: RADC; Clerk: EJK;

Measured Text : NLS/TENEX File Compatibility

Reference: <1journal>19830

Jim: A friend sent me a copy of your referenced suggestion for a family of new NLS commands for "measured text" operations. In reading your suggestion, many past instances where I would have found it very VERY useful came to mind. For whatever small value it may represent, I would like to offer my support for the suggestion....In addition, I would like to invite your consideration of two allied problems which would further enhance the utility of NLS to network users such as myself. (1) If the NLS/TENEX interface could be modified to insert the appropriate number of spaces for each encountered ctrl-I [↑I], this would be a great convenience, and (2) consideration should be given to a parameterized conversion capability so that conversion of TENEX files to NLS files, and the converse, could be accomplished with a greater degree of percision. I believe, because of the restricted access to NLS currently, that such an interface would render NLS more useful to network users. It is often the case that I work at ISI and/or CASE-10, and subsequently enter text-files created there into NLS files. Thus, when NLS is unavailable to me, I simply go to a friendly TENEX site and work their using such as TECO/DED/Etc. I have noticed though, even with the use of some of your user programs like INSEQN, that conversion to/from NLS leaves a lot of room for improvement. Thanks for your interest.....Jean

1

Measured Text : NLS/TENEX File Compatibility

(J19884) 28-OCT-73 07:40; Title: Author(s): Jean Iseli/JI;
Distribution: /JEW JBP(fyi - look at 19830) JCN(thought you might be
interested) MEJ(thanks for the link); Sub-Collections: NIC; Clerk: JI;

For your Information [<ljournal>19830:measured text/

Please look at <ljournal>19830 and send comments to Jim White (jew) -
I think his suggestion is worth your support:Jean

1

19885 Distribution

Michael A. Padlipsky, Ernest H. Forman, Susan S. Poh,

1
1a

For your Information [<ljournal>19830:measured text]

(J19885) 28-OCT-73 07:47; Title: Author(s): Jean Iseli/JI;
Distribution: /MAP(Mike, I will try to call you again this week) EHF
SSP(would make your characterizations far easier to insert and
maintain); Sub-Collections: NIC; Clerk: JI;

November ARPANET Newsletter : Thanks

Dr. Newell: Thank you and your associates for the fine article on the activities of CMU-10A, the ARPANET Newsletter readership will benefit greatly from the description of your activities. I would like to invite your further consideration in keeping the community apprised of your progress through the ARPANET Newsletter. Periodic submission would be most welcome and may be forwarded to ISELI@isi.
Thanks again.....Jean

1

November ARPANET Newsletter : Thanks

(J19886) 28-OCT-73 07:53; Title: Author(s): Jean Iseli/JI;
Distribution: /MEJ JBN SSP AN; Sub-Collections: NIC; Clerk: JI;

November Featured Site Article : ALOHA

Frank/Wayne: Just a note to thank you both for the really fine support of the ARPANET Newsletter and you fine interest in better apprising the network community of your interest, plans, and progress. I would very much invite your consideration of keeping our readership apprised of your activities; submissions may be forwarded to JERNIGAN@NIC, or to ISELI@ISI - On behalf of the staff...thanks again.....Jean

1

November Featured Site Article : ALOHA

(J19887) 28-OCT-73 08:00; Title: Author(s): Jean Iseli/JI;
Distribution: /JBN MEJ SSP WWL FK; Sub-Collections: NIC; Clerk: JI;

19887 Distribution

Jeanne B. North, Mil E. Jernigan, Susan S. Poh, W. Wayne
Lichtenberger, Franklin Kuo,

1

1a

ARPANET Newsletter inserts for November

Jeanne: The November inserts may be found in <help>november-inserts. Mil and I took the liberty of retrieving the updates that had previously been submitted because they had to be slightly altered to comply with a co-featured site format. Hope you will enjoy them...think they make a darn good issue. Sorry we couldn't get more on resources and forum...maybe December will be better in those departments...Have some ideas that are being pursued.

Jeanne, thank you for the recent very prompt response in getting it both on-line and in hard copy....I believe we will begin to see greater network participation as a consequence, maybe as early as next month. I really appreciate the help Mil is providing and you also.....makes for some much better issues...the response I hear is very encouraging. Thanks again.....Jean

1

ARPANET Newsletter inserts for November

(J19888) 28-OCT-73 09:59; Title: Author(s): Jean Iseli/JI;
Distribution: /JBN SSP MEJ; Sub-Collections: NIC; Clerk: JI;

new exec 1.51 features

the following are the changes (that i am aware of) in the new exec 1.51 from bbn

1) there has been a cleanup in the way some things are done

2) ↑G pseudo interrupt

↑G is now a pseudo interrupt that is similar to ↑T. However, whereas ↑T prints much information, ↑G merely rings the bell. ↑G can thus be used to determine if the system is still up (the way many people use ↑T), but using ↑G rather than ↑T puts less of a load on the system

3) IDDT and NO IDDT

these commands exist for the use of invisible mode ddt. i do not have a manual on the use of IDDT and suggest that interested people either experiment or contact Bill Plummer (at BBN).

4) REDIRECT and DETACH

the ability to specify alternate INFILES and OUTFILES for the commands REDIRECT and DETACH has been implemented. I believe there may be some bugs in this code and i suggest experimentation if you are interested in these features.

5) default accounts and account validation

We are now using BBNS method for specifying default accounts and for performing account validation. This method is a little less kludgy than our method and should be slightly faster. Users should notice no change in their interactions, with the following exception:

If a user does not have a valid entry in the account data base, he/she will not be allowed to login and will receive the message ILLEGAL ACCOUNT.

We have made one pass at the data base and there should exist an entry for all known users.

6) TRMSTAT command

this is a new command that tells you what the current state of the parameters for your terminal are set to. this is a nice idea, but it does not always list the current state of the parameters. Try it, maybe you'll like it.

new exec 1.51 features

7) LENGTH command

lg

this is a new command that allows you to specify the page length of your terminal

lg1

8) new TERMINAL types

lh

several new terminal types have been defined. However, users are forewarned to use the new types with caution as NLS does not yet support all (any?) of the new types.

lh1

there is a new type called SCOPE. eventually the monitor will pause at the bottom of a page, ring the bell several times, and then wait for the user to type any character before doing more output. thus information should not scroll off the face of your screen before you have had a chance to read it. (the above is disabled if you have typed ahead.) When we implement this in our monitor (NOTE* NOT IMPLEMENTED YET), we will implement this feature for IMLACS, LINEPROCESSORS, LOCAL DISPLAYS, and the appropriate terminal types.

lh2

9) ephemerons

li

subsystems can now have the attribute EPHEMERAL. this attribute is set by the new exec command EPHEMERAL and reset by the new exec command NOT EPHEMERAL.

li1

running a subsystem that is an ephemeron is equivalent to issuing an exec command. thus you can be running a regular subsystem, type control-C, run an ephemeral subsystem, and then continue with the subsystem you were running before you typed control-C.

li2

note that since ephemerons are equivalent to exec commands, you CANNOT control-C out of an ephemeron and then continue the ephemeron, just as you cannot control-C out of a DIR command and then continue the DIR.

li3

(IMPORTANT NOTE TO DNLS USERS: because of the way we treat displays, it is not possible to fc out of DNLS, run an ephemeron, and then continue DNLS. You should quit DNLS, then run the ephemeron, and then reenter DNLS.)

li4

The following list of subsystems have been made to be ephemerons (an ephemeral file shows up in a dir listing with the attribute ;E):

li5

SNDMSG READMAIL TRIM SETMRP

li5a

new exec 1.51 features

10) SYSTAT

1j

SYSTAT nows lists detached jobs last

1jl

11) AUTHOR subcommand to dir

1k

AUTHOR is a new subcommand to the DIR command. this will tell you the login directory name of the last person who had the file open for write access.

1kl

new exec 1.51 features

(J19889) 28-OCT-73 11:51; Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Sub-Collections: SRIARC TUG ; Clerk: KEV;
Origin: <VICTOR>NEW-EXEC.NLS;2, 28-OCT-73 11:49 KEV ;

Workshop on Machine-Independent Graphics

Jim,

We will be presenting the following two papers at the NCC:

a paper describing the use of interactive display terminals for text manipulation by Charles Irby, and

a paper describing our experimental work in progress with the use of an alphanumeric terminal and an MCS-4 (a 4 bit cpu on a chip) by Don Andrews.

Since the NCC is being held at approximately the same time as the Workshop on Machine-Independent Graphics, we do not feel it would be appropriate to present these papers at both conferences. However, if you feel that this is not true, let me know and we could present one or both of these papers at the workshop.

Though we will probably not be presenting any papers, Charles Irby, Don Andrews, and/or myself (and maybe one or two others) would like to attend the workshop.

If necessary we are all willing to (although none of us wants to) serve as session chairpersons, and/or panel discussers, etc.

If we can be of any help in getting things organized (e.g. use of the NIC) feel free to get in touch with us.

Sincerely,

Ken Victor

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1a

1a1

1a2

1b

1c

1d

1e

1f

1g

Workshop on Machine-Independent Graphics

(J19890) 28-OCT-73 14:37; Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /JDF CHI DIA RWW JCN; Sub-Collections:
SRI-ARC; Clerk: KEV;

19890 Distribution

Jim D. Foley, Charles H. Irby, Don I. Andrews, Richard W. Watson,
James C. Norton,

1

1a

mouse and stuff for an IMLAC

jim,

It is possible to run DNLS on an IMLAC without a mouse and keyset. Although running this way is not as nice as having a mouse and keyset.

I suggest you read <IMLAC>IMLAC-USERS-GUIDE.NLS (an NLS file) to see all about using an IMLAC for DNLS.

Regarding the cost of a mouse and keyset, you should give your local imlac sales rep a call. I beleive it costs about \$1000. to have a mouse and keyset installed.

We are indeed doing some experimentation with "cheap" terminals. What we have done is interpose an MSC-4 (a 4 bit cpu on a chip) between a Delta Data 5500 and the Data Line Scanner (or the TIP or a remote HOST). We call the MSC-4 configuration a lineprocessor. We have defined a protocol for communication to and from the line processor. The lineprocessor can then paint "nicely" formatted stuff on the delta data.

This work is still experimental. We estimate the cost of the finished line processor to be \$500-\$2500. Thus you should be able to get a DNLS terminal for the cost of a cheap alphanumeric display (we will eventually extend our work to include other alphanumeric terminals) plus the cost of the lineprocessor.

If you are interested in more information about the lineprocessor (costs, availability, etc.) contact Martin Hardy or Don Andrews, both here at NIC.

Sincerely,

Ken Victor

1

1a

1b

1c

1d

1e

1f

1g

1g1

mouse and stuff for an IMLAC

(J19891) 28-OCT-73 15:24; Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /JOC DIA MEH; Sub-Collections: SRI-ARC; Clerk:
KEV;

IMLACs

mike,

I'm going to ramble a bit also!

First off, I'll have you made a member of the IMLAC interest group unless you have some objections.

Secondly, for our purposes, and for the mean time, we are going to standardize on our version of IMLOAD for loading IMLACs for the purpose of running DNLS. We dont have much use for IMLACs for any other reason.

Thirdly, if you haven't already, why don't you read the Imlac users guide that I wrote. Dave Crocker should have a couple of copies.

Regarding the upgrading of your IMLAC, I cant offer any suggestions one way or the other. All I can say is that it sure would be nice if all imlacs were the same, or for that matter, even almost the same!

Have you guys successfully loaded IMNLS using the new IMLOAD yet?

Sorry for taking so long to respond but its been a bad week for me.

Please keep up the dialog.

Sincerely,

Ken Victor

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1a

1b

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1il

19892 Distribution
Michael P. Urban,

1
1a

IMLACs

(J19892) 28-OCT-73 15:39; Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /MPU; Sub-Collections: SRI-ARC; Clerk: KEV;

messages and nls

I've relayed your message about ident problems on to Charles Iroy.
Regarding your other problem their user name is UK-ICS and not UKCS.

1

messages and nls

(J19893) 28-OCT-73 15:42; Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /JJV CHI; Sub-Collections: SRI-ARC; Clerk:
KEV;

ident problem?

The following is a message that i received which i am here passing on to you. (maybe its really my problem or not a problem at all but i though you should see it anyway).

1

25-OCT-73 22:38:48,525

Net mail from site SRI-ARC rcvd at 25-OCT-73 22:38:47

1a

Date: 25-OCT-73 2238-PDT

1a1

From: UCLA-BC at SRI-ARC

1a2

Re: messages and nls

1a3

- - - -

1a4

Hi - this is Jacques Vidal at UCLA-BC - There seems to be a problem with my ident: JJV> Every time i try NLS I get 13 bytes lost in transmission. This does not arise with the one i am using now (mdb)

1a5

Another thing: I am trying to establish contact with UKCS with a message ; but your tenex refuses it with the comment - no such user - Thanksfor any help. JJV

1a6

1a7

ident problem?

(J19894) 28-OCT-73 15:45; Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /CHI; Sub-Collections: SRI-ARC; Clerk: KEV;

IT'S OVER!!

After a week of data collection, the command frequency study has ended. So if you havn't already, you can delete your QBVM files and have a little more room. You'll be hearing the results in a couple of days.

1

IT'S OVER!!

(J19895) 28-OCT-73 16:10; Title: Author(s): Susan R. Lee/SRL;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: SRL;

HOTLINE : SU-AI :Contact

Mike: The person to contact at SU-AI regarding the production use of the HOTLINE, is Lester [Les] Earnest; his phone number is: (415) 321-2300 ext 4971. He is a very nice person and you will have no problem discussing your problem with him. Incidentally, if you are going out there, please say hi to PMK for me. Hope this help,...Jean

1

HOTLINE : SU-AI :Contact

(J19896) 28-OCT-73 18:08; Title: Author(s): Jean Iseli/JI;
Distribution: /MRL; Sub-Collections: NIC; Clerk: JI;

SU-AI Cureio in Ident System

Marcia.....in using your identification system just awhile ago, I noticed something strange that I would like to bring to your attention; either it is a gross omission or there has been a change in circumstance that I am unaware of. Lester Earnest, LDE, should be included in the SU-AI group membership but is not...because my spelling is less than excellent, I had a devil of a time finding him...could you please look into this for me....thanks,.....Jean

1

SU-AI Cureio in Ident System

(J19897) 28-OCT-73 18:18; Title: Author(s): Jean Iseli/JI;
Distribution: /MLK; Keywords: file-integrity-consistency;
Sub-Collections: NIC; Clerk: JI;

More Information about Command Frequency Collection

When I printed out the command frequency statistics for Friday there were statistics for Roger Panara. So I guess there was no trouble after all, unless you can tell me that other people worked on the Imlac last week.

1

The automatic collection has ended here at ARC but if you are really interested in this type of study there is a way for you to continue. There is a command G(oto) U(se Measurements) F(requency Count) S(ave) which if used at the end of a DNLS session will record all commands used in a file called QBVMXYZ.LAN (where XYZ is the users ident). This file may be printed out like any other NLS file.

2

The problem with this is getting users to remember to do it after each session, however, you may have more luck with this than I did.

3

The command frequency collection program is not very efficient so when you give the GUFS command it takes awhile. There are a lot of improvements which should be made in it which will probably happen before we try another study like this.

4

I intend to get the results from last week's study out sometime this week and I'll be sure to send you a copy.

5

If you have any questions or suggestions please let me know.

6

More Information about Command Frequency Collection

(J19898) 29-OCT-73 09:24; Title: Author(s): Susan R. Lee/SRL;
Distribution: /DLS DVN(for your information) PR(for your information);
Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>BALP.NLS;1, 29-OCT-73 08:59 SRL ;

the name is jon

could you please try to spell my name correctly, on both the on-line
rfc i recently submitted and the transmittal letter that accompanied
its distribution someone spellrd my name "john"
--jon.

1

the name is jon

(J19899) 29-OCT-73 10:25; Title: Author(s): Jonathan B. Postel/JBP;
Distribution: /JBN MLK; Sub-Collections: NIC; Clerk: JBP;

short distribution

could you please tell me why transmittal letter 108 list three items
yet only one was included ?

1

short distribution

(J19900) 29-OCT-73 10:28; Title: Author(s): Jonathan B. Postel/JBP;
Distribution: /JBN MLK; Sub-Collections: NIC; Clerk: JBP;

linking

linking is all fouled up

1

linking

(J19901) 29-OCT-73 10:29; Title: Author(s): Jonathan B. Postel/JBP;
Distribution: /BUGS; Sub-Collections: NIC BUGS; Clerk: JBP;

invalid account

there is a problem with account 3 and mitre-tip, if i specify account i am told "invalid account" but if a let tenex choose the account by escaping the field (it chooses 3 also) everything is ok.

1

invalid account

(J19902) 29-OCT-73 10:32; Title: Author(s): Jonathan B. Postel/JBP;
Distribution: /BUGS; Sub-Collections: NIC BUGS; Clerk: JBP;

Jean, Many thanks for the information re Les Earnest. I'll definitely say hello to Peggy Karp when I'm there. Mike

1

(J19903) 29-OCT-73 11:35; Title: Author(s): M. R. Leavitt/MRL;
Distribution: /JI; Sub-Collections: NIC; Clerk: MRL;

Request for News for ARPANEWS : December

Vint: I understand you will be going to Hawaii for the INWG MTG. and that you may also attend the Networking Subconference while there. Could I prevail on you for help in covering the Subconference on behalf of the ARPANET Newsletter. I appreciate the fact that you are probably very heavily committed, and would find equally useful a reference to someone who might help who may not be so pressed?

Also, I would be most appreciative of any news from INWG that could be published in the Newsletter for the benefit of our readership. I believe that there is substantial interest in what is happening internationally in Networking and would very much like to keep our readership apprised.

Thank you for any assistance you can give and/or helpful suggestions you might make.

Warmest regards,

Jean

1

Request for News for ARPANEWS : December

(J19904) 29-OCT-73 12:37; Title: Author(s): Jean Iseli/JI;
Distribution: /VGC JBN(coordination) MEJ(coordination); Keywords:
inwg-international-networking-conference; Sub-Collections: NIC; Clerk:
JI;

Arrival in London

To: Prof. Peter Kirstein and Prof. Manny Lehmann

I expect to arrive in London late Thursday, November 8th departing Saturday, November, 10th. Can we meet for an hour or so to discuss some network issues. Lunch Friday is my first suggestion. If you cannot make it give me alternates. I will leave UCLA Thursday November first and would like response before then. Will be staying at Cumberland in London.

1

Arrival in London

(J19905) 29-OCT-73 16:12; Title: Author(s): Lynn A. Rossiter/LYNN;
Distribution: /PK; Sub-Collections: NIC; Clerk: LYNN;

Comment About your ASIS Notes

After reading your review of the ASIS meeting I had one question. In a couple of places you mentioned that in general people had few facts about system usage and that there was a real need for measuring more aspects of the user interaction with a system.

1

If you have any ideas for anything specific along these lines that we could do here I would really like to hear them.

2

I don't feel like I know that much about what analyses are really needed so any comments on what you heard would be appreciated.

3

Comment About your ASIS Notes

(J19906) 29-OCT-73 16:18; Title: Author(s): Susan R. Lee/SRL;
Distribution: /HGL; Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>BLAP.NLS;2, 29-OCT-73 16:17 SRL ;

Developing Insert Message file User Program

See (19746,) for possible directions in this area.

Developing Insert Message file User Program

Ken: I have changed the user program INMES as we discussed. It now always takes the login directory message.txt file, it includes the time received, and it handles messages without titles properly. Try it and let me know what you think. We can then discuss the addition of a check for time of last read.

1

Developing Insert Message file User Program

(J19907) 29-OCT-73 16:23; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /KEV DCE(fyi) CHI(fyi) DVN(fyi) JHB(fyi); Sub-Collections:
SRI-ARC; Clerk: NDM;

TENEX/NLS File Compatibility : A mini-suggestion

I would invite your attention to the file (help,map,1) which was constructed from a TENEX file, and make the following suggestions for your consideration.

(1) It would be nice if NLS allowed me easily to make the enclosed map a single statement as opposed to the sequence of statements that it currently occupies. Very often, I am forced to leave a file in this condition because the capability does not exist. I believe that this leaves no alternative but to have files occupying unneeded disk space because of the overhead implied by this structural form. For me to currently try to append the statements into a single statement is unnecessarily complex, so I generally leave them this way.

(2) Often, it is easier to construct a scenario employing the telnet typescript capability. However, I am denied the option because the NIC Query language requires that I indent the text one level down from the Query link to the text. I believe that this is a serious restriction on the use of NIC Query.

Any consideration that could be given to the above two points would be much appreciated.

.....Jean

1

TENEX/NLS File Compatibility : A mini-suggestion

(J19908) 30-OCT-73 07:55; Title: Author(s): Jean Iseli/JI;
Distribution: /JCN DCE MDK NDM(Dean, though you might be interested and
could help) SSP MEJ; Keywords: tenex-nls-file-compatibility-nic-query;
Sub-Collections: NIC; Clerk: JI;

This is a demo given to some Stanford students.

1

(J19909) 29-OCT-73 15:35; Title: Author(s): James H. Bair/JHB;
Distribution: /DLS SRL; Sub-Collections: SRI-ARC; Clerk: JHB;

Apparent Incompatibility of Output File With New EXEC/or Some System
Change

To: All users of NLSre: An apparent incompatibility between the new
EXEC and NLS

1

Please be aware of the following thing happening since the new EXEC
was brought up:

2

If you are:

3

outputting a large file to reduce its size, and using the same
name, and defaulting to a new version number, and

3a

Get Processing Suspended (Q4'd), and

3b

Decide to forget the whole thing at the present, and

3c

↑C to EXEC, reset, thinking all is well as in former days, and the
whole command was aborted and your file remains untouched.....
have news for you!

3d

The system now creates the new version which after a bit will show up
in the directory (but not immediately) and since it will be the next
highest version number, TRIM will come along and delete and expunge
your good file, leaving A PARTIAL FILE ONLINE.

4

The only way you can save your good file (the old version) is to
carefully delete the new version-file which is a partial file only,
and return to the old file. If all this occurs while TRIM is being
run...YOU HAVE HAD IT!

5

Apparent Incompatibility of Output File With New EXEC/or Some System
Change

(J19910) 30-OCT-73 09:58; Title: Author(s): Mil E. Jernigan/MEJ;
Distribution: /SRI-ARC NIC HGL JI CHI DCW ARH; Keywords:
NLS-incompatibility; Sub-Collections: SRI-ARC NIC BUGS ; Clerk: MEJ;
Origin: <DOCUMENTATION>WARNING.NLS;1, 30-OCT-73 09:46 MEJ ;

Some Measurement Suggestions: See SRLs (19906,) and HGLs (19877,)

Susan Lee asked me in (19906,) to elaborate on some comments I made in my discussion of my trip to the ASIS convention, (19877,), dealing with the suggestion that studies of user interaction with systems were necessary.

Several suggestions are possible:

1. Monitor command frequency counts. This has been done at a primitive level at ARC very recently, but we should carry such studies further.

2. Check the results of our training some time after the initial classes. Training and documentation should be recognized as vital parts of the system package. Develop skills tests to see if users are really making use of the full power of the system. Are they using four "simple" commands when one sophisticated command would do? Are they doing that because they are not aware of the more sophisticated commands?

3. Send people around to other sites to check their use of NLS over a period of time in their own environment. Get some sort of feedback; offer refresher courses in the system; offer advanced courses. (Perhaps restrict the first course in NLS to the most basic commands and concepts. Expand the base only after the user has used the system for a time.)

4. We have relatively accurate means of measuring system response times for commands. We should also measure user response times: how long does it take for a user to decide his next action?

5. Are other commands more effective than the one's we have? Experiment with different command languages with proper controls and over a reasonable time (probably several weeks). This could be done in a straightforward manner when we bring up the CML version of the system. How effective are particular commands over alternative forms of the command? Are sophisticated combination commands more effective? What is a measure of this effectiveness?

These suggestions just scratch the surface. They deal not just with simple machine measurements, but with users, and will not be simple to carry out. The resulting improvements in the state of the whole system and in the state of such user-interaction measurement (with appropriate recognition in a published paper) are, I feel, worth the efforts necessary to overcome the difficulties.

I left something out in (19877,) which I think is also applicable to Susan's question. I spoke to a friend of mine at the conference (Al De Lucia of RADG) who mentioned that he was monitoring a project at the UCLA Psychology Department's Center for Computer Based Behavioral

Some Measuremnt Suggestions: See SRLs (19906,) and HGLs (19877,)

Studies. He said their work was quite good and involved in the field of measuring user interaction with computer systems. They have an ARPA contract and are on the Network, I think. We should see what they are doing. He mentioned a person named Bob Meeker at (213) 825-0841. I note they are in the Ident file under UCLA-CCBS.

4

Some Measuremnt Suggestions: See SRLs (19906,) and HGLs (19877,)

(J19916) 30-OCT-73 11:01; Title: Author(s): Harvey G. Lehtman/HGL;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: HGL;
Origin: <LEHTMAN>MEASURE.NLS;1, 30-OCT-73 10:19 HGL ;

DSS Section for Quarterly Management Report

Dirk-- The DSS section for the Quarterly Management Report is available in (WHITE,QMR,1:y). Sorry for the delay. --Jim

1

DSS Section for Quarterly Management Report

(J19917) 30-OCT-73 11:40; Title: Author(s): James E. (Jim)
White/JEW; Distribution: /DVN; Sub-Collections: SRI-ARC; Clerk: JEW;

Online Viewspec and Keypset codes

For demonstrations and online reference, an online version of the Viewspec and keyset codes card is available in (userguides,viewspeccard,1).

1

Online Viewspec and Keyset codes

(J19918) 30-OCT-73 11:50; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: NDM;

Reply to MEJs "Incompatability" Note (19910,)

To: Mil Jernigan and all users of NLS. Re: No change in Output File and the new EXEC-- MEJs (19910,) was wrong

1

If you control-C out of any process and reset, the state of your world reflects that which the computer has executed up to that point. Thus if, when doing an output file, output quickprint, etc., you are suspended and then do a control-C, if the suspension occurred BEFORE the system code which creates (i.e., starts to write on) a new version of the file has been executed, when you reset, you will not find that new version in your directory. If it occurred AFTER the creation, the file (incomplete though it may be) will be present. This has always been the case. I should also point out that control-C--reset while some processes (e.g., Update Old) are running could be disastorous.

2

Reply to MEJs "Incompatability" Note (19910,)

(J19919) 30-OCT-73 11:55; Title: Author(s): Harvey G. Lehtman/HGL;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: HGL;
Origin: <LEHTMAN>REPLY.NLS;1, 30-OCT-73 11:46 HGL ;

Suggestions

Don't really know anything about #2. A list of all user programs is available in (user-progs,-contents,1).

Suggestions

Jean: I looked over your file (help,map,). There are two user programs which may be of interest. Given that file, the user program APPEND will append a group of statements into one (more if it overflows the 2000 char limit). That would provide a one step operation for condensing such structure into a single statement. Another program that would have been of more interest had you contacted me sooner is called INSEQH. It is a new Input Sequential Algorithm which breaks statements at two consecutive carriage returns. If you still have the sequential source file, you might give this one a try. Let m know how these treat you.

--Dean

1

Suggestions

(J19920) 30-OCT-73 12:20; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /JI; Sub-Collections: SRI-ARC; Clerk: NDM;

sndmsg and nls and inmes

dean,

thanx for the improvments to inmes.

I spoke to charles about adding a command to NLS and he is amenable to doing this. We both feel the command should ask the user whether he wants the entire file or only the unread messages. you and i can work together on getting inmes to do this and then we can see about getting this added to nls.

response to (19746,) :

I agree whole-heartedly with doug in that the round trip from nls - to sndmsg - and back to nls should not alter the format of the file.

this was a fairly serious problem for the editing of assembler files and one that had to be solved before nls truly became useful for editing assembly language files.

the solution was as follows:

the output assembler nls command does not break up statements on line boundaries, but merely outputs a statement at a time. Output assembler inerts N tabs in front of each statement, where N is the difference in levels that exists between the first statement output and the current statement being output.

Input assembler with structure is then the converse of ouput: the number of leading tabs determines the level at which a statement will be placed. statement breaks are determined only by the occurence of a cr-lf pair. input assembler also knows about certain assembly languages semantical entities and deals with these as special cases.

We need similar symmetrical commands for the use of sndmsg files.

output assembler may be sufficient for this.

to deal with the long line problem maybe users will have to be restriced to writing one line statements (this is not too nice, but i dont know how else to solve this problem)

inmes comes very close to doing the input side nicley.

inmes should probably not do the appends it curently does for the message part, but everything up to the cr-lf pair should be read in as one statement. perhaps tabs (if we use the existing output assembler) or n leading spaces (if we

sndmsg and nls and inmes

use something else for the output side) could be used to determine relative levels.

4d2a

(we can not use input assembler because we wish to deal with the header information is messages and also because input assembler special cases ceratian assembly language constructs.)

4d2b

i don't like the idea of imbedded characters in the message for format control.

4e

This seems to me to extend the existing serious problem that we have with the output processor imbedded directives to yet another type of file.

4el

sndmsg and nls and inmes

(J19921) 30-OCT-73 12:31; Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /NDM DCE JCN RWW CHI DCW WRF JEW;
Sub-Collections: SRI-ARC; Clerk: KEV;
Origin: <VICTOR>INMES.NLS;1, 30-OCT-73 09:20 KEV ;

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28 NOV 73
SRI-ARC 19938

Proposal For Research
SRI No. ISU 73-175

A KNOWLEDGE WORKSHOP FOR THE NAVY:
AN EXPERIMENT IN TECHNOLOGY TRANSFER

Part One--Technical Proposal

Prepared for:

Information Systems Branch
Office of Naval Research
Department of the Navy
Arlington, Virginia 22217

Attn: Mr. A. Kenneth Showalter

Submitted by:

R. W. Watson, Assistant Director
Augmentation Research Center

J. C. Norton, Assistant Director
Augmentation Research Center

Approved:

D. C. Engelbart, Director
Augmentation Research Center

Bonnar Cox, Executive Director
Information Science and Engineering Division
Stanford Research Institute

ESRI-ARC JCN RWW 10-FEB-74 07:37 19938

Proposal for Research No. ISU xx-xxx
Extension to Contract No. N00014-70-C-0302

28 NOV 73
SRI-ARC 19938

Proposal For Research
SRI No. ISU 73-175

A KNOWLEDGE WORKSHOP FOR THE NAVY:
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Part Two--Contractual Provisions

Prepared for:

Information Systems Branch
Office of Naval Research
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Arlington, Virginia 22217

Attn: Mr. Kenneth Showalter

Proposal for Research No. ISU 73-175

A KNOWLEDGE WORKSHOP FOR THE NAVY:
AN EXPERIMENT IN TECHNOLOGY TRANSFER

PART ONE--TECHNICAL PROPOSAL

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I INTRODUCTION 2

A. Growth of the Knowledge Workshop Concept 2a

During the past three years the Office of Naval Research has supplied support that has enabled the Augmentation Research Center of Stanford Research Institute (ARC) to carry on work in building a Research Intelligence System, that has been termed RINS; work that ARC would otherwise not have been able to do. The work has been sponsored under Contract N00014-70-C-0302; this work will end on 31 December 1973. For 1974, ARC proposes to shift the focus of the work in a direction that will bring greater immediate benefit to ONR and the Navy. 2a1

Enough progress has been made within the technology that ARC has been pursuing, that it seems appropriate to use continuation funding to begin exploring the future application of this technology within the Navy and to determine the appropriate groups, steps, and mechanisms to perform this technology transfer task. It is toward this end that our renewal proposal is oriented. 2a2

The work for ONR has been carried on by the Augmentation Research Center as part of its pursuit of a continuing, closely coordinated set of objectives. Since the beginning of our augmentation system development in 1963, ARC has evolved a sizable set of integrated tools and techniques to increase the effectiveness of organizations and individuals as they work with information. During the development of these tools, it has become clear that what was evolving fit into a broader concept, a system to support the activities of what Peter Drucker in "The Age of Discontinuity" has termed "knowledge workers." Appropriately, the total system concept that ARC is continuing to develop has been designated as the Augmented Knowledge Workshop. This concept has been introduced by ARC in a paper included in this proposal as Appendix A. Although, as pointed out the paper, developments in the area of computer application systems show a trend toward the evolution of workshop systems, this evolution is more implicit than explicit. ARC's goal is to make workshop system evolution explicit. 2a3

2a3a

B. Implementing the Knowledge Workshop Concept 2b

It is a basic premise of ARC's concept that a Knowledge Workshop system can be developed only in an environment of usage by people doing their real everyday work and feeding back

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their experience into the evolutionary development process through formal analysis and informal comments and suggestion.

2b1

The workshop system envisioned must be designed in a coherent way at many levels with consideration given to tools and technology, methodology of use, training, and organization. Such an effort is expected to require many hundreds, possibly thousands, of man-years of coordinated effort by people from many disciplines and backgrounds, e.g. hardware, software, operations research, psychology, management science, etc. Until recently the users of ARC-developed tools were the system developers themselves. This approach proved very useful but limits the types of function and working environment for recognizing needs and gaining usage experience. There is no way that a single organization such as ARC can acquire the wisdom, range of capabilities, and financial backing necessary to carry out the total effort of workshop system design by itself.

2b2

Therefore, the next step is to provide a capability to market and deliver Knowledge Workshop services to a wider range of groups who want to participate as users and developers of a workshop system. We are meeting this need by setting up a "Workshop Utility Service" as described in Appendix A.

2b3

There are two general classes of user groups toward which support is being oriented: single coherent organizations (called Offices for brevity), and mission- or discipline-oriented groups (called Communities) whose members' prime affiliations are with different organizations. Examples of the first category would be departmental organizations in government, industry, research institutes or universities. Examples of the latter would be a distributed group of researchers and developers working in the same discipline domain, such as cancer, or representatives of many organizations working on a particular problem in the energy or environmental areas.

2b4

Although many of the workshop support functions needed by each of these two classes are shared in common, their profile of needs, their organizational and financing problems, and their methodology for use of functions are sufficiently different that it is useful to maintain the distinction.

2b5

A strategy that ARC believes has the greatest probability of creating a truly coherent, coordinated workshop system in the most economic and explicit fashion is the formation of an interdisciplinary Community made up of user representatives and developers who want to create and experiment with the usage of

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such a workshop. Because of the usage, analysis-feedback, and development nature of such a community, ARC has been calling it a "Bootstrap Community" in its planning and writing.

2b6

C. Working with the Navy to Implement the Knowledge Workshop Concept

2c

An attempt to create and sustain a healthy Bootstrap Community is a significant experiment that will yield much useful experience for other large interdisciplinary efforts. To progress to the establishment of an early prototype workshop that could

2c1

1) be demonstrated and used by others,

2c1a

2) serve to create further interest in the concept of the Knowledge Workshop and,

2c1b

3) provide a beginning focus for the formation of a Bootstrap Community,

2c1c

has been a central motivating factor for the work at ARC during the past ten years. The sections to follow in this proposal describe how we feel that our work with ONR could now be directed to better meet ONR and Navy needs and contribute to the goals above.

2c2

The ONR project has been unique and valuable to us because in it ARC has worked to produce an operating intelligence system that will provide an active community of system developers with the information they need to perform their work. It is ARC's plan to expand steadily the number of RED groups among systems developers that interact and collaborate to their mutual advantage through computer network and online services, and to begin to enlist groups that are developing customer-oriented systems in difficult knowledge-work areas. The new direction that we want to shift our ONR work toward will be valuable because of the opportunity it will present of learning about the real world applications in the Navy and to experiment with technology transfer processes. [see (12445,) Appendix B]. The work proposed herein should stimulate thinking and planning within the Navy toward the time this type of technology will be in daily use.

2c3

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II OBJECTIVES

3

The main objective is to carry out a joint effort between ARC and ONR or some other appropriate Navy organization that would have as its goal the production of a plan of staged technology transfer, leading to the prototype usage by a pilot plant group or community within the Navy, of ARC's Knowledge Workshop technology.

3a

The separate steps in the total effort of the technology transfer are seen to be:

3b

1) Initial study of Navy needs and applications

3b1

2) Demonstrations and tutorials to appropriate Navy personnel showing ARC technology capabilities and potentials in context of Navy needs.

3b2

3) Study and analysis of Steps 1 and 2, and planning for further implementation

3b3

4) Hands on experience by a "pilot plant" Navy R&D organization.

3b4

A. Planning and Initiation of Workshop Technology Transfer

3c

The objective of the current effort would be to carry out the first three of these steps. The fourth step would require facilities and funding beyond the scope of the current ARC effort. One possible approach to the fourth step would be to have a Navy research organization obtain separate funding to subscribe to the Workshop Utility system, and to plan for extensive hands on experience. With this fourth step in view, work could proceed to achieve an initial understanding of Navy needs and requirements for workshop technology. Then at an appropriate point, one or more seminars demonstrating and discussing the needs and potentials could be given. This effort would be followed by more detailed planning for continued transfer based on the initial experience.

3d

Step 1. Initial study of Navy needs and applications

3d1

For technology to transfer successfully, there has to be an understanding of the application needs and the potentials of a technology to meet these needs. One of the side benefits of this project would be some valuable experience for ONR and the Navy in this process.

3d1a

Step 2. Demonstrations and tutorials to appropriate Navy

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personnel showing ARC technology capabilities and potentials in context of Navy needs.

3d2

For the type of information system technology being developed by ARC written reports or papers, while important, are insufficient to get across the potentials. What are needed are demonstrations and hands on experience. Further, these demonstrations need to be oriented toward real application needs of potential users.

3d2a

The appropriate Navy participants for the seminars would be clearer after the initial need and requirements studies. The issue of whether to give one seminar for a large audience or several for appropriate small selective audiences would also have to be decided.

3d2b

Step 3. Study and analysis of steps 1 and 2, and planning for further implementation.

3d3

As steps 1 and 2 are being carried out, the basis for step 3 would be built. Based on the activities in steps 1 and 2, the prospects of further stages in the use of workshop technology by the Navy would be examined cooperatively by ONR and ARC. At the end of the contract period a set of considerations and recommendations would be produced by ARC.

3d3a

B. Use of the Technology by a Pilot Group

3e

Step 4. Hands on experience by a "pilot plant" Navy R&D organization.

3e1

As indicated above, this step is not covered by the current effort, and depends on external arrangements to be made by the Navy to provide facilities for extensive, continued work by a group of knowledgeable users. This step is seen as an important continuation of the first three steps.

3e1a

The reason we want ultimately to work closely with a Navy R&D organization is that it is through such a group that technology transfer seems most natural. Successful technology transfer cannot be achieved by single exposures, but requires sustained contact and commitment. ARC's workshop system can be considered a special information system laboratory to be used experimentally by the Navy R&D group. From such experience and ongoing dialogue between the Navy R&D group and eventual users of this type of technology in operational Navy organizations will come specifications for systems to meet specific Navy needs.

3f

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III SUMMARY OF PROGRESS

4

Work during the current period, since April 1973, has been directed toward the expected application of the ARC-developed tools to an outside Office and an outside Community. Reports covering this work have of course not been completed, but those now in preparation cover:

4a

Consideration of Export of ARC Tools to a Distant Office

4a1

Analysis of the Content of the Network Journal

4a2

Comparison of Features of ARC Bibliographic Retrieval Systems with Other Existing Systems

4a3

Features of File Systems Created for Personal Use

4a4

Scenarios for Common Useful Tasks

4a5

Other analyses of the effectiveness of the input and retrieval features of ARC systems.

4a6

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IV SUMMARY OF WORK PROPOSED FOR COMING YEAR

5

Step 1. Initial Study of Navy Needs and Applications

5a

The initial step would be to work with ONR or another Navy agency ONR designates to prepare a work plan for the year that consists of the ingredients mentioned earlier: studies of Navy needs and possible application of workshop technology, seminars and demonstrations, and an actual hands on pilot plant experience in a Navy real work environment.

5a1

Study of Navy needs and applications could consist of visits to appropriate Navy installations and discussions with Navy personnel and/or ongoing dialogue and working sessions with Navy personnel who want to pursue this topic both before and after seminars and demonstrations.

5a2

Step 2. Demonstrations and Tutorials to Appropriate Navy Personnel showing ARC technology capabilities and potentials in context of Navy needs.

5b

Workshop seminars and tutorials for appropriate Navy personnel would:

5b1

a) discuss the Knowledge Workshop concept

5b1a

b) introduce the prototype Workshop tools, and

5b1b

c) demonstrate the use of these tools at one or more Navy sites

5b1c

Preparation for a Demonstration and Seminar

5b2

The success of a demonstration would depend on well-prepared and well-written scenarios, and useful files built to allow user practice. It would also depend on local and Network arrangements which would provide the machines and communication to make online demonstrations and practice possible. To obtain maximum benefit from these preparations, it would be important to record the formal presentations for replay to other groups. Therefore, the tasks to be undertaken in this proposed effort are of the following types:

5b2a

Writing of scenarios for use in demonstration and by attendees and later by the user community.

5b2a1

Building of files that are matched to the scenarios.

5b2a2

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Message files	5b2a2a
Project time and cost files	5b2a2b
Personnel files	5b2a2c
Report text files	5b2a2d
Bibliographic files	5b2a2e

Scripting of demonstrations to clearly illustrate the use of the scenarios and files. 5b2a3

Printing of slides and booklets. 5b2a4

Arranging for equipment to be installed at the Demonstration. 5b2a5

Typewriter terminals	5b2a5a
Display terminals	5b2a5b
Lineprinters	5b2a5c
Closed circuit video and videotape equipment	5b2a5d

Arranging for Network connections locally and at ARC to insure system performance as needed. 5b2a6

Arranging for video recording a demonstration and for editing the results. 5b2a7

Arranging for invitations, housing, meals, and so forth. 5b2a8

Preparing of questionnaires to be answered by Navy participants regarding aspects of a demonstration and seminar, to test the effectiveness of presentation and allow improvement of techniques. 5b2a9

Step 3. Study and Analysis of Steps 1 and 2, and Planning for Further Implementation. 5c

Study and Analysis 5c1

After any demonstration and seminar, ARC and ONR personnel would evaluate the sessions. 5c1a

From this study, critiques and analyses would be prepared by ARC. For any further demonstrations, improvements would be made, based on the results. 5c1b

Planning for Further Implementation 5c2

The best next steps for carrying on the transfer of ARC

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technology to the Navy would be studied by ARC and CNR.
 Possible courses to be examined for feasibility are:

5c2a

Additional Demonstrations and Seminars

5c2a1

A single event may be judged to be inadequate to give a satisfactory understanding of the uses of the workshop tools. Further demonstrations and tutorials to the same group or other groups might be judged to be needed to achieve comprehension of the workshop concept.

5c2a1a

Formation of an Interest Group

5c2a2

Navy personnel in various departments might be interested in personal use of the tools and in carrying on discussion of the potential applications in the Navy. Plans for further work with these individuals could be made.

5c2a2a

Navy Site Cooperative Effort

5c2a3

The feasibility of small trial workshop groups in the Navy could be examined. If it appeared that the next useful step would be to work on-site with a small Navy group for a limited period, plans for this activity could be formulated.

5c2a3a

Establishment of a Workshop Pilot Plant Group in the Navy

5c2a4

The prospect of a pilot plant group using workshop tools in their daily work could be outlined. If the initial prospect were to be judged advantageous, the resources necessary to achieve this could be estimated.

5c2a4a

Final Report

5c3

A final report of the activity in Steps 1, 2, and 3 would be prepared by ARC. This report would include:

5c3a

Factual report and summary critique of all presentations.

5c3a1

Recommendations for next steps in the transfer of the Workshop technology.

5c3a2

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V PERSONNEL

6

It is planned that the Principal Investigators will be Dr. Douglas C. Engelbart, Director, Augmentation Research Center. (SS 540-22-2706) and Dr. Richard W. Watson, Assistant Director, Augmentation Research Center. (SS 474-38-5770) Other significant contributions are anticipated from

6a

Jeanne B. North, Research Analyst

6a1

Paul Rech, Senior Research Engineer

6a2

Other personnel from ARC

6a3

VI REFERENCES

7

D.C. Engelbart, R. W. Watson, and J. C. Norton. "The Augmented Knowledge Workshop". In: AFIPS Conference Proceedings, vol. 42, 1973. p.9-21. ARC File 14724. (Included as Appendix A).

7a

D. C. Engelbart. "Coordinated Information Services for a Discipline- or Mission-Oriented Community". Presented at the Second Annual Computer Communications Conference, San Jose, California. January 24, 1973. ARC File 12445. (Included as Appendix B).

7b

D. C. Engelbart. "Design Considerations for Knowledge Workshop Terminals." In: AFIPS Conference Proceedings, vol. 42, 1973. p.221-227. ARC File 14851.

7c

VII BIBLIOGRAPHY

8

ARC 20400, "DNLS Users' Guide." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. November 1973.

8a

ARC 19200, "TNLS Users' Guide." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. November 1973. Separately paged.

8b

ARC 12209, "Output Processor Users' Guide." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 23 August 1973. Unpaged.

8c

ARC 16737, Jeanne B. North, "A Status Report on RINS Design Considerations." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. April 1973.

8d

Proposal for Research No. ISU xx-xxx
 Extension to Contract No. N00014-70-C-0302

ARC 16511, J. F. Vallee, "Towards a Survey of Intelligence Needs Among Systems Developers." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. August 1972.

8e

ARC 16510, N. Dean Meyer, "User Programs; Table of Contents." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 27 April 1973.

8f

ARC 15983, J. F. Vallee, Elizabeth K. Michael, Kirk Kelley, Linda Lane, "The Economics of Text-Editing Functions: Cost-Effectiveness Analysis of NLS and Other Systems." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 17 April 1973.

8g

ARC 15078, J. F. Vallee, "Catalog System Plans." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 13 March 1973.

8h

ARC 14851, D. C. Engelbart, "Design Considerations for Knowledge Workshop Terminals." In: AFIPS Conference Proceedings, Vol. 42, 1973. p.221-227.

8i

ARC 14724, D. C. Engelbart, R. W. Watson, and J. C. Norton, "The Augmented Knowledge Workshop." In: AFIPS Proceedings, National Computer Conference. June 1973. 19p.

8j

ARC 14711, J. B. North, "History, Needs, Possibilities of Catalogs at ARC -- Part 1: NIC Catalogs." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 22 February 1973.

8k

ARC 14537, W. L. Bass, "Catalog Production Processor System Guide." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 20 February 1973.

8l

ARC 13905, J. B. North, "Flow of Information Through the NIC." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 17 January 1973.

8m

ARC 13875, J. B. North, "Online Group Membership Lists and Indexes to Notes." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 25 January 1973.

8n

ARC 13579, J. B. North, "Projector Use in Meeting Agenda, Discussion, Concensus." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 28 December 1972.

8o

ARC 13537, D. C. Engelbart, "SRI-ARC Summary for IPT Contractor

Proposal for Research No. ISU xx-xxx
 Extension to Contract No. N00014-70-C-0302

Meeting, San Diego, 8-10 January 1973." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 7 January 1973. 8p.

8p

ARC 13436, J. B. North, "Online Files Maintained by NIC." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 20 December 1972.

8q

ARC 13141, Elizabeth K. Michael, "CALCULATOR: Phase 1, Specifications." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 6 December 1972. Unpaged.

8r

ARC 13041, "The Online Team Environment: Network Information Center and Computer Augmented Team Interaction." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 94025. 8 June 1972. 266p. [RINS report cited, p.20.]

8s

ARC 13037, J. B. North, "Some Procedures for People Support of an Online Information System." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 4 December 1972.

8t

ARC 12445, D. C. Engelbart, "Coordinated Information Services for a Discipline- or Mission-Oriented Community." In: 2nd Annual Computer Communications Conference, January 24-25, 1973, at California State University, San Jose, California. 12 December 1972. 7p. [Describes RINS efforts to date.]

8u

ARC 12119, J. C. Norton, "Programs for Preparation of: Table of Contents, Journal References, and Index." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 12 October 1972. 16p.

8v

ARC 11841, J. F. Vallee, "Q1: A Simple Retrieval Tool for TNLS Structured Files." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 19 Sept 1972.

8w

ARC 11779, J. B. North, M. D. Kudlick, J. F. Vallee, "Comparative Analysis of Three State-of-the-Art Information Systems." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 7 September 1972. 24p.

8x

ARC 11736, Douglas C. Engelbart, Philip H. Sorenson, "Explorations in the Automation of Sensorimotor Skill Training." Stanford Research Institute, Menlo Park, California. NAVTRADEVCCEN 1517-1, AD 619 046. January 1965. 81p.

8y

ARC 11331, J. F. Vallee, "Progress of SDIS Planning."

Proposal for Research No. ISU xx-xxx
Extension to Contract No. N00014-70-C-0302

Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 9 August 1972. 19p.

8z

ARC 11221, J. B. North, "Some Background for SDIS Considerations." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. June 1972. 10p.

8a@

ARC 11101, Robert Savoie, "Summary of Results of Five-Finger Keyset Training Experiment," Project 8457-21. Stanford Research Institute, Bioengineering Group, Menlo Park, California. 29 March 1972. 4p.

8aa

ARC 10937, J. B. North, "Codes Used in the Master Catalog." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. July 1972. 3p.

8ab

ARC 10923, J. B. North, "Code Manual for Codes Used in the Master Catalog." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. July 1972. 6p.

8ac

ARC 10806, M D. Kudlick, "Report from SDIS Planning Team." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 21 June 1972. 4p.

8ad

ARC 10704, "DNLS Environment." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 19 June 1972. 8p.

8ae

ARC 10480, Nilo Lindgren, "Toward the Decentralized Intellectual Workshop." In: Innovation, No. 24, September 1971. p.50-60.

8af

ARC 10045, D. C. Engelbart, "Experimental Development of a Small Computer-Augmented Information System." Annual Report, Office of Naval Research, (ONR) Contract N00014-70-C-0302, SRI Project 8622. Augmentation Research Center, Stanford Research Institute, Menlo Park, California. April 1972. 22p.

8ag

ARC 9934, "Deferred Execution User Guide." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. April 1972.

8ah

ARC 9733, "Augmentation of the Human Intellect - A Film of the SRI-ARC Presentation at the 1969 ASIS Conference, San Francisco." (A 3-Reel Movie) Augmentation Research Center, Stanford Research Institute, Menlo Park, California. October 1969.

8ai

ARC 9704, D. C. Engelbart, Staff of ARC, "Study for the

Proposal for Research No. ISU xx-xxx
Extension to Contract No. N00014-70-C-0302

Development of Human Intellect Augmentation Techniques," Technical Letter Report 2. 18 August 1969. 45p.

8aj

ARC 9703, Douglas C. Engelbart, William K. English, David C. Evans, "Study for the Development of Computer Augmented Management Techniques - Interim Technical Report." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. RADC-TR-69-98, AD 855 579. 8 March 1969. 82p.

8ak

ARC 9701, D. C. Engelbart, Staff of ARC, "Study for the Development of Human Intellect Augmentation Techniques," Semiannual Technical Letter Report. Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 18 February 1969. 91p.

8al

ARC 9699, D. C. Engelbart, W. K. English, D. A. Evans, "Study for the Development of Computer-Augmented Management Techniques," Quarterly Progress Report 1, 2 July - 7 October 1968. Augmentation Research Center, Stanford Research Institute, Menlo Park, California. 18 October 1968. 60p.

8am

ARC 9698, Douglas C. Engelbart, "Augmenting Your Intellect (Interview With D. C. Engelbart)." In: Research/Development, August 1968. p.22-27.

8an

ARC 9697, D. C. Engelbart, W. K. English, J. F. Rulifson, "Development of a Multidisplay, Time-Shared Computer Facility and Computer-Augmented Management-System Research." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. AD 843 577. April 1968. 180p.

8ao

ARC 9696, R. E. Hay, J. F. Rulifson, "MOL940: Preliminary Specifications for an ALGOL-Like Machine Oriented Language for the SDS 940." (Interim Technical Report 2). Augmentation Research Center, Stanford Research Institute, Menlo Park, California. March 1968. 35p.

8ap

ARC 9695, J. D. Hopper, L. P. Deutsch, "COPE: An Assembler and On-Line-CRT Debugging System for the CDC 3100." (Interim Technical Report 1). Augmentation Research Center, Stanford Research Institute, Menlo Park, California. March 1968. 66p.

8aq

ARC 9694, William K. English, Douglas C. Engelbart, Melvin A. Berman, "Display-Selection Techniques for Text Manipulation." In: IEEE Transactions on Human Factors in Electronics, Vol. HFE-8, No. 1, March 1967. p.5-15.

8ar

ARC 9693, D. C. Engelbart, W. K. English, J. F. Rulifson, "Study

Proposal for Research No. ISU xx-xxx
 Extension to Contract No. N00014-70-C-0302

for the Development of Human Intellect Augmentation Techniques - Interim Progress Report." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. March 1967. 98p.

8as

ARC 9692, W. K. English, D. C. Engelbart, Bonnie Huddart, "Computer Aided Display Control - Final Report." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. CR-66111, N66-30204. July 1965. 104p.

8at

ARC 9691, D. C. Engelbart, "Augmenting Human Intellect: Experiments, Concepts, and Possibilities - Summary Report." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. March 1965. 65p.

8au

ARC 9690, D. C. Engelbart, B. Huddart, "Research on Computer-Augmented Information Management - Final Report." Augmentation Research Center, Stanford Research Institute, Menlo Park, California. ESD-TDR-65-168, AD 622 520. March 1965. 144p.

8av

ARC 9689, Douglas C. Engelbart, "Games That Teach the Fundamentals of Computer Operation." In: IRE Transactions on Electronic Computers, March 1961. p.31-41.

8aw

ARC 9474, "Interactive Bibliographic Search: the User Interface." Proceedings of the Workshop, AFIPS Press, 1971. [Bibliography and index produced at ARC by RINS procedures.]

8ax

ARC 9375, Douglas C. Engelbart, "A Conceptual Framework for the Augmentation of Man's Intellect." p.1-29. In: Vistas In Information Handling. Paul W. Howerton, David C. Weeks (Eds.). Spartan Books, Washington, D.C. 1963. 233p.

8ay

ARC 8829, Douglas C. Engelbart (Augmentation Research Center, Stanford Research Institute, Menlo Park, California). "X-Y Position Indicator for a Display System," U. S. Patent No. 3,541,541. U. S. Patent Office, Washington, D.C. 21 June 1967. 7p.

8az

ARC 8616, D. C. Engelbart, "Experimental Development of a Small Computer-Augmented Information System." Annual Report, Office of Naval Research (ONR) Contract N00014-70-C-0302, SRI Project 8622. Augmentation Research Center, Stanford Research Institute, Menlo Park, California. April 1971. 8p.

8ba

ARC 8277, D. C. Engelbart and Staff of Augmentation Research Center, "Network Information Center and Computer-Augmented Team Interaction." Interim Report, Air Force (RADC) Contract F30602-70-C-0219, SRI Project 8457. Augmentation Research Center,

Proposal for Research No. ISU xx-xxx
 Extension to Contract No. N00014-70-C-0302

Stanford Research Institute, Menlo Park, California. July 1971.
 104p.

8ba

ARC 7470, "NIC TNLS User Guide." Functional Document,
 Augmentation Research Center, Stanford Research Institute, Menlo
 Park, California. 23 September 1971. Unpaged.

8bb

ARC 7834, J. C. Norton, "Outline for Establishing People Service
 Support Team (PSST)." Augmentation Research Center, Stanford
 Research Institute, Menlo Park, California. 2 November 1971.

8bc

ARC 5255, D. C. Engelbart, "Intellectual Implications of
 Multi-Access Computer Networks." Paper presented at the
 Interdisciplinary Conference on Multiple-Access Computer Networks,
 Austin, Texas, April 20-22, 1970. 12p.

8bd

ARC 5145, "Current Catalog of the NIC Collection." Functional
 Document, Augmentation Research Center, Stanford Research
 Institute, Menlo Park, California. August 1972. Unpaged.

8be

ARC 5140, D. C. Engelbart and Staff of Augmentation Research
 Center, "Advanced Intellect-Augmentation Techniques." Final Report
 NASA Contract NAS1-7897, SRI Project 7079. Augmentation Research
 Center, Stanford Research Institute, Menlo Park, California. July
 1970. 212p.

8bf

ARC 5139, D. C. Engelbart and Staff of Augmentation Research
 Center, "Computer-Augmented Management-System Research and
 Development of Augmentation Facility." RADC-TR-82, Final Report of
 Contract F30602-68-C-0286, SRI Project 7101. Augmentation Research
 Center, Stanford Research Institute, Menlo Park, California. April
 1970. 268p.

8bg

ARC 3954, D. C. Engelbart, W. K. English, "A Research Center for
 Augmenting Human Intellect." In: AFIPS Proceedings, Fall Joint
 Computer Conference, Vol. 33, 1968. p.395-410.

8bh

ARC 3906, D. C. Engelbart, "Augmenting Human Intellect: A
 Conceptual Framework." Summary Report, Contract AF 49(638)-1024,
 SRI Project 3578. Augmentation Research Center, Stanford Research
 Institute, Menlo Park, California. AD 289 565, October 1962.
 144p.

8bi

ARC 3562, D. C. Engelbart, "Human Intellect Augmentation
 Techniques." Final Report. Augmentation Research Center, Stanford
 Research Institute, Menlo Park, California. CR-1270, N69-16140.
 July 1968. 85p.

8bj

Proposal for Research No. ISU xx-xxx
Extension to Contract No. N00014-70-C-0302

ARC 585, Douglas C. Engelbart, "Special Considerations of the
Individual As a User, Generator, and Retriever of Information."
In: American Documentation, Vol. 12, No. 2, April 1961. p.121-125.

8bk

Proposal for Research No. ISU xx-xxx
 Extension to Contract No. N00014-70-C-0302

A KNOWLEDGE WORKSHOP FOR THE NAVY:
 AN EXPERIMENT IN TECHNOLOGY TRANSFER

PART TWO--CONTRACTUAL PROVISIONS

I ESTIMATED TIME AND CHARGES

9

10

It is proposed that the research work outlined herein by Stanford Research Institute be performed during a period of 12 months, starting 2 January 1974.

10a

Pursuant to the provisions of ASPR 16-206.2, attached is a cost estimate and support schedule in lieu of the DD Form 633-4. Also enclosed is a signed form complete except as to the "Detail Description of Cost Elements."

10b

II GOVERNMENT-FURNISHED EQUIPMENT

11

The performance of the proposed work will involve the use of government-furnished equipment covered by Air Force (RADC) Contract No. F30602-72-C-0313.

11a

III REPORTS

12

A Final Technical Report will be submitted upon completion of the work.

12a

IV CONTRACT FORM

13

It is requested that any contract resulting from this proposal be awarded on a cost-plus-fixed-fee basis as a supplemental agreement to Contract No. N00014-70-C-0302.

13a

V ACCEPTANCE PERIOD

14

This proposal will remain in effect until 2 January 1974. If consideration of the proposal requires a longer period, the Institute will be glad to consider a request for an extension of time.

14a

SSRI-ARC JCN RWW 10-FEB-74 07:37 19938

Proposal for Research No. ISU xx-xxx
Extension to Contract No. N00014-70-C-0302

Cost Estimate:

Proposal for Research No. ISU xx-xxx
 Extension to Contract No. N00014-70-C-0302

COST ESTIMATE

(for the one year period starting 1/2/74)

Personnel Costs

Prof	1594 hrs.	
Clerical	463 hrs.	
Total Direct Labor		14,351
Payroll Burden @ 26.0% *		3,731
Total Labor and Burden		18,032
Overhead @ 105% *		18,968
Total Personnel Costs		\$ 37,068

Direct Costs

Travel		\$ 4,219
7 trips Wash DC @ 318 =	2,226	
28 Days Subsistence @ 31=	868	
5 trips San Diego @ 49 =	245	
20 Days Subsistence @ 26=	520	
Auto Rental 24 days @ 15	360	
Seminar arrangements		5,000
(Demonstration equipment rental, shipping, communications)		
Report Costs		355
Total Direct Costs		\$ 9,574
Total Estimated Cost		\$ 46,642
Fixed Fee		3,703
TOTAL ESTIMATED COST PLUS FIXED FEE		\$ 50,345

* See following Schedules

Proposal for Research No. ISU xx-xxx

Extension to Contract No. N00014-70-C-0302

Cost Schedules:

Proposal for Research No. ISU xx-xxx
 Extension to Contract No. N00014-70-C-0302

SCHEDULE A

DIRECT LABOR

Direct labor charges are based on the actual salaries for the staff members contemplated for the project work plus a judgmental factor applied to base salary for merit increases during the contract period of performance. Frequency of salary reviews and level of merit increases are in accordance with the Institute's Salary and Wage Payment Policy as published in Topic No. 505 of the SRI Administration Manual and as approved by the Defense Contract Administration Services Region.

SCHEDULE B

OVERHEAD AND PAYROLL BURDEN

Based on projected 1973 budget data, higher overhead and payroll burden rates were formerly negotiated. However, these have been adjusted downward (with the concurrence of the Resident Government Auditor) to reflect more favorable cost experience through the first six accounting periods.

Rather than setting forth these specific rates, it is requested that contracts provide for reimbursement at billing rates acceptable to the Contracting Officer subject to retroactive adjustment to fixed rates negotiated on the basis of historical cost data. Included in payroll burden are such costs as vacation, holiday, and sick leave pay, social security taxes, and contributions to employee benefit plans.

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SCHEDULE C

TRAVEL COSTS

Air fare is based on prices for travel to Washington D.C. at \$318 and to San Diego at \$49 round trip tourist established in the Official Airline Guide dated November 1, 1973.

Domestic subsistence rates and travel by private auto are established standards based on cost data submitted to and approved by DCAA.

SCHEDULE D

REPORT COSTS

Report costs are estimated on the basis of the number of pages of text and illustrations and the number of copies of reports to be produced, in accordance with the following rates per page which have been reviewed by DCAA:

Editing	\$ 2.29
Composition	\$ 2.22
Report coordination	.63
Proofreading	.92
Press/Bindery/Photography	.021 per impression

The following is a breakdown of the estimated cost of report production:

Printing, 50 pages at \$ 6.06 per page =	\$ 303
(including editing, composition, report coordination, proofreading)	
Press and bindery at \$.021 per printed page =	52
(for 50 printed pages - 50 copies)	
Total Estimated Report Costs	355

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Proposal for Research No. ISU xx-xxx

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Delivery of Messages Directly to Initial Files

We should move toward elimination of the need for inmes. Sndmsg stuff should deliver directly to a users initial file if he so indicates. Whats required to do this?

1

RWW 30-OCT-73 13:24 19963

Delivery of Messages Directly to Initial Files

(J19963) 30-OCT-73 13:24; Title: Author(s): Richard W. Watson/RWW;
Distribution: /KEV NDM CHI DCE JCN JEW; Sub-Collections: SRI-ARC; Clerk:
RWW;

response to (19918,) on mouse and keyset codes

the mouse and keyset codes should show caseshift 4(?) that is the control shift (all mouse buttons down) i.e. ↑A, ↑B... It should also show what codes are represented by depressing and releasing mouse buttons without intervening typing e.g. right button down and up is CA, right two buttons down and up is CDOT (i think) etc.

1

KEV 30-OCT-73 13:40 19964

response to (19918,) on mouse and keyset codes

(J19964) 30-OCT-73 13:40; Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /NDM; Sub-Collections: SRI-ARC; Clerk: KEV;

station agent change

Jeanne:

please delete robert silberski (RS2) and add me Brenda Epling (BBE)
in the station agent group (NSAG) thank you.

1

station agent change

(J19965) 30-OCT-73 13:51; Title: Author(s): Brenda B. Epling/BBE;
Distribution: /JBN; Sub-Collections: NIC; Clerk: BBE;