

Some Rules for Backlinks in Helpd,

When I tried to start putting backlinks in the Help files today, I found the rules in Helpd somewhat inadequate. I suggest this rewrite, which follows the already existing rule as I understood it, but amplifies it somewhat. If everyone concurs, could we all try to follow it? Bev

## Some Rules for Backlinks in Helpd,

BACKLINKS: The following is a suggested rewrite/clarification / amplification of the present rule for backlinks in Helpd.

1. The form to follow when putting in a backlink is: % backlinks: <.....>, <.....>

2. Backlinks are placed at the tail of the plex one level below the node to which the backlink refers: e.g., if statement 3 is the one being referenced, and it has 3 substatements beneath it (3a, 3b, 3c), then the backlinks would be placed at statement 3d. (If the referenced node has no substructure, backlinks would become a substatement.)

3. When the statement you are backlinking from is an un-named menu item, the backlink should reference the source statement of the menu item, followed by viewspecs tr (e.g. the backlink to reference an un-named menu item under "accessing" in the Base file would be <base, accessing:tr>. In this way the next documentor who needs to deal with the backlink will be able to find the link more quickly.

BEV 7-NOV-75 18:01 26896

Some Rules for Backlinks in Helpd.

(J26896) 7-NOV-75 18:01;;; Title: Author(s): Beverly Boli/BEV;  
Distribution: /KIRK( [ ACTION ] ) DVN( [ ACTION ] ) POOH( [ INFO-ONLY ]  
 ) DAV( [ INFO-ONLY ] ) ; Sub-Collections: SRI-ARC; Clerk: BEV;

26896 Distribution

Kirk E. Kelley, Dirk H. Van Nouhuys, Ann Weinberg, David C. Smith,

FEA guy's name McCrensky and a question

Dean the guy from EPA is Jay McCrensky , was at SU Busin. School,  
joined Pete's staff, hopes to come, but \$\$ problems which may be  
overcome,, wont know til next week, says he really doesn't know you,  
just your name,

P.S. Is it really the 'Office of Low Income Weatherization' ??  
Weatherization of Low iNcome Houses? orwhat???

RLL 7-NOV-75 18:08 26897

FEA guy's name McCrensky and a question

(J26897) 7-NOV-75 18:08;;; Title: Author(s): Robert N.  
Lieberman/RLL; Distribution: /NDM( [ ACTION ] ); Sub=Collections:  
SRI-ARC; Clerk: RLL;

26897 Distribution  
N. Dean Meyer,

Questions on Help status comments in 12650

- 1) Re: 5c1b and 26894, Why can't we have a help command and CTRL-Q? 1
- 2) Re: 5c1b4, If no "phrase to look up" is specified, the system should first look for a statement containing the name of the tool, searching that file and it's index files, before just taking them to the first statement in the file. This is what it does now. 2
- 3) Re: 5c2a, The help tool description files must be in the directory Help or Xhelp. Any other help files can be in any directory on your computer in 8.5. Are you saying it will be necessary to change this in 9 until WM files work? 3



KIRK 8-NOV-75 03:40 26898

Questions on Help status comments in 12650

(J26898) 8-NOV-75 03:40;;; Title: Author(s): Kirk E. Kelley/KIRK;  
Distribution: /CHI( [ ACTION ] ) DAV( [ ACTION ] ) HELP( [ INFO-ONLY ] )  
; Sub-Collections: SRI-ARC HELP; Clerk: KIRK;

26898 Distribution

Charles H. Irby, David C. Smith, Jeanne M. Beck, David C. Smith,  
Beverly Boli, David C. Smith, Jonathan B. Postel, Priscilla A. Wold,  
Rita Hysmith, Pamela K. Allen, Delorse M. Brooks, Elizabeth F.  
Finney, Beverly Boli, Lawrence A. Crain, Kirk Sattley, Susan Gail  
Roetter, Robert N. Lieberman, Ann Weinberg, Kenneth E. (Ken) Victor,  
Douglas C. Engelbart, James H. Bair, Elizabeth K. Michael, Richard W.  
Watson, Elizabeth J. Feinler, Harvey G. Lehtman, Kirk E. Kelley,  
Laura E. Gould, Jeanne M. Beck, Dirk H. Van Nouhuys, James C. Norton,  
Dirk H. Van Nouhuys, Ann Weinberg, Kirk E. Kelley,

JJL2 9-NOV-75 18:57 26899

Good Morning !!

Lynne,

Good Morning !!

How was your weekend?

Thanks for the help Friday,

Jay

1

JJL2 9-NOV-75 18:57 26899

Good Morning !!

(J26899) 9-NOV-75 18:57;;; Title: Author(s): John J. (Jay)  
Lowe/JJL2; Distribution: /MAS2( [ ACTION ] ) ; Sub-Collections: NIC;  
Clerk: JJL2;

26899 Distribution  
Marilynne A. Sims,

Any More 'Additions or Corrections' to the KWAC Minutes?

I've received comments from a couple of architects and wondered how many others intended to submit comments. If you do intend to send comments, would you sndmsg to me your intentions so I know when we have everything to finalize and journalize the minutes? Thanks,

SGR 10-NOV-75 11:54 26900

Any More 'Additions or Corrections' to the KWAC Minutes?

(J26900) 10-NOV-75 11:54;;; Title: Author(s): Susan Gail  
Roetter/SGR; Distribution: /KWAC( [ ACTION ] ) ARC-APP( [ INFO-ONLY ] )  
; Sub-Collections: SRI=ARC KWAC ARC=APP; Clerk: SGR;

## 26900 Distribution

Marcia L. Keeney, Jeanne M. Beck, Rodney A. Bondurant, Douglas C. Engelbart, Jeanne M. Leavitt, Susan Gail Roetter, Raymond R. Panko, Adrian C. McGinnis, James C. Norton, J. D. Hopper, Elizabeth J. Feinler, James H. Bair, Robert N. Lieberman, N. Dean Meyer, Sandy L. Johnson, Martin E. Hardy, Chuck D. Hall, Robert L. Fishback, Sri User, Joseph L. Ehardt, Marilynne A. Sims, Elizabeth F. Finney, Lawrence A. Crain, E. S. VonGehren, Glenn A. Sherwood, Kathy L. Mabrey, Jeanne M. Beck, David A. Potter, Robert N. Lieberman, Terry H. Proch, Ronald P. Uhlig, Susan Gail Roetter, Michael A. Placko, Stanley M. (Stan) Taylor, Elizabeth J. Feinler, Rudy L. Ruggles, Frank G. Brignoli, Robert M. Sheppard, Richard W. Watson, Douglas C. Engelbart, James C. Norton, James H. Bair, Duane L. Stone, Inez M. Mattiuz, Connie K. McLindon, Bonny Penny Mosher, Israel A. Torres, Buddie J. Pine, Laura J. Metzger, Priscilla A. Wold, Pamela K. Allen, Jeffrey C. Peters



Viewspec Q - Partial answer to Scroll left

Are u aware of viewspc Q (uppercase q)? It flushes let the text  
maintaining indentation relative to top statement. Viewspc l or q  
must also be one. This is a patial answer to the Scroll left  
function you mentio in <33858,>

RLL 10-NOV-75 14:08 26901

Viewspec Q - Partial answer to Scroll left

(J26901) 10-NOV-75 14:08;;; Title: Author(s): Robert N.  
Lieberman/RLL; Distribution: /DVN( [ ACTION ] ); Sub-Collections:  
SRI-ARC; Clerk: RLL;

26901 Distribution  
Dirk H. Van Nouhuys,

DLS 10-NOV-75 14:56 26902

Changes Requested in BBNB Exec

Sent to chipman, calleva, strollo, peters and norton

## Changes Requested in BBNB Exec

There are a number of differences in using NLS at BBNB (as compared with Office-1). Most have to do with the exec. Since all past experience at RADC has been with Office-1 there is a body of documentation, user programs and procedures that would have to be changed to accommodate the exec at BBNB. It seems (from my end of course) that it would be simpler to change the exec. Most of the changes seem minor, and a real service would be given to NLS users. Changes that would help NLS users at RADC (and elsewhere) are listed below in my order of priority.

1

IMLAC's...we have several IMLAC's at RADC (long vector type) that are used extensively with NLS. There are a number of user features on the IMLAC that make them desirable over the lineprocessors, therefore I suspect that IMLAC's would be (if it were possible) used a lot with NLS at BBNB. Can IMLAC's be added to the list of terminals that are supported by BBNB?

1a

SUBSYSTEMS...there are two subsystems at office-1 that are used daily at RADC; MESSAGE and SENDPRINT. The first to read messages on-line, the second to send sequential files to a line printers on our TIP. MSG can be used to read messages, however most people at RADC have L-10 and/or NLS programs that automatically move messages into NLS, reformat them, print them etc. Reading messages with MSG reformats the MESSAGE.TXT file, such that the user programs will all have to be rewritten. Can MESSAGE and SENDPRINT be included in the subsystems available under BBNB TENEX?

1b

NO RAISE...NLS all our terminals and make use of both upper and lower case. Is it possible to make the default no raise? If not for everyone, for those groups that are NLS users? If not for them, for the terminal types lineprocessor and IMLAC?

1c

LOG...at Office-1 it is not necessary to type LOG to log on. One needs only to start typing the directoryname, password etc. A minor point, again one of consistency with past experience,

1d

DLS 10-NOV-75 14:56 26902

Changes Requested in BBNB Exec

(J26902) 10-NOV-75 14:56;;; Title: Author(s): Duane L. Stone/DLS;  
Sub=Collections: RADC; Clerk: DLS;

KEV 10-NOV-75 12:36 26903

1st release of the debugger

it is now released for internal use, please let me know of any problems, etc. this document describes what files you need, and how to get started; see me if questions, etc.

1st release of the debugger

The first release of the debugger is now available for internal use, 1

(Since this is a first release, although I dont know of any bugs, please be tolerant, and I am interested in any suggestions. Also, since this is a first release, there are kludges involvled in running it, due to MSG and CLI present deficiencies, that we anticipate disappearing in the future.) 1a

Similar to the rest of the current NSW implementation, all the files needed by the debugger must exist in the connected directory. In addition, the debugger will create files in the connected directory. 2

One of the files you may wish to pick up is a runfile that will delete all the files created by the debugger and do a deliver. 2a

Current ssave versions of the needed files will be maintained in [ISIC]<NSW=SOURCES>. 3

FILES NEEDED TO RUN THE DEBUGGER 4

fe.sav	this is the normal tool frontend	4a
messg.sav	MSG program	4b
wm.sav	the worksmanager	4c
exec.gram	the worksmanager grammar	4d
datal.nswdata	data base for the worksmanager	4e
nswhelprule.gram	worksmanager help rules	4f
dfe.sav	this is a version of the frontend that the fe creates to talk to the debugger	4g
nsw.sav	a kludge program to bypass MSG deficiencies	4h
msgpsi.sav	another kludge program to bypass MSG deficiencies	4i
debug.gram	the debugger grammar	4j
debug.pf	the debugger parsefunctions	4k
debug.sav	the debugger backend (debugger dispatcher)	4l
l1010.sav	the L10 langauge module	4m
tnxloc.sav	the local TENEX operating system module	4n



1st release of the debugger

FILES CREATED BY THE DEBUGGER (in connected directory)	5
*,SYM;*                  symbol table files	5a
MSGPSI,DATA;*          kludge MSG files	5b
*,LM;*                  language module files	5c
*,OSM;*                 operating system module files	5d
*,TMFIL;*              worksmanager files	5e
USEFUL RUNFILES	6
delete-debug.run	6a
will delete the following files and then do a deliver (YY*,*;) in your connected directory:	6a1
*,SYM;*                  symbol table files	6a1a
MSGPSI,DATA;*          kludge MSG files	6a1b
*,LM;*                  language module files	6a1c
*,OSM;*                 operating system module files	6a1d
*,TMFIL;*              worksmanager files	6a1e
copy-debug.run	6b
will copy the following files from <nsw=sources> to your connected directory:	6b1
fe.sav	6b1a
dfe.sav	6b1b
nsw.sav	6b1c
msgpsi.sav	6b1d
debug.sav	6b1e
debug.gram	6b1f
debug.pf	6b1g
tnxloc.sav	6b1h

1st release of the debugger

11010,sav 6b1f

delete=debug,run 6b1j

USE OF THIS RELEASE OF THE DEBUGGER 7

the following sequence must be strictly adhered to: 7a

1) at the TENEX EXEC level run the program nsw,sav 7a1

2) login to the worksmanager properly 7a2

3) give the NSW EXEC command "ARM DEBUGGER" 7a3

4) give the NSW EXEC command to run the tool you wish to debug 7a4

5) anytime after the tool herald appears you may type a control-L <"L"> to enter the debugger for the first time 7a5

6) when entering the debugger for the first time you will be asked for the MSG fork number of the PSI fork, type 5<CA> 7a6

7) the above step will be (eventually) followed by some noise words and then the debugger herald (DEBUG) and you are now talking to the debugger 7a7

8) you may now set breakpoints, read and/or modify core, etc, 7a8

9) to get back to your tool (and to continue after a breakpoint is encountered) give the continue command 7a9

NOTES AND WARNINGS FOR THIS RELEASE 8

a) the debugger STATUS command will always show you as debugging tool NLS, IDH 1, with a garbage or null generic name 8a

b) this release of the debugger can not handle multiple tool/fork debugging (FE limitation to disappear in a couple of days) 8b

c) do NOT set a breakpoint in your backend after you have acknowledged a procedure call from the FE as this will cause the world to die ungracefully (FE limitation expected to go away in a couple of days) 8c

(This generalises to not setting a breakpoint in the backend for when the FE is in a MSG RUNNING NOT READY state and is reading characters from the users terminal.) 8c1

(NOTE: setting a breakpoint at BPTCTN in an L10 backend that

KEV 10-NOV-75 12:36 26903

1st release of the debugger

uses DSMS middle end can cause a breakpoint after the  
acknowledge is sent to the FE)

8c2

(You can set a breakpoint at BPTCTN if you really want to,  
but when you get into the breakpoint for the Middle end  
returns clear the breakpoint.)

8c2a

d) there is a FE restriction of 50 characters on the length of the  
string that you may specify as the break/no break command string  
to get fed to the debugger when you hit/miss a breakpoint

8d

e) control-L <"L> is a DEFERRED PSI (at my request, please comment  
if you would rather have it as an immediate PSI) to the FE

8e

f) you may not type control-L <"L> to enter the debugger to  
examine a looping tool (FE limitation expected to go away  
eventually)

8f

KEV 10-NOV-75 12:36 26903

1st release of the debugger

(J26903) 10-NOV-75 12:36;;; Title: Author(s): Kenneth E. (Ken)  
Victor/KEV; Distribution: /NPG( [ ACTION ] ) JBP( [ ACTION ] ) RWW( [  
INFO-ONLY ] ) ; Sub-Collections: SRI-ARC NPG; Clerk: KEV;  
Origin: < NSW-DEBUGGER, !DOC/DEBUG-1ST-RELEASE,NLS;1, >, 10-NOV-75  
12:33 KEV ;;;;####;

## 26903 Distribution

Susan K. Ocken, Raphael Rom, Jan H. Kremers, David C. Smith, Andy Poggio, David L. Retz, Jan A. Cornish, Larry L. Garlick, Robert Louis Belleville, Elizabeth J. Feinler, Joseph L. Ehardt, Jonathan B. Postel, Kirk E. Kelley, Carolyn J. Martin, David S. Maynard, Kenneth E. (Ken) Victor, James E. (Jim) White, Elizabeth K. Michael, Don I. Andrews, J. D. Hopper, Charles H. Irby, Harvey G. Lentman, Jonathan B. Postel, Richard W. Watson,

CONTACT: TRW, Jim Sinclair on 21 Oct 75, mutual interest in  
Man/Machine interface

TRW: Contact report 26904

CONTACT: TRW, Jim Sinclair on 21 Oct 75, mutual interest in  
Man/Machine interface

DATE: 21 Oct 75

BY: Lieberman

ATTENDEES: Full name of organization, address, phone number as  
substatements

Jim Sinclair - TRW

Dave Vatz - TRW

Robert Lieberman - SRI-ARC

MEDIUM: FACE-TO-FACE

WHERE: TRW, McLean, VA

ACTION-ITEMS:

Actions taken, to be taken, etc., dated

DISTRIBUTION: ARC-LOG DCE JCN DVN RLL

REFERENCES: <26605,> <25369,>

DOCUMENTS: Hard copy given and received

GIVEN: Date and documents given

"Coordinated Information Services for a Discipline- or  
Mission-Oriented Community," Douglas Engelbart, 12-DEC-72,  
<journal,12445,>

"The Augmented Knowledge Workshop," Douglas C. Engelbart,  
Richard W. Watson, and James C. Norton, 1-MAR-73,  
<journal,14724,>

"The SRI-ARC Workshop Utility Service: What and Why," James  
Norton, 10-SEP-75, <journal,26368,>

"Seminar on the AUGMENTED KNOWLEDGE WORKSHOP," SRI-ARC,  
12-Aug-75, <journal,33193,>

1

1a

1b

1c

1d

1d1

1d2

1d3

1e

1f

1g

1g1

1h

1i

1j

1j1

1j1a

1j1b

1j1c

1j1d

RLL 10-NOV-75 18:55 26904

CONTACT: TRW, Jim Sinclair on 21 Oct 75, mutual interest in  
Man/Machine interface

RECEIVED: Date and documents received

1j2

## REMARKS:

1k

Jim requested a demonstration of NLS. He is taking over the work of Dr. Leon <see the second reference --references> on the Command Center project,

1k1

For one hour Jim spoke on TRW's work and showed me the set up they have in McLean,

1k2

They have a room with two slave monitors, two console monitors; one of which has 4 color capabilities with a random access slide projector overlay. There is also a 4 by 8 screen where computer or slide images can be project (including the four colors),

1k2a

The set up is supported by a NOVA computer but will soon be a PDP-11/70,

1k2b

For the PDP-11 they will have dial-up features, 192k words and 88 megabytes of disc (RP04),

1k2c

Their capability includes displaying three different computer generated displays and a slide projection overlay. One was used for a map, one for command interaction, and one for system monitoring (not really part of the command center for users),

1k3

Their command interaction was crude but in talking with Jim they were beginning to go the route we have taken. They have found that once operators began to learn the commands, the wanted a short way of specifying them to the system. Menu items was the key way of giving chooses to the operator,

1k4

Response was super fast (compared to our network response) but the entire NOVA was used to serve one command center. Another, center is possible but I believe is only a duplication of what is seen in the first,

1k5

They believe such a center can be used for training, reviewing data, data management, etc,

1k6

Clearly they have the military in mind (alas) but only the content of their demo was so colored,

1k7

I felt the random access side projector was a neat feature but was clearly a manual operation,

1k8

RLL 10-NOV-75 18:55 26904

CONTACT: TRW, Jim Sinclair on 21 Oct 75, mutual interest in  
Man/Machine interface

The operator had to go to a special device and push a number (which he remembered was a particular map) and then pushed another button to display the map. Then he switched to the computer console and requested the computer generated picture to be displayed over it.

1k8a

The colors really added something to the information being seen, but I think less than four would be sufficient (dispite the four color map conjecture). Showing table data in the usual black and white with selected items in RED was very good. (they can blink the items also, but cannot blink two different colors).

1k9

They intend to link up with GIM (a TRW Generalized Information Management System).

1k10

After their demo, I spoke for several hours. They were quite interested but I really don't know if TRW would ever wish to buy into our utility.

1k11

I tried to get them to see DNLS in Rosslyn but they refused, saying perhaps sometime later.(??)

1k12

Another note, they use a four button system to move the cursor-ugh. Thus, Jim was impressed with the mouse.

1k13



RLL 10-NOV-75 18:55 26904

CONTACT: TRW, Jim Sinclair on 21 Oct 75, mutual interest in  
Man/Machine interface

(J26904) 10-NOV-75 18:55;;; Title: Author(s): Robert N.  
Lieberman/RLL; Distribution: /ARC-LOG( [ INFO-ONLY ] ) DCE( [ INFO-ONLY  
] ) JCN( [ INFO-ONLY ] ) DVN( [ INFO-ONLY ] ) RLL( [ INFO-ONLY ] ) ;  
Sub-Collections: SRI-ARC ARC-LOG; Clerk: RLL;

## 26904 Distribution

James C. Norton, Log Augmentation, Douglas C. Engelbart, James C.  
Norton, Dirk H. Van Noughuys, Robert N. Lieberman,

Documentation Report for week ending 11/9/75: single sources/ final report/ back links

Bev	1
this week	1a
Worked on completion of Xhelp Base: ran link program; put in Kirk's edits; mass substitutions; backlinks,	1a1
The continuing hassle with DDSI over Final Report tape: finally sent a new tape when no one could discover what was wrong with first one. Second try successful--shd be back Monday.	1a2
Reviewed documents pertaining to single source for documentation and Help design. Outlined some tentative first steps,	1a3
next week	1b
Get Final Report proofs reviewed. Then do proof on COM file with new fonts,	1b1
Try to finish up Xhelp, Base,	1b2
Go over single source and Help issues with people on Monday.	1b3
Kirk	2
done	2a
rules and regulations of help development interpreted. Did not get a chance to work on programs,	2a1
Wrote a document describing simple techniques for making and updating single source files for online and hardcopy documents <xhelp, helpd, converting> this is a help branch meant to be readable via COM or output processor,	2a2
do	2b
Fix up xhelp programs,	2b1

KIRK BEV 10-NOV-75 20:19 26905

Documentation Report for week ending 11/9/75: single sources/ final  
report/ back links

(J26905) 10-NOV-75 20:19;;; Title: Author(s): Kirk E. Kelley,  
Beverly Boli/KIRK BEV; Distribution: /HELP( [ INFO-ONLY ] ) ARC-DEV( [  
INFO-ONLY ] ) ; Sub-Collections: SRI=ARC HELP ARC-DEV; Clerk: KIRK;

## 26905 Distribution

Larry L. Garlick, Delorse M. Brooks, Beverly Boli, James E. (Jim) White, Ann Weinberg, Kenneth E. (Ken) Victor, Dirk H. Van Nouhuys, Jonathan B. Postel, Elizabeth K. Michael, David S. Maynard, Karolyn J. Martin, Harvey G. Lehtman, Kirk E. Kelley, Charles H. Irby, Robert Louis Belleville, Don I. Andrews, Richard W. Watson, Douglas C. Engelbart, Jeanne M. Beck, David C. Smith, Beverly Boli, David C. Smith, Jonathan B. Postel, Priscilla A. Wold, Rita Hysmith, Pamela K. Allen, Delorse M. Brooks, Elizabeth F. Finney, Beverly Boli, Lawrence A. Crain, Kirk Sattley, Susan Gail Roetter, Robert N. Lieberman, Ann Weinberg, Kenneth E. (Ken) Victor, Douglas C. Engelbart, James H. Bair, Elizabeth K. Michael, Richard W. Watson, Elizabeth J. Feinler, Harvey G. Lehtman, Kirk E. Kelley, Laura E. Gould, Jeanne M. Beck, Dirk H. Van Nouhuys, James C. Norton, Dirk H. Van Nouhuys, Ann Weinberg, Kirk E. Kelley, Jan H. Kremers, Susan K. Ocken, Raphael Rom, David C. Smith, Andy Poggio, David L. Retz, Jan A. Cornish

## NLS-9 SUBSYSTEMS

## NLS-9 SUBSYSTEMS

NLS-9 and the FE now support subsystems. A subsystem is basically a separate grammar which communicates with an existing instance of the NLS Back End. This note documents the NLS-9 implementation of subsystems, and may serve as a temporary guide for writing and installing user subsystems in NLS-9.

The GOTO command:

The grammar for NLS-9 includes the command:

```
goto COMMAND =
```

```
"GOTO" <"subsystem" > sent - LSEL("#TEXT") CONFIRM
```

```
  xgoto( sent -> dent)) fenewsubsys(sent, dent);
```

The NLS X-routine, `xgoto`, will attempt to make the support routines for the subsystem available, loading the file `subsystemname.subsys` if necessary. This creates and opens a dispatch package in the middle end. A dispatch package is merely a table of procedures which can be called from other processes. `xgoto` returns a string, `subsystemname.gram`, which is in turn passed to the front-end parse function called `fenewsubsys`. This parse function loads the grammar from the file whose name is passed, and makes this the user's current grammar.

The QUIT command:

Each subsystem must contain the "QUIT" Command. This should call the xroutine `xquitsubsys`, and the parse function `feendsubsys()`. The procedure `xquitsubsys` is provided in the NLS Back End, see the example below.

Implementation details:

GOTO:

The procedure `xgoto` receives one argument, a subsystem name.

A check is made to see if this subsystem is part of NLS, i.e. the support procedures are loaded with the current version of NLS. This is done by examining the data structure "nlssubs". For each subsystem in NLS "nlssubs" contains the address of a string containing the subsystem name, and the address of a package descriptor data structure. The package descriptor in turn contains, for each remotely callable

## NLS-9 SUBSYSTEMS

procedure, the address of a string containing the name by which the procedure is referenced remotely, and the address of the procedure. Thus to make a user subsystem become a part of NLS one would have to include the file containing the support routines in the NLS Load, and update the nls subs data structure, which is defined in the file (nine, madata,). 1d1b

If the subsystem is not a part NLS xgoto checks to see if a dispatch table for it exists from a previous load of the subsystem. If this is the case the dispatch table is opened. If no dispatch table exists for the subsystem then xgoto attempts to load the file subsystemname,subsys into the user program buffer. If this is successful it then looks for a variable named "subsystemname" within the file just loaded. This is assumed to be the dispatch data structure for the subsystem. Xgoto then creates a new dispatch table from the dispatch data structure and opens the table. Note that the dispatch tables are searched in order of most recently opened first by the middle end. This allows user subsystems to override NLS xroutines, and also allows calls on any routine within the "BASE" subsystem of NLS to be made from any subsystem. 1d1c

QUIT 1d2

The xquitsubsys procedure merely marks the dispatch table for the subsystem as closed. It does not remove the support routines from the user programs buffer. This saves the time of loading the support routines on subsequent goto's to the user subsystem. The DELETE LAST and DELETE ALL command in the programs subsystem may be used to purge the support routines from the user program buffer (and delete the dispatch table). 1d2a

Programs subsystem: 1e

The programs subsystem is now available as a built in part of NLS-9. The command "G<oto subsystem> programs" will take you to the subsystem. Compile procedure is among the commands available in this subsystem. This command should prove helpful for debugging user subsystems. 1e1

EXAMPLE: The following two files define a trivial user subsystem which runs in NLS-9 1f

```
FILE blapgram % (nsw=sources, xcml,) (RELNINE,blap,gram,) % 1g
```

```
% DECLARATIONS % 1g1
```

## NLS-9 SUBSYSTEMS

```

DECLARE FUNCTION                                     1q1a
    PROCESS = "BLAPPROCESS", PACKAGE = "BLAPPACKAGE": 1q1a1
        xblap, xquitsubsys;                          1q1a1a
DECLARE PARSEFUNCTION                                1q1b
    feendsubsys;                                     1q1b1
% BLAP COMMANDS %                                   1q2
SUBSYSTEM blapsubsys KEYWORD "BLAP"                 1q2a
    INITIALIZATION                                  1q2a1
        initrule =<"Welcome to blap">;              1q2a1a
    blap COMMAND =                                  1q2a2
        "BLAP" CONFIRM xblap();                     1q2a2a
    quit COMMAND =                                  1q2a3
        "QUIT" CONFIRM xquitsubsys() feendsubsys(); 1q2a3a
END,                                                 1q3
FINISH OF BLAPGRAM                                  1h
FILE psblap % (arcsubsys, xl10,) (RELNINE,blap,subsys,) % 1i
    % dispatch table for blap subsystem %           1i1
        (blap) = ($"XBLAP" , sxblap, 0,0);          1i1a
    (xblap) PROCEDURE; %Executes the Blap Command%  1i2
        dismes(2, s"BLAP BLAP BLAP BLAP BLAP BLAP BLAP BLAP BLAP"); 1i2a
    RETURN;                                         1i2b
END,                                               1i2c
FINISH OF PSBLAP                                    1j

```



## NLS-9 SUBSYSTEMS

(J26906) 11-NOV-75 00:10;;; Title: Author(s): David S. Maynard/DSM;  
Distribution: /EKM( [ INFO-ONLY ] ) JBP( [ INFO-ONLY ] ) DAV( [ INFO-ONLY ] ) HGL( [ INFO-ONLY ] ) LLG( [ INFO-ONLY ] ) ROM( [ INFO-ONLY ] ) SKO( [ INFO-ONLY ] ) JAC3( [ INFO-ONLY ] ) RLB2( [ INFO-ONLY ] ) DSM( [ INFO-ONLY ] ) ; Sub-Collections: SRI-ARC; Clerk: DSM;

26906 Distribution

Elizabeth K. Michael, Jonathan B. Postel, David C. Smith, Harvey G. Lehtman, Larry L. Garlick, Raphael Rom, Susan K. Ocken, Jan A. Cornish, Robert Louis Belleville, David S. Maynard,

DEX definition in 8,5 HELP

The definition in <xhelp,publication,dex> seems good to me.

1

DEX definition in 8.5 HELP

(J26907) 11-NOV-75 00:15;;; Title: Author(s): Jeanne M. Beck/JMB;  
Distribution: /DVN( [ INFO-ONLY ] ) KIRK( [ INFO-ONLY ] ) BEV( [  
INFO-ONLY ] ) HGL( [ INFO-ONLY ] ) ; Sub-Collections: SRI-ARC; Clerk:  
JMB;

26907 Distribution

Dirk H. Van Nouhuys, Kirk E. Kelley, Beverly Boli, Harvey G. Lehtman,

List of AKW Seminar participants for Nov 75

Names, addresses, etc as in the <arc-log,names,> database. ATT-LL and CIA are 100% sure, the EPA and NAVCOSSACT guys are 90% sure.

## List of AKW Seminar participants for Nov 75

(Hunt)	1
(S13) Val R. Hunt (nicident) Of CIA	1a
(S13-ORGANIZATION) Central Intelligence Agency	1a1
(S13-CODE) organization=code	1a1a
(S13-ADDRESS)	1a1b
Home address:	1a1b1
5906 Lambon Lane	1a1b2
Bethesda, MD 20034	1a1b3
(S13-PHONE) 703-351-2088	1a2
(S13-POSITION)	
Position in organization	1a3
(S13-JOB-TITLE) job=title	1a3a
(S13-PROJECT) Head of the SAFE project	1a3b
(S13-SUPERIOR) Vaughan Totman <sup=id>	1a3c
(S13-INFERIORS) Names <inf=id>	1a3d
(S13-INTERACTIONS)	
Citations of relevant interactions	1a4
(S13-REFERRED-BY) date: name-or-organization-or-meeting	1a4a
(S13-CONTACTS) Links to contact reports	1a4b
citation	1a4b1
(S13-DIALOG) Links to relevant online dialog	1a4c
citation	1a4c1
(S13-CONFERENCES) presence at meetings	1a4d
(S13-confname) ATTENDED/NOT ATTENDED	1a4d1
(S13-CALENDAR-ITEMS)	
Actions to be taken, etc., dated	1a5

List of AKW Seminar participants for Nov 75

(S13=NOTES)		
Dated miscellaneous notes or Citations		1a6
SENT Nov=75 AKW Seminar Announcement		1a6a
(Kelly)		2
(K9) Joe Kelly (nicident) Of NAVCOSSACT		2a
(K9-ORGANIZATION) Naval Command System Support Activity		2a1
(K9-CODE) Code 10.3		2a1a
(K9-ADDRESS)		2a1b
NAVCOSSACT		2a1b1
Code 10.3		2a1b2
Washington Navy Yard		2a1b3
Washington, DC 20374		2a1b4
(K9-PHONE) 202-433-3930		2a2
(K9-POSITION)		
Position in organization		2a3
(K9-JOB-TITLE) job-title		2a3a
(K9-PROJECT) project-or-field-of-responsibility		2a3b
(K9-SUPERIOR) Al Sorkowitz <S8>		2a3c
(K9-INFERIORS) Names <inf-id>		2a3d
(K9-INTERACTIONS)		
Citations of relevant interactions		2a4
(K9-REFERRED-BY) date: name-or-organization-or-meeting		2a4a
(K9-CONTACTS) Links to contact reports		2a4b
citation		2a4b1
(K9-DIALOG) Links to relevant online dialog		2a4c
citation		2a4c1



## List of AKW Seminar participants for Nov 75

(K9=CONFERENCES) Presence at meetings	2a4d
(K9=confname) ATTENDED/NOT ATTENDED	2a4d1
(K9=CALENDAR=ITEMS) Actions to be taken, etc., dated	2a5
(K9=NOTES) Dated miscellaneous notes or Citations	2a6
Will attend the AKW seminar Nov 75	2a6a
(Heyes)	3
(H6) John Heyes (nicident) Of ATT-LL	3a
(H6=ORGANIZATION) American Telephone and Telegraph - Long Lines Division	3a1
(H6=CODE) organization-code	3a1a
(H6=ADDRESS)	3a1b
ATT Long Lines	3a1b1
110 Belmont Drive	3a1b2
Somerset, NJ 08873	3a1b3
(H6=PHONE) 201-885-2568	3a2
(H6=POSITION) Position in organization	3a3
(H6=JOB=TITLE) job-title	3a3a
(H6=PROJECT) project-or-field-of-responsibility	3a3b
(H6=SUPERIOR) name (sup-id)	3a3c
(H6=INFERIORS) Names (inf-id)	3a3d
(H6=INTERACTIONS) Citations of relevant interactions	3a4
(H6=REFERRED=BY) Jul 75: Mike Bedford of BELL Canada	3a4a
(H6=CONTACTS) Links to contact reports	3a4b

## List of AKW Seminar participants for Nov 75

citation	3a4b1
(H6=DIALOG) Links to relevant online dialog	3a4c
JCN 26-AUG-75 13:16 33343 ATT Long Lines Demonstration September 29th Location: (IJOURNAL, 33343, 1:w)	3a4c1
(H6=CONFERENCES) Presence at meetings	3a4d
(H6=confname) ATTENDED/NOT ATTENDED	3a4d1
(H6=CALENDAR=ITEMS) Actions to be taken, etc., dated	3a5
29 Sept 75 : 1975 Long Lines President's Conference	3a5a
(H6=NOTES) Dated miscellaneous notes or Citations	3a6
Phone call 6 Nov 75: Confirming attendance at AKW Seminar Nov 75	3a6a
SENT Nov=75 AKW Seminar Announcement	3a6b
(McCrensky)	4
(M16) Jay McCrensky (nicident) Of FEA	4a
(M16=ORGANIZATION) Federal Energy Administration	4a1
(M16=CODE) organization=code	4a1a
(M16=ADDRESS)	4a1b
Office of Low Income Weatherization	4a1b1
Division of Conservation and Environment	4a1b2
FEA	4a1b3
1200 Pennsylvania Ave.	4a1b4
Washington, DC 20461	4a1b5
(M16=PHONE) 202-961-6217 / 202-964-3555	4a2
(M16=POSITION) Position in organization	4a3

## List of AKW Seminar participants for Nov 75

(M16-JOB-TITLE)	job-title	4a3a
(M16-PROJECT)	project-or-field-of-responsibility	4a3b
(M16-SUPERIOR)	Michael Pete <P6>	4a3c
(M16-INFERIORS)	Names <inf-id>	4a3d
(M16-INTERACTIONS)		
	Citations of relevant interactions	4a4
(M16-REFERRED-BY)	date: name-or-organization-or-meeting	4a4a
(M16-CONTACTS)	Links to contact reports	4a4b
	citation	4a4b1
(M16-DIALOG)	Links to relevant online dialog	4a4c
	citation	4a4c1
(M16-CONFERENCES)	Presence at meetings	4a4d
	(M16-confname) ATTENDED/NOT ATTENDED	4a4d1
(M16-CALENDAR-ITEMS)		
	Actions to be taken, etc., dated	4a5
(M16-NOTES)		
	Dated miscellaneous notes or Citations	4a6

List of AKW Seminar participants for Nov 75

(J26909) 11-NOV-75 04:03;;; Title: Author(s): Robert N.  
Lieberman/RLL; Distribution: /JHB( [ INFO-ONLY ] ) JCN( [ INFO-ONLY ] )  
DCE( [ INFO-ONLY ] ) ; Sub-Collections: SRI-ARC; Clerk: RLL;

26909 Distribution

James H. Bair, James C. Norton, Douglas C. Engelbart,

Out of the Loop...

Thought you might be interested in seeing how I got out of the loop we discussed on the phone the other day...it's so easy I don't knowe why I didn't start out this way, but then...AND IT WORKS! When I asked INDEXMAKER to go create a title index for a particular file, it did it...113 references turned into a title index in about 25 sconds (connect time) dirunig BBNB's busy hours. Thanks again for your help with it...

Out of the Loop...

```

(xtitle)PROCEDURE(result, parsemode);          1
LOCAL TEXT POINTER  pt1, pt2, pt3, pt4 ;      1a
LOCAL STRING  nmbr[10], ttl[200];             1b
REF result;                                    1c
wrkstid _  getsub(instid);                     1c1
FIND SF(wrkstid) ^pt1;                         1c2
  IF FIND $PT NP ^pt2 "- " ^pt3 ["by"] < 2CH $NP > ^pt4 THEN 1c2a
  BEGIN
    *nmbr*_pt1 pt2 ; %sets the string "nmbr" to the characters
    -- all digits -- between pointer 1 and pointer 2%      1c2b
    *ttl*_pt3 pt4 ;                                       1c2c
    ST pt1_ *ttl*, "                                     ", *nmbr* ; 1c2d
  END;                                               1c2e
WHILE (wrkstid _ getsuc(wrkstid)) # instid DO  1c3
BEGIN                                              1c4
  FIND SF(wrkstid) ^pt1;                             1c4a
  IF FIND $PT NP ^pt2 "- " ^pt3 ["by"] < 2CH $NP > ^pt4 1c4a1
  THEN BEGIN
    *nmbr*_pt1 pt2 ; %sets the string "nmbr" to the
    characters -- all digits -- between pointer 1 and pointer 1c4a2
    2%
    *ttl*_pt3 pt4 ;                                       1c4a3
    ST pt1_ *ttl*, "                                     ", *nmbr* ; 1c4a4
  END ELSE RETURN(FALSE);                             1c4a5
END;                                               1c4b
RETURN;                                             1d
END,                                               1e

```

Out of the Loop...

(J26910) 11-NOV-75 08:13;;; Title: Author(s): David A. Potter/DAP;  
Distribution: /DSM( [ ACTION ] ) ; Sub-Collections: NIC; Clerk: DAP;



26910 Distribution  
David S. Maynard,

Call from Carl Zinn

Both of these individuals are very interested in NLS; both are themselves highly sophisticated (well, compared to some of us around here users or system developers in their own right... e.g., Morgan is building his own office automation system at Penn and will go on the ARPANET with it in the Spring.

Call from Carl Zinn

Yesterday I received a call from Carl Zinn at Michigan. We had a very pleasant conversation re/ NLS and related matters. Thanks to your suggestion, he invited me to join in their (symposium/paper session/whatever) at AERA (assuming the Program Committee accepts it), which I'll be delighted to do. Thanks for suggesting my name.

Incidentally, I received a similar invitation from Howard Morgan at Penn, not for AERA but for NCC. I understand that he'll be at SRI around the end of this week to probe and discuss NLS... He has a standing invitation to come to ETS to see what we're doing with it here, so I'll be happy to do whatever I can to help inform and interest him.

1

DAP 11-NOV-75 08:22 26911

Call from Carl Zinn

(J26911) 11-NOV-75 08:22;;; Title: Author(s): david A. Potter/DAP;  
Distribution: /DCE( [ ACTION ] ) JCN( [ INFO-ONLY ] ) ; Sub-Collections:  
NIC; Clerk: DAP;

26911 Distribution

Douglas C. Engelbart, James C. Norton,

Gunter demo - Help Needed

HELP NEEDED!!!

1

It looks as though the 'demo' at Gunter next week for the NSW steering committee will have to be more talk than show because of the difficulties of showing 40 people anything with one display,

1a

I gather the main purpose of this affair is to convince the steering committee that they did indeed get something for their money. To this end we are trying to put together a few viewgraphs that are basically lists of the things we have been working on associated with the NSW contract. We will use these to talk from,

1b

Would you look the list over and mark up a copy with omissions and extensions and comments and return to Jon or Elizabeth ASAP. We have to get them made Thursday morning,

1c

We think the Documentation section has many more things than we have listed,

1d

FRONT END

2

CLI-10

2a

CLI-11

2b

New Tool

2c

Old Tool

2d

DEBUGGER

3

MSG/DPS

4

USER PROFILE

5

HELP

6

Multifile

6a

Help Building Tool

6b

NLS

7

COBOL AND RJE

7a

Program creation and submit for compile

7a1

FILE SYSTEM

7b

## Gunter demo - Help Needed

Graphics	7b1
GRAPHICS	7c
Flow Charts	7c1
Line Drawings	7c2
MISC	7d
Retreive	7d1
Sort	7d2
DOCUMENT PRODUCTION	7e
Tabs	7e1
Modify	7e2
Publish	7e3
Table of contents	7e4
Format	7e5
AFMFormats	7e6
Output Processor Directives	7e7
Singer 6000	7e8
Proof	7e9
Mixed Text and Graphics	7e10
SEQUENTIAL FILES	7f
MTST	7f1
MCST	7f2
DEX	7f3
DOCUMENTATION	8
Secretarial Functions	8a
Primers	8b

Gunter demo - Help Needed

Glossary

8c

Cue Card

8d



Gunter demo - Help Needed

(J26912) 11-NOV-75 08:55;;; Title: Author(s): Elizabeth K.  
Michael/EKM; Distribution: /ARC-DEV( [ ACTION ] ) DVN( [ ACTION ] ) JCN(  
[ INFO-ONLY ] ) ; Sub-Collections: SRI-ARC ARC-DEV; Clerk: EKM;  
Origin: < MICHAEL, CHANGES,NLS;2, >, 11-NOV-75 08:53 EKM ;;;####;

26912 Distribution

Jan H. Kremers, Susan K. Ocken, Raphael Rom, David C. Smith, Andy Poggio, David L. Retz, Jan A. Cornish, Larry L. Garlick, Delorse M. Brooks, Beverly Boli, James E. (Jim) White, Ann Weinberg, Kenneth E. (Ken) Victor, Dirk H. Van Nouhuys, Jonathan B. Postel, Elizabeth K. Michael, David S. Maynard, Karolyn J. Martin, Harvey G. Lehtman, Kirk E. Kelley, Charles H. Irby, Robert Louis Belleville, Don I. Andrews, Richard W. Watson, Douglas C. Engelbart, Dirk H. Van Nouhuys, James C. Norton,

Letter sent from Vice Commander to all directorates about  
documentation

This was handed to me (sort of under the table) by a friend who  
thought I would be interested, I sent it to elizabeth, dick, jim, and  
jon and you all may forward to anyone that you think should see it.  
Major Hearn know I saw it and he said that he had taken care of it.  
He refused to elaborate on what he meant by that. Let me know if you  
feel there is anything I should do, ann####;

Letter sent from Vice Commander to all directorates about documentation

Letter sent from Robert F. Godec Colonel, USAF Vice Commander to all directorates,

During the past few weeks there have been several instances of questions posed regarding the plan to be used for documentation and administrative correspondence within the Center. Some of these questions have pertained to need for additional funds, future of ARPANET and publications using microfiche methods. The many varied views that have been expressed have led me to the following conclusions:

There is no Center-wide program designed to produce a single method for documentation.

Several unilateral actions have been accomplished by various directorates to alleviate existing workload and test selected methods of documentation (e.g., Mag-card II, and Savin).

Many of the actions indicated by the above have been accomplished by diversion of budget dollars from other requirements. In effect, they have been, and continue to be, absorbed out of the directorates resources.

There is no single leader designated in the Center for this all important area that is consuming more and more of our budget dollars.

There was a general consensus that ARPANET may be the cure in the future; however, it is premature at this time to formally accept this concept until more data is known. For example, how many terminals will be available at AFSDC or what will be the cost of large scale documentation, etc.?

The growth of documentation within AFSDC is growing at a rapid pace as evidenced by the recent study we provided to General Edge. In addition to this growth, which centers on publication of manuals and changes, there is a relatively new facet of DPD and DPP production that is also assuming significant proportions. A third area of concern deals with the constant burden of administrative correspondence. All of these three areas need to be addressed in a plan that will focalize AFSDC resources and manpower.

The discussion presented above has led me to the following decision. Mr. Jacob Fischer of your organization is hereby designated to conduct an analysis of the methods that have been pursued within the Design Center and to select a proposal that can

Letter sent from Vice Commander to all directorates about documentation

be used for our current needs. The following guidance is offered to Mr. Fischer as a preliminary step in launching this effort:

1c

There should not be any need to conduct a long study of methods that could be used to solve our documentation problems. Numerous studies have been conducted within the Design Center and throughout the Air Force. The results of these efforts should provide the necessary basic data.

1c1

The primary problem is the area of publication and manuals. Secondary consideration is methods to be used for administrative correspondence.

1c2

Whatever method is selected must be adaptable to computer methodology.

1c3

The future of ARPANET as it pertains to documentation is uncertain at this time. Therefore, a proposal may be presented in two phases. The first phase should be a short term solution in the sense that it could be implemented immediately in order to provide a standard method for documentation within the AFSDC. The second phase would be the long term solution that could only be realized after the ARPANET/NSW situation has been tried and proven. Mr Fischer's efforts need not address the second phase.

1c4

Mr. Fischer is to be detailed to the command section on a full-time basis for a period not to exceed 45 days. He is to be permitted to call for assistance from all directorates within the Center. Normally, this will be on a part-time or ad hoc basis that hopefully can be worked out with the cooperation of all who is concerned.

1d

It is essential that the Design Center agree upon a uniform method for accomplishing our documentation requirements. We are spending an ever-increasing amount of our resources to accomplish the growing task of documentation by means of antiquated and outdated methods. Your cooperation and that of every directorate in the Center is requested.

1e

Letter sent from Vice Commander to all directorates about  
documentation

(J26913) 11-NOV-75 12:52;;; Title: Author(s): Dirk H. Van Noughuys,  
Ann Weinberg/DVN POOH; Distribution: /DOCPLAN( [ INFO-ONLY ] ) POOH( [  
INFO-ONLY ] ) i rejournalized this to send it to the docplan  
subcollection) DLS( [ INFO-ONLY ] ) ; Clerk: DVN; Origin: <  
MJOURNAL, 26691.NLS;i, >, 17-OCT-75 10:32 XXX ;;;; Title:  
Author(s): Ann Weinberg/POOH; Distribution: /EKM( [ INFO-ONLY ] )  
JCN( [ INFO-ONLY ] ) JBP( [ INFO-ONLY ] ) RWW( [ INFO-ONLY ] ) ;  
Sub-Collections: SRI-ARC DOCPLAN; Clerk: POOH;

26913 Distribution

Beverly Boli, Joseph L. Ehardt, Raymond R. Panko, James H. Bair,  
David R. Brown, Glenn A. Sherwood, N. Dean Meyer, Kathey L. Mabrey,  
Norman R. Nielsen, Thomas L. Humphrey, Robert Louis Belleville,  
Elizabeth K. Michael, Richard W. Watson, James C. Norton, Robert N.  
Lieberman, Pat Whiting O'Keefe, Douglas C. Engelbart, Dirk H. Van  
Nouhuys, Ann Weinberg, Duane L. Stone,

Comment on Proposed KWAC Newsletter

Response to (26832,)



## Comment on Proposed KWAC Newsletter

I think your suggestion is an excellent one Robert, You make the comment that we must compare the value to the cost, I feel a newsletter could be a very valuable tool for dealing with our utility clients, At the KWAC meeting I got the distinct feeling that had their been more communication between ARC and KWAC after the previous KWAC meeting much of the negativism would have been absent, So I think the newsletter has the potential for achieving within clients a sense that ARC is doing something throughout the year to better their state (which we are - they just don't know what we are doing!) 1

I've talked with Sandy about her role in this whole thing and she is planning to keep a file for November containing interesting and informative notes going through feedback for use in December if that's when the first issue comes out, We agreed that it was probably best not to report bug fixes that were so obscure that only one or two utility users had even run into them, (Those users would be notified,) 2

I think in many cases (feedback statistics, application descriptions, KWAC minutes) it would be appropriate to have a summary in the newsletter with links to the actual text, This may be useful in reporting on some areas of feedback, For example, you mention having a section on interesting suggestions, This may be silly, but I think we should call it something besides interesting so people won't think their suggestion is excluded because it is uninteresting, Also, if a link were included pointing to all suggestions for the month then there should be no questions, I'm sure this will work itself out after a few months, 3

I agree with Jon that monthly is often enough, It would work well from the feedback standpoint if the date of issue were sometime after the 1st of the month to allow time for collecting and writing the description of the previous month's transactions, Maybe the 10th? 4

Comment on Proposed KWAC Newsletter

(J26914) 11-NOV-75 13:31;;; Title: Author(s): Susan Gail  
Roetter/SGR; Distribution: /ARC-APP( [ INFO-ONLY ] ) DCE( [ INFO-ONLY ]  
) JBP( [ INFO-ONLY ] ) RWW( [ INFO-ONLY ] ) EKM( [ INFO-ONLY ] ) ;  
Sub-Collections: SRI-ARC ARC-APP; Clerk: SGR;

26914 Distribution

Bonny Penny Mosher, Israel A. Torres, Buddie J. Pine, Laura J. Metzger, Priscilla A. Wold, Pamela K. Allen, Jeffrey C. Peters, Marcia L. Keeney, Jeanne M. Beck, Rodney A. Bondurant, Douglas C. Engelbart, Jeanne M. Leavitt, Susan Gail Roetter, Raymond R. Panko, Adrian C. McGinnis, James C. Norton, J. D. Hopper, Elizabeth J. Feinler, James H. Bair, Robert N. Lieberman, N. Dean Meyer, Sandy L. Johnson, Martin E. Hardy, Douglas C. Engelbart, Jonathan B. Postel, Richard W. Watson, Elizabeth K. Michael,

JMB 11-NOV-75 16:34 26915

QUESTIONS TO DETERMINE THE NATURE OF A POTENTIAL SYSTEM ALLOWING  
ENTRY, MODIFICATION, AND MAINTENANCE OF DATA

Stan, please return your answers to me (JMB; BECK@BBNB). This  
remains still general; we'll follow up on specific details. Thanks.

QUESTIONS TO DETERMINE THE NATURE OF A POTENTIAL SYSTEM ALLOWING  
ENTRY, MODIFICATION, AND MAINTENANCE OF DATA

QUESTIONS TO DETERMINE THE NATURE OF A POTENTIAL SYSTEM ALLOWING  
ENTRY, MODIFICATION, AND MAINTENANCE OF DATA:

Understanding your current system & organization:

What information do you now maintain that you would like to keep track of with an online system?

How much of it is now online and how much is maintained in manual systems?

How many people does that involve?

Does the data now channel through one point in the organization? If not, is there someone in a position to collect it all?

Who is now responsible for the data?

For what purposes, and in what form, is this data now used?

Database needs:

Do you want this system to look like an extension of NLS (that is, users would have to know enough NLS to get to the subsystem and might have to use additional NLS commands), or should it be a separate stand-alone system without regular NLS commands?

To what extent do you want the system to monitor different users' authorization to enter data, change data, read the database, etc.?

What input verification do you need, i.e., do you want the system to monitor the correctness of different units of information entered?--length of field, type of text, lower/upper limit of dollar amountss, etc.?

Do you need to keep records of transactions with the database?

Approximately how many pages of total information must be stored in your database? If much more than 200 pages, what is a natural way to break it up into files?

What OUTPUTS from the database are required, i.e., reports, etc.?

Who are the ultimate users of the information provided by the database, and how will they use it (are just reports required, or do they want to interact with the database)?

QUESTIONS TO DETERMINE THE NATURE OF A POTENTIAL SYSTEM ALLOWING  
ENTRY, MODIFICATION, AND MAINTENANCE OF DATA

Must the system perform numeric calculations from the database for reports? 3h

How often is the database (i.e., its structure or the fields required) likely to change? 3i

Support needs: 4

Is there a programmer available who can learn L10 in order to build special tools for special cases (e.g., report extraction) and in order to solve problems in using the standard tools we provide? 4a

QUESTIONS TO DETERMINE THE NATURE OF A POTENTIAL SYSTEM ALLOWING  
ENTRY, MODIFICATION, AND MAINTENANCE OF DATA

(J26915) 11-NOV-75 16:34;;; Title: Author(s): Jeanne M. Beck/JMB;  
Distribution: /SMT( [ ACTION ] ) SGR( [ INFO-ONLY ] ) JCN( [ INFO-ONLY ]  
) NDM( [ INFO-ONLY ] ) JAC3( [ INFO-ONLY ] ) ; Sub-Collections:  
SRI-ARC; Clerk: JMB; Origin: < BECK, BRL,NLS;7, >, 11-NOV-75  
16:26 JMB ;;;;####;

26915 Distribution

Stanley M. (Stan) Taylor, Susan Gail Roetter, James C. Norton, N.  
Dean Meyer, Jan A. Cornish,



CONTACT: Mitre Corp, Solow on 21 Oct 75, interest in text editors for  
a NSA contract

MITRE: Contact report 26916 1

CONTACT: Mitre Corp, Solow on 21 Oct 75, interest in text editors  
for a NSA contract 1a

DATE: 21 Oct 75 1b

BY: Lieberman 1c

ATTENDEES: Full name of organization, address, phone number as  
substatements 1d

Harold Solow - Mitre 1d1

Doug Engelbart - SRI-ARC 1d2

Robert Lieberman - SRI-ARC 1d3

MEDIUM: FACE-TO-FACE 1e

WHERE: SRI, Washington, DC 1f

ACTION-ITEMS: 1g

Actions taken, to be taken, etc., dated 1g1

DISTRIBUTION: ARC-LOG DCE JCN RLL 1h

REFERENCES: 1i

DOCUMENTS: Hard copy given and received 1j

GIVEN: Date and documents given 1j1

"Coordinated Information Services for a Discipline- or  
Mission-Oriented Community," Douglas Engelbart, 12-DEC-72,  
<journal,12445,> 1j1a

"The Augmented Knowledge Workshop," Douglas C. Engelbart,  
Richard W. Watson, and James C. Norton, 1-MAR-73,  
<journal,14724,> 1j1b

"Seminar on the AUGMENTED KNOWLEDGE WORKSHOP," SRI-ARC,  
12-Aug-75, <journal,33193,> 1j1c

Listing of Client Organizations using the NLS System 1j1d

Handouts: 1j1e

CONTACT: Mitre Corp, Solow on 21 Oct 75, interest in text editors for a NSA contract

"AKW Services Provided: A Handout," Robert Lieberman, 30-SEPT-75, <journal,26599,> 1j1e1

"AKW Services Capabilities: A Handout," Robert Lieberman, 30-SEPT-75, <journal,26598,> 1j1e2

RECEIVED: Date and documents received 1j2

REMARKS: 1K

Harold contacted us to get some infomation on NLS. Apparently he is participating in a study for NSA (a group not directly connected to the group using NLS - in house or at Office-1). In any case he wished to know more on what was going on, 1k1

The study involves looking into text editors. 1k2

He was interested enough to return later the same day. He has used TNLS a little but was quite anxious to learn more about DNLS. 1k3

Doug and I talked to him and I showed him DNLS. 1k4

CONTACT: Mitre Corp, Solow on 21 Oct 75, interest in text editors for  
a NSA contract

(J26916) 11-NOV-75 18:37;;; Title: Author(s): Robert N.  
Lieberman/RLL; Distribution: /ARC-LOG( [ INFO-ONLY ] ) DCE( [ INFO-ONLY  
] ) JCN( [ INFO-ONLY ] ) RLL( [ INFO-ONLY ] ) ; Sub-Collections:  
SRI-ARC ARC-LOG; Clerk: RLL;

26916 Distribution

James C. Norton, Log Augmentation, Douglas C. Engelbart, James C.  
Norton, Robert N. Lieberman,

Development Seminar: Tuesday Dec 2, 1975.

On tuesday December 2 at 1:30 Peter Nuemann from Jack Goldberg's group here at SRI will present a seminar on their work on certification of an operating system using top down structured programming techniques. You are invited to attend.

1

RWW 11-NOV-75 18:16 26917

Development Seminar: Tuesday Dec 2, 1975.

(J26917) 11-NOV-75 18:16;;; Title: Author(s): Richard W.  
Watson/RWW; Distribution: /SRI-ARC( [ INFO-ONLY ] ) ; Sub-Collections:  
SRI-ARC; Clerk: DSM;

26917 Distribution

N, Dean Meyer, James E. (Jim) White, Douglas C. Engelbart, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, James C. Norton, Jeffrey C. Peters, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson, Don I. Andrews, Bonny Penny Mosher, Israel A. Torres, Jan H. Kremers, Susan K. Ocken, Raphael Rom, David C. Smith, Buddie J. Pine, Andy Poggio, David L. Retz, Laura J. Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L. Garlick, Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks, Beverly Boli, Rita Hysmith, Log Augmentation, Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Ann Weinberg, Adrian C. McGinnis, Robert S. Ratner, David S. Maynard, Robert N. Lieberman, Sandy L. Johnson, James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel, Elizabeth J. Feinler, Kirk E. Kelley

Changes to HELP group

Would you please delete the group DIRT from HELP group membership. We feel that they do not overlap in their interests. Would you also add JAKE and BJP (Bud Pine) to the HELP group. Thanks. -- Dave

1



DAV 11-NOV-75 18:21 26918

Changes to HELP group

(J26918) 11-NOV-75 18:21;;; Title: Author(s): David C. Smith/DAV;  
Distribution: /MLK( [ ACTION ] ) ; Sub-Collections: SRI-ARC; Clerk:  
DAV;

26918 Distribution  
Marcia L. Keeney,

## Request for Documentation

Since there are a number of people here at the Design Center that are becoming interested in NLs programming, would you please send us a copy of the Programmer's guide and whatever other system documentation that is available in hardcopy that you think is appropriate for programmers. We can retrieve some of the relevant stuff on-line, but for general distribution photocopies of printed matter would probably be better. The material could be sent to myself or Lynne Sims (MAS2) and we'll get it around. Thanks for your help.

1

Jay Lowe  
Data Systems Design Center  
Medical Systems Directorate (SGCX)  
Bldg 857  
Gunter AFS, AL 36114

1a

Lynne Sims  
Data Systems Design Center  
Simulation and Analysis Branch (SYOT)  
BLDG 325  
Gunter AFS, AL 36114

1b

Request for Documentation

(J26920) 12-NOV-75 08:35;;; Title: Author(s): John J. (Jay)  
Lowe/JJL2; Distribution: /FEEDBACK( [ ACTION ] ) MAS2( [ INFO-ONLY ] ) ;  
Sub-Collections: NIC FEEDBACK; Clerk: JJL2;

26920 Distribution  
Special Jhb Feedback, Marilynne A. Sims,

A scheme for systematically documenting procedures

The general problem of online/offline documentation, the particular problem of procedure documentation, and a specific solution to the particular problem.

## A scheme for systematically documenting procedures

Last week the ARC seminar discussed the problems resulting from having separate versions of documents for online and offline (hardcopy) use. The most serious difficulties are the duplication of time and effort that separate copies entail, and the difficulty in maintaining current, up-to-date hardcopy versions. The universal opinion was that there should be only one version of any document, kept online. Various ways were discussed to put online documents in a form such that they could easily (with little processing, or at least with a simple algorithm) be converted to hardcopy.

1

The issue of documenting programs is similar to, and presents the opportunity to experiment with solutions to, the general documentation question. As a first stab at a solution, I propose that all procedures be documented by incorporating a descriptive comment in a standard format (the template is below). This would have several beneficial effects:

2

(a) The L10 procedures in the NLS system immediately become more understandable. The interface between procedures would be explicitly stated, inevitably leading to cleaner interfaces and more modular programming. (This is primarily of interest to us as system builders.)

2a

(b) The procedure declaration and its descriptive comment can be easily extracted, producing an augmented SYSGUIDE. The SYSGUIDE would now be documented well enough that a subset, containing just the user-callable procedures, could be extracted and published as part of the system documentation (as required by NSW).

2b

(c) Having the descriptive comments for all procedures be in the same format makes them easily processible by machine. In particular, special-purpose documents be easily assembled. For example, it might be interesting to assemble documents containing all procedures that use SIGNALS, or COROUTINES, or containing the FUNCTION of all procedures, or....

2c

(d) This organization increases the flexibility and versatility of the documentation. The same source text can be used to produce different object documents.

2d

An outline of the template for the descriptive comment:

3

(name) PROCEDURE (arg1, ..., argn : res1, ..., resn);

3a

% Descriptive comment in the following form:

3a1

FUNCTION

3a1a

ARGUMENTS

3a1b

## A scheme for systematically documenting procedures

VALUES	3a1c
NON-STANDARD CONTROL	3a1d
SIGNALS GENERATED	3a1d1
SIGNALS CAUGHT	3a1d2
COROUTINES %	3a1d3
<body of the procedure>	3a2
The template in more detail:	4
(name) PROCEDURE (arg1, ..., argn : res1, ..., resn);	4a
% One level down from the procedure declaration is a comment containing the following entries. All entries should be present. If one of them does not apply (e.g. the procedure has no arguments), the word 'none' should be used. This will insure that no one forgets to put in a relevant entry, or that it is left out if the procedure is changed later by someone else. If everyone uses the same names for the entries (FUNCTION, ARGUMENTS, etc.), an information retrieval system can extract and assemble individual entries into documents. A general document would include all of the entries; a special-purpose document, just some of them.	4a1
FUNCTION	4a1a
A high-level, conceptual description of the procedure, including what the procedure does and how it fits in with the rest of the system. Make the description as self-contained as possible. Assume a minimum of fore-knowledge. In particular, minimize the number of other procedures, global variables, data structures and concepts one would have to know to understand your description. This is especially important for user-callable procedures, but it is also a good practice for our own benefit. The more concrete the description, the better. Examples should be used wherever possible.	4a1a1
ARGUMENTS	4a1b
name1 - type - description of value	4a1b1
name2 - type - description of value	4a1b2
...	4a1b3



## A scheme for systematically documenting procedures

Example:	4a1b3a
ARGUMENTS	4a1b3a1
foo = LIST = contains two text pointers pointing to the user's typein:	4a1b3a1a
(<pointer to front> <pointer to end>)	4a1b3a1a1
baz = STRING = the current command word:	4a1b3a1b
e.g., "INSERT"	4a1b3a1b1
Again, make these descriptions as concrete as possible. Include examples where relevant.	4a1b3b
VALUES	4a1c
name1 = type = description of value	4a1c1
name2 = type = description of value	4a1c2
...	4a1c3
Example:	4a1c3a
VALUES	4a1c3a1
procedure value = BOOLEAN = TRUE if the user typed a legal command word, FALSE otherwise.	4a1c3a1a
foo = INTEGER = If the command word was legal, the value of the command word; 0 otherwise.	4a1c3a1b
baz = BOOLEAN = TRUE if the window should be refreshed; FALSE otherwise.	4a1c3a1c
Again, make these descriptions as concrete as possible. Include examples where relevant.	4a1c3b
NON-STANDARD CONTROL	4a1d
<p>Descriptions of anything that might cause a non-standard transfer of control. "Non-standard" means any control structure that transfers control into or out of a procedure except procedure calls and returns. The following three sub-entries should be used, but any or all of them may be omitted if not applicable. (Whew, at</p>	

## A scheme for systematically documenting procedures

last something is optional!) Other sub-entries will be added if we come up with new control structures for L10. 4a1d1

SIGNALS GENERATED 4a1d2

Descriptions of errors generated, as well as help signals, notes, etc. Example: 4a1d2a

SIGNALS GENERATED 4a1d2a1

If the argument 'foo' is not a list, the error signal 4a1d2a1a

ABORT(cantdothat, "You've got to pass a list, dummy!") 4a1d2a1a1

is generated. 4a1d2a1b

SIGNALS CAUGHT 4a1d3

Descriptions of signals that are stopped and/or modified by invoked catchphrases. Signals that are CONTINUED need not be mentioned. If a catchphrase generates a new signal, the new signal should be described in the SIGNALS GENERATED entry. Example: 4a1d3a

SIGNALS CAUGHT 4a1d3a1

This procedure stops all error signals (all signals of type "abort"). 4a1d3a1a

COROUTINES 4a1d4

I'm not sure that L10's synchronous coroutines are "non-standard" enough to warrant being mentioned when they are called from a procedure, since they look pretty much like procedure calls (i.e. calls wait for the coroutines to return). However, if in the future we add asynchronous coroutines or multiple processes, then their calls should be described under this entry. 4a1d4a

% 4a1e

<body of the procedure> 4a2

Examples: These are from the HELP subsystem. 5

(helpinit) PROCEDURE (currenttool REF, helpstring REF, helplink REF); 5a

## A scheme for systematically documenting procedures

% FUNCTION	5a1
This procedure does the initialization required upon entry into the help command. It puts out a help message, loads the help file if necessary, does initialization and allocation of storage. Initializes moremen to FALSE (no more to be shown).	5a1a
ARGUMENTS	5a2
currenttool = STRING = the name of the tool we are in	5a2a
Example: "NLS"	5a2a1
helpstring = STRING = the context we were in when the HELP button was hit; NULL if at the beginning of a command	5a2b
Example: "INSERT STATEMENT"	5a2b1
helplink = LIST = an LSEL literal pointing to the user's typein; NULL if he didn't type anything	5a2c
Example: ([INTEGER 30] [LITERAL foo] [INTEGER 1])	5a2c1
VALUES	5a3
none	5a3a
NON-STANDARD CONTROL	5a4
SIGNALS GENERATED	5a4a
err(\$"No help has been provided for <toolname>")	5a4a1
if the tool does not have a HELP file, and if the user does not explicitly type one, and if we can't find the default file <HELP>EXEC.HELP	5a4a1a
err(\$"I am the elusive Help command bug: tell FEEDBACK details of what you were doing,")	5a4a2
if any of a variety of low-level system errors occur	5a4a2a
SIGNALS CAUGHT	5a4b
All ABORT signals are terminated,	5a4b1
%	5a5

## A scheme for systematically documenting procedures

```

(helpshow) PROCEDURE (type REF LIST, param REF LIST);          5b
% FUNCTION                                                    5b1
    Dummy routine for communicating between the CML and
    help2show.                                              5b1a
ARGUMENTS                                                    5b2
    type = LIST = a CML command word indicating the type of
    showing to be done: up, name, next, back, menu        5b2a
        Example: ([INTEGER 32] [LITERAL name] [INTEGER 1]) 5b2a1
    param = LIST = additional information depending on the value
    of "type"                                             5b2b
        Example: ([INTEGER 30] [LITERAL foo] [INTEGER 1]) 5b2b1
VALUES                                                        5b3
    none                                                    5b3a
NON-STANDARD CONTROL                                        5b4
    none                                                    5b4a
%                                                            5b5
(help2show) PROCEDURE (type, param REF);                    5c
% FUNCTION                                                    5c1
    Does the actual printing of a statement and its menu. Sets
    global moremen FALSE if the menu was finished; TRUE if more
    is to be displayed.                                  5c1a
ARGUMENTS                                                    5c2
    type = INTEGER = indicates the type of showing to be done:
    up, name, next, back, menu                            5c2a
    param = STRING = additional information depending on the
    value of "type"                                       5c2b
        Example: "foo"                                     5c2b1
VALUES                                                        5c3

```

## A scheme for systematically documenting procedures

none	5c3a
NON-STANDARD CONTROL	5c4
SIGNALS GENERATED	5c4a
err(\$"Help system error: Invalid parameter passed to helpshow")	5c4a1
if 'type' was not one of: up, name, next, back, menu	5c4a1a
%	5c5
(helping) PROCEDURE (param REF LIST, results REF LIST);	5d
% FUNCTION	5d1
Provides feedback for stepping through the context ring with HELP's "BACK" command,	5d1a
ARGUMENTS	5d2
param = LIST = contains the last statement that we asked the user if he wanted to see; NULL if we are at the beginning:	5d2a
([INTEGER <ring index>] [INTEGER <stid>])	5d2a1
VALUES	5d3
procedure value = LIST = a param-format list containing the next statement to ask the user about; NULL if there are no more	5d3a
NON-STANDARD CONTROL	5d4
SIGNALS GENERATED	5d4a
err(\$"No text block associated with node")	5d4a1
if HELP loses track of a previously displayed statement	5d4a1a
%	5d5

A scheme for systematically documenting procedures

(J26921) 12-NOV-75 13:01;;; Title: Author(s): David C. Smith/DAV;  
Distribution: /NPG( [ ACTION ] ) ARC-DEV( [ INFO-ONLY ] );  
Sub-Collections: SRI=ARC NPG ARC-DEV; Clerk: DAV;

26921 Distribution

Elizabeth K. Michael, David S. Maynard, Carolyn J. Martin, Harvey G. Lehtman, Kirk E. Kelley, Charles H. Irby, Robert Louis Belleville, Don I. Andrews, Richard W. Watson, Douglas C. Engelbart, Susan K. Ocken, Raphael Rom, Jan H. Kremers, David C. Smith, Andy Poggio, David L. Retz, Jan A. Cornish, Larry L. Garlick, Robert Louis Belleville, Elizabeth J. Feinler, Joseph L. Ehardt, Jonathan B. Postel, Kirk E. Kelley, Carolyn J. Martin, David S. Maynard, Kenneth E. (Ken) Victor, James E. (Jim) White, Elizabeth K. Michael, Don I. Andrews, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, Jan H. Kremers, Susan K. Ocken, Raphael Rom, David C. Smith, Andy Poggio, David L. Retz, Jan A. Cornish, Larry L. Garlick, Delorse M. Brooks, Beverly Boli, James E. (Jim) White, Ann Weinberg, Kenneth E. (Ken) Victor, Dirk H. Van Nouhuys, Jonathan B. Postel

## BBNB Now Handles IMLACs

One can now use the IMLAC at BBNB...host 49. I have used it for a day now, and things seem to react the same as at Office-1. It is implemented as a SUBSYSTEM, rather than as a TERMINAL TYPE (like on Office-1). After logging on, type:

1

SRILVIMLAC,SAV;1<cr>....or just SRIL<esc><cr>

1a

This also takes care of the NO Raise problem, that is it gives you lowercase characters after that without you having to type NO RAISE.

1b

BBNB is considering adding MESSAGE and SENDPRINT subsystems, but have to talk it over with themselves and SRI first. Will let you know if and when they come up at BBNB.

2

They did not give up on the LOG part. You still have to type LOG before giving the directory name.

3



DLS 12-NOV-75 16:56 26922

BBNB Now Handles IMLACs

(J26922) 12-NOV-75 16:56;;; Title: Author(s): Duane L. Stone/DLS;  
Distribution: /RJC( [ INFO-ONLY ] ) JPC( [ INFO-ONLY ] ) MAW( [ INFO-ONLY ] ) TFL( [ INFO-ONLY ] ) ; Sub-Collections: RADC; Clerk: DLS;

26922 Distribution

Roberta J. Carrier, Joseph P. Cavano, Mike A. Wingfield, Thomas F. Lawrence,

## KWAC Meeting Notes

Susan,

1

I have read (at least twice) the KWAC meeting notes, and have pulled out statements that were action items for me. I have no corrections, additions or deletions. They are somewhere between minutes and a complete transcription of the meeting, but I don't have a word to call them...(except long!). In any event, a monumental job and one well done.

1a

One of the underlying problems at the meeting seemed to be the feeling that there was a lack of communication from SRI on what they were doing about complaints, gripes, problems, etc. I might suggest that the minutes stand as they are in (33726,) and that action items be pulled out (both for SRI and the architects), with dates and responsible people tentatively assigned to each.

1b

This list could then be referred to and checked off as items were accomplished. I know several things promised by SRI have already happened. A monthly Journal article indicating action taken on items on the list could then be issued, indicating the responsiveness of SRI to the User community...and possibly even vice-versa.

1c

KWAC Meeting Notes

(J26923) 12-NOV-75 17:14;;; Title: Author(s): Duane L. Stone/DLS;  
Distribution: /AID( [ INFO-ONLY ] ) SGR( [ INFO-ONLY ] ) JCN( [ INFO-ONLY ] ) ; Sub-Collections: RADC AID; Clerk: DLS;

26923 Distribution

Sri User, Lawrence A. Crain, E. S. VonGehren, Glenn A. Sherwood, Frank G. Brignoli, Inez M. Mattiuz, Connie K. McLindon, David A. Potter, Terry H. Proch, Robert M. Sheppard, Duane L. Stone, Stanley M. (Stan) Taylor, Ronald P. Uhlig, Susan Gail Roetter, James C. Norton,

## Identifying your data-management needs

- "I'm trying to learn the price you have to pay to avoid going through all these things twice" - Bob Dylan 1
- Background 2
- Recently and not so recently, several individuals have written subsystems to handle particular data management problems. For example, 2a
- Glen Sherwood and Jan Cornish - CIMROS 2a1
- Dean Myer - FMS 2a2
- Ken Victor - RETRIEVE 2a3
- These systems all share a lack of generality. They were written because no such NLS capability existed. 2b
- It has been suggested that some of these systems be "converted" or "enhanced" or "generalized" to either increase their capabilities and improve the user interface ( RETRIEVE ) or to increase the range of applicability ( FMS ). 2c
- Concern has been expressed that this motley set of special case solutions to special case problems will thus grow unmanageably large without providing a single TRULY GENERAL THOUGH MODEST solution among them. 3
- One management problem this set would cause is the problem of converting them across system changes. 3a
- Of course it is not clear what form a general solution would take until our data-management needs become well-known. 4
- To this end, I would like to start a dialogue about YOUR data-management needs or ideas: 5
- How LARGE are your files ? 5a
- Do you allow simultaneous access ? 5b
- Does your data-base span several files ? 5c
- What RETRIEVAL REQUESTS do you make or wish you could make ? 5d
- What LANGUAGE does the user need to know to make the requests ? 5e
- How much knowledge of the STRUCTURE of the data-base does the user need to know in order to satisfactorily interact with it ? 5f

Identifying your data-management needs

Do you derive REPORTS from the data-base ? 5g

How important is response time ? 5h

... 5i

In fact , do you think such questions are the right ones to ask?  
That is, would well-defined answers to these questions point us to a  
general solution? Do you think a general solution exists or is  
desireable? 6

Identifying your data-management needs

(J26924) 12-NOV-75 20:37;;; Title: Author(s): Jan A. Cornish/JAC3;  
Distribution: /SRI-ARC( [ ACTION ] ); Sub-Collections: SRI-ARC; Clerk:  
JAC3; Origin: < CORNISH, MEETING,NLS;3, >, 12-NOV-75 20:35 JAC3  
; ; ; ; # ; ; ; ;



26924 Distribution

N. Dean Meyer, James E. (Jim) White, Douglas C. Engelbart, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, James C. Norton, Jeffrey C. Peters, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson, Don I. Andrews, Bonny Penny Mosher, Israel A. Torres, Jan H. Kremers, Susan K. Ocken, Raphael Rom, David C. Smith, Buddie J. Pine, Andy Poggio, David L. Retz, Laura J. Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L. Garlick, Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks, Beverly Boli, Rita Hysmith, Log Augmentation, Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Ann Weinberg, Adrian C. McGinnis, Robert S. Ratner, David S. Maynard, Robert N. Lieberman, Sandy L. Johnson, James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel, Elizabeth J. Feinler, Kirk E. Kelley

NLS Problems

Hi Bob, I sent this message once but have since found it back in my directory marked as undeliverable mail. So if you did receive it the first time, please ignore this copy. Anyway, glad you had a safe journey back to Washington and that you are already using NLS. Now to answer your questions... first about inserting a <cr> (carriage return) in the wrong place when using sendmessage. There is no way to back up to insert text in a field that you missed. Have to start over. About your problem with creating a file...I think that you could not create the file the second time because you forgot to expunge your directory after deleting the file. Unless you delete and expunge a file, you cannot create a new file with the same name. The command you use after the delete command is <sp> Expunge Directory. This really erases the deleted file so be sure that is what you want to do. If you have more questions let me know or send it to feedback. Also what did we decide to do about changing your mail delivery? I won't really change anything until I hear from you. You could have it delivered to the NSWC directory insted of NAVIMP. Good Luck, Pam

1

NLS Problems

(J26925) 13-NOV-75 01:26;;; Title: Author(s): Pamela K. Allen/PKA;  
Distribution: /RDA( [ ACTION ] ); Sub-Collections: SRI-ARC; Clerk:  
PKA;

26925 Distribution  
Robert D. Archer,

Comment on DAV's Code Format Suggestions

See (26921,). The earlier KEV=HGL document will be forwarded again when retrieved from archive.

## Comment on DAV's Code Format Suggestions

DAV's suggestion follows in many respects the suggestions made in the memo by KEV and HGL (15934,) "Proposed NLS Code Format and Documentation Standards" dated 13 April 1973. Comments on this document are in (15956,) and (15974,).

1

These standards have been honored in spirit only in most cases, though there is a consistency in the use of BEGINS and ENDS in blocks and in the structure of IF statements imposed, I believe, by peer pressure.

2

DAV's document does not handle commenting and formatting within the bodies of procedures and does not deal with results returned. (Please note that there is an error: in the procedure definition statement, the results do not occur after a colon! They COULD be placed there embedded in % signs as a comment, however. Also, the newer features of the language (e.g., the optional TRUE or FALSE result) are not dealt with.)

3

There should be standards for CML documentation (the language was developed since (15934,) appeared) and for using and commenting SIGNALS and CATCHPHRASES.

4

Some agreed upon set of standards is essential, and these are a could beginning.

5

Comment on DAV's Code Format Suggestions

(J26926) 13-NOV-75 13:20;;; Title: Author(s): Harvey G.  
Lehtman/HGL; Distribution: /SRI-ARC( [ ACTION ] ) ; Sub-Collections:  
SRI-ARC; Clerk: HGL;

26926 Distribution

N. Dean Meyer, James E. (Jim) White, Douglas C. Engelbart, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, James C. Morton, Jeffrey C. Peters, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson, Don I. Andrews, Sandra Lee Miranda, Bonny Penny Mosher, Israel A. Torres, Jan H. Kremers, Susan K. Ocken, Raphael Rom, David C. Smith, Buddie J. Pine, Andy Poggio, David L. Retz, Laura J. Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L. Garlick, Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks, Beverly Boli, Rita Hysmith, Log Augmentation, Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Ann Weinberg, Adrian C. McGinnis, Robert S. Ratner, David S. Maynard, Robert N. Lieberman, James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel, Elizabeth J. Feinler, Kirk E. Kelley



## Status of NSRDC Hardware and a few Associated Users

According to Martin, NSRDC has the following equipment - 2-725's, 2-735's, 2-LP's, 2-Data Medias, 1-733ASR. On order for NAVCOSACCT are: 1 GE Terminet, 1 Vadic modem, 1 LP, and 1 Display. On Order for NSWC-White Oaks are 4-735's.

1

I was under the impression that there was an LP on order for NUSC but apparently there isn't. Let me know if this differs from your expectations. When I stopped there last spring the level of interest was pretty high so it would probably warrant a visit with or without a lineprocessor.

2

When Pam talked to Gene Stemple at NSWC-Dahlgren he noted that they are using commercial long-distance lines to Wash. D.C. and that because of that many people are reluctant to use the system. Apparently they have plans to get access within 12-18 months but in the meantime we won't try to get any big effort going there.

3

NADC told Pam they would be losing the terminal they have on loan in December and they too have to dial long distance to Rutgers to gain access. Given the long distance business we won't want to get any big effort started but if they won't have a terminal at all it hardly seems worth our going there. If you know of any different plan for the terminal situation there, please let us know.

4

Status of NSRDC Hardware and a few Associated Users

(J26927) 13-NOV-75 14:25;;; Title: Author(s): Susan Gail Roetter,  
Pamela K. Allen/SGR PKA; Distribution: /FGB( [ ACTION ] );  
Sub-Collections: SRI-ARC; Clerk: SGR;

26927 Distribution  
Frank G. Brignoli,

## Some Important Things about NLS

## Introduction

In response to <26703,> I began to set down what I thought were NLS's neat features, then I began to set down my frustrations, then I began to list things that were both good and frustrating. All this is pretty much off the top of my head, not organized, and I haven't had time to collect the many appropriate references. In some places I wax a little philosophical, but sometimes you have to face fundamental issues to function. Let me say that when I complain of frustration, I recognize that it is a tremendous achievement to get to the point where we can be frustrated by such things.

1

## Three-Dimensional, Mouse-Addressable display

Really in a sense I still get a little hit every time I put my fingers on mouse and keyset and know that I can bug any spot on the screen.

2

## Access for Decision Makers

When I came to work in ARC the chief prospective benefit that was cited for the world at large was that people who made consequential decisions would have the right information, and only the right information, at the right time. I have been told that Jim Norton was hired to develop and implement management information tools. This function has happened only to a trivial extent. Present applications of NLS are based mostly on interest in programming, documentation, data base access by data specialists, or hopes for the future. It's not clear to me what this has happened but I think it is an important failure. One reason it is important is that some features of NLS exist chiefly to fulfill that need.

3

## Intellectual Consequence

When I came to work at ARC Doug and others asserted that access to online systems would affect how people thought. Doug and others talked about Whorf. That issue was very attractive to me, although I have to record that I have always been by temperament, as it were, anti-Mcluhanite. I realize media affect thought, but I don't think they normally reshape it, windows are good mediums because you cannot see glass. Anyway I want to pass on that I do not think that proposition is true about NLS. I don't believe my thought has been altered, I don't think other people's generally has been or will be. Similarly, NLS seems to me politically neutral: wide dissemination of information can make government more responsible, but a culture based on an NLS-like system of information could be very vulnerable. Consider for example viewspecs based on idents.

4

## Awkwardness of displays

Along with what I said about the mouse, I perceive having to go to some public place and sit hunched over a two-foot, immovable cubic box, with some other boxes attached by a tangle of wires, where you see 20 x 72 characters of your work as a burden. I don't think

## Some Important Things about NLS

computer systems will ever become the dominant form of reading and writing until it's as physically easy as paper and the various media that mark paper.

5

## Flexible Addressing

All the ways you can address a character are really important to things like the tinkerability note below.

6

## Shared Information

One of the most important virtues of NLS seems to me that in the machine your file is as available to me as mine. In this connection the NLS users have gotten into a problematic situation. There was a time when I felt free to read the files of anyone who did not put access restrictions on them. I still feel free to do that with some people, but only people that I know in some way. This is connected with some of Ra3y's comments on the journal. I am a frequent journal user, I noted in October that I sent 11% of all journal items. But when I regard my motive I see I do not use it primarily as a message send system, but as an information sharing system. In fact ideally the journal should wither away and it should simply happen that all files not restricted should be indexed and old copies retrievable so that the file system would be the journal system.

7

## Tinkerability

If you consider automobiles, most users never get their hands dirty or look under the hood. But many do. Many spend many happy hours under the hood and that process is an important part of the place of the car in our culture. NLS is wonderfully tinkerable. Consider how I know I sent 11 percent of the October journal items. I went to Tjcat and looked at the statement number of the bottom journal item which I could translate into the total number of items, then I put on a content search from myself as author and counted those items. There is no command to do that, no one programmed or documented it, I did not even think about it a great deal, I just fussed around and did it.

8

## Response time

I don't think I need comment on this problem.

9

## Overcommitment to hierarchic organization

I see the universe as an n-dimensional net. Between any two entities we can name a number of relations including relative generalization. However, relative generalization depends on context, and relations exist among the relations, and so on. Language is a basically linear medium and outline format is a good way to handle dimensional complexity in a linear medium. Perhaps it is the mode of choice as high as half the time in the area of technical documentation, perhaps higher in programming. But it is not nearly so useful in general exposition and it always introduces distortion. NLS is over

## Some Important Things about NLS

committed to hierarchy. If it were not, for example, it might be a paged system, content searches would run as fast as level-clipping, there would be a scrol command, tables would be easy, there might be associative addressing. It is like trying to do all your work with a screwdriver. I see some of our development work these days as struggle to work around this over committment: Some of Jan's suggestions about the Retrieve system; the whole Help system, the WUC, development of ways to handle tables and paging for DDPCS.

10

## Hecticness

I've found it hectic to work in NLS. The function of ARC as a development organization, and the bull-pen atmosphere of the central work area up there contribute, but now I am working alone in the display room and part of ISG and I still feel hectic. Maybe it is me. I'm sure that paradoxically, fast response would help, I keep turning my mind away and back to the screen as I work. One reason I have put long statements in this journal item is that when you are typing you are atleast not waiting for the screen to refresh.

11

12

## Some Important Things about NLS

(J26928) 13-NOV-75 12:27;;; Title: Author(s): Dirk H. Van  
Nouhuys/DVN; Distribution: /CHI( [ ACTION ] ) JML( [ INFO-ONLY ] ) DSM(  
[ INFO-ONLY ] ) JDH( [ INFO-ONLY ] ) JHB( [ INFO-ONLY ] ) DCE( [  
INFO-ONLY ] ) KEV( [ INFO-ONLY ] ) SGR( [ INFO-ONLY ] ) KJM( [ INFO-ONLY  
] ) POOH( [ INFO-ONLY ] ) KIRK( [ INFO-ONLY ] ) BEV( [ INFO-ONLY ] )  
RLL( [ INFO-ONLY ] ) BJP( [ INFO-ONLY ] ) DLS( [ INFO-ONLY ] ) JBP( [  
INFO-ONLY ] ) FWO( [ INFO-ONLY ] ) TLH( [ INFO-ONLY ] ) NJN( [ INFO-ONLY  
] ) JMB( [ INFO-ONLY ] ) JAKE( [ INFO-ONLY ] ) PMK( [ INFO-ONLY ] ) RWW(  
[ INFO-ONLY ] ) ; Sub-Collections: SRI-ARC; Clerk: DVN; Origin:  
< VANNOUHUYS, FIVEORTEN,NLS;3, >, 13-NOV-75 12:10 DVN ;;;;####;

26928 Distribution

Charles H. Irby, Jeanne M. Leavitt, David S. Maynard, J. D. Hopper,  
James H. Bair, Douglas C. Engelbart, Kenneth E. (Ken) Victor, Susan  
Gail Roetter, Karolyn J. Martin, Ann Weinberg, Kirk E. Kelley,  
Beverly Boli, Robert N. Lieberman, Buddie J. Pine, Duane L. Stone,  
Jonathan B. Postel, Pat Whiting O'Keefe, Thomas L. Humphrey, Nancy J.  
Neigus, Jeanne M. Beck, Elizabeth J. Feinler, Peggy M. Karp, Richard  
W. Watson,



## User Services Course Report for AMC Oct,8-10

- Charged 32 hours to 4395-10 for AMC training. 1
- AMC - ARMCOM (Armament Command, Rock Island, Illinois) (1 person/day) 2
1. Persons (users or not) contacted [uppercase if they have a directory] 2a
- Don MCCUNE - Director, Attended the class I taught on TENEX and MSG, 2a1
- Dave O'Melia - Assistant Director, Attended the class I taught TENEX and MSG. 2a2
- Wayne Jost - Systems Analyst, Attended class I taught on TENEX and MSG, 2a3
- Cindy Reid - secretary for Mccune and O'Melia, Attended TENEX and MSG class, 2a4
- Betty (haven't received last name) - Secretary to Mccune and O'Melia 2a5
2. COURSE: 2b
- On October 8 I taught the Basic Course omitting Insert Text, Print Journal, sndmsg, Linking, and addressing, Discussed their network delivery and how to read an item that is cited in the message.txt file using the Print Branch command, Taught Show Record so they could find out names of idents, Gave out a list of all AMC directory names and idents, Talked about when to use sendmail or sndmsg, Advised Sendmail for files (created and edited in NLS) longer than one page, When they need to send a file with sndmsg they will use the Output Sequential command and the <CTRL=B> feature, 2b1
3. ASSISTANCE (other than formal course): 2c
- Gave them some information about the ARPANET, the system, and ARC, Left a copy of Investments in Tomorrow and the Primer, They had had some problems with using the don't Archive command in TENEX, I went over those TENEX commands that still weren't clear to them, 2c1
4. APPLICATION 2d
- The AMC sites are using the system primarily for communication, They need the capability to edit long messages or documents before they are sent, The messages will be created and edited

## User Services Course Report for AMC Oct.8-10

in NLS. If lengthy the message will be sent with Sendmail. If urgent then sndmsg (CTRL-B feature) will be used,

2d1

## 5. ISSUES

2e

My arrival at ARMCOM was perfectly timed for NLS training. Since my last visit in August the people had been using the TENEX commands and MSG. They were eager to learn NLS and had tried to use it without much success. They just went in and repeatedly typed question marks to get information and didn't understand most of it. Their knowing how to log in, use Sndmsg, handle files (delete, undelete, archive, retrieve, read with MSG, etc.), link, and logout made the Basic Course much easier for them. There was none of the usual confusion with learning the two different ways to send mail, and I thought this was important as it is their only use of the system. Perhaps we shouldn't try to teach both Sndmsg and Sendmail in the same course in the future.

2e1

AMC - AVSCOM (Aviation Systems Command, ST. Louis, Mo.) and ALMSA (Army Logistic Management System Agency, St. Louis, Mo.) 1 person/day

3

1. Persons (users or not) contacted [Use upper case if they have a directory]

3a

AVSCOM - Lucille Breville, Carol Emily, and Jerry Emily (none had received previous training in TENEX or MSG.) Claire Meyer - had been in TENEX-MSG class

3a1

ALMSA - Ruth Ingram and Harty Suarez - no previous training

3a2

## 2. COURSE:

3b

On October 9 the two groups got together at ALMSA for the course. Since only one person in the group had had previous training I had to change my plans to teach just a modified Basic Course. I had to give an introduction, go through the log in procedure, give the modified course (omitting the parts listed previously) but including sndmsg and linking, go over MSG, necessary TENEX commands, and attaching to a job,

3b1

## 3. ASSISTANCE (other than formal course):

3c

After spending most of the day trying to cover everything listed (some of it very briefly) I answered individuals' questions. After explaining MSG spent some time showing how to manipulate the accumulated messages in their directories. Left copies of the Primer and Investments in Tomorrow,

3c1

User Services Course Report for AMC Oct.8-10

4. APPLICATION 3d

As stated previously the AMC sites are using the system for communication with each other. NLS will be used to create, edit, and send files. 3d1

5. ISSUES: 3e

Neither Col. Smith of ALMSA nor James of AVSCOM attended the class. I don't think either of them is very interested, and their attitudes were reflected by their subordinates. I doubt if anything will be done at these sites. There is also the same old problem with unreliable phone lines. The terminal that AVSCOM has on loan from AMC headquarters doesn't work at all. 3e1

AMC - TROSCOM (Troop Support Command, St. Louis, Mo.) 1 person/day 4

1. Persons (users or not) contacted [Use upper case if they have a directory] 4a

Sandy Davis, Daniel Kamp, Connie Simms = previous TENEX-MSG training 4a1

Debbie M. Czarnopys = no previous training 4a2

2. COURSE: 4b

October 10 - The TROSCOM group had been using the system and had a good understanding of Sndmsg and limited TENEX commands. The modified Basic Course was exactly what they needed, especially since they were tired of having to retype long messages in Sndmsg to correct errors. Taught the Basic Course leaving out all 2's. 4b1

3. ASSISTANCE (other than formal course): 4c

They had had trouble with detached jobs so I went over attaching. They also had questions about MSG so spent time discussing that. Left copies of the Primer and Investments in Tomorrow. 4c1

4. APPLICATION 4d

Communication between other AMC sites 4d1

5. ISSUES: 4e

The main problem at TROSCOM is their terminal which is a 33

User Services Course Report for AMC Oct.8-10

that doesn't have lowercase. So they have to say ter 33 to use NLS. When typing in text they are preceding characters with a slash to make them uppercase. I think a terminal has been ordered and when/if it arrives will make using the system much more pleasant for them.

4e1

User Services Course Report for AMC Oct.8-10

(J26929) 13-NOV-75 15:46;;; Title: Author(s): Pamela K. Allen/PKA;  
Distribution: /SRI-ARC( [ INFO-ONLY ] ) ; Sub-Collections: SRI-ARC;  
Clerk: PKA;

26929 Distribution

N. Dean Meyer, James E. (Jim) White, Douglas C. Engelbart, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, James C. Norton, Jeffrey C. Peters, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson, Don I. Andrews, Sandra Lee Miranda, Bonny Penny Mosher, Israel A. Torres, Jan H. Kremers, Susan K. Ocken, Raphael Rom, David C. Smith, Buddie J. Pine, Andy Poggio, David L. Retz, Laura J. Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L. Garlick, Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks, Beverly Boli, Rita Hysmith, Log Augmentation, Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Ann Weinberg, Adrian C. McGinnis, Robert S. Ratner, David S. Maynard, Robert N. Lieberman, James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel, Elizabeth J. Feinler, Kirk E. Kelley

Directory for Alan R Klaytone at RADC

Please create a directory and ident entry under the RADC group for Al  
Klayton at Office-1,

<KLAYTON>

password and ident = (ARK)

Alan R Klayton  
Computer Architecture Section (ISCA)  
Griffiss AFB NY 13441

315-330-2558

200 pages is fine

Thanks,

Stoney

1

1a

1b

1c

1d

1e

1e1

1e2

Directory for Alan R Klaytone at RADC

(J26930) 13-NOV-75 16:58;;; Title: Author(s): Duane L. Stone/DLS;  
Distribution: /FEED( [ ACTION ] ) JCP( [ ACTION ] ) FJH( [ INFO-ONLY ] )  
; Sub-Collections: RADC; Clerk: DLS;



26930 Distribution

Special Jhb Feedback, Jeffrey C. Peters, Francis J. Hilbing,

User Services Course Report-NSRDC (NSWC)-Oct 31-Nov 4

NSRDC - NSWC (Naval Surface Weapons Center - White Oak, Md.) at ARC  
on Oct. 31 - Nov. 4, Charged 19 hours to NSRDC 4395-2

1. Persons (users or not) contacted [uppercase if they have a directory]

Robert Archer - uses the NSWC directory

2. COURSE:

On October 31 taught the Basic Course after giving a brief overview of the system. Finished the course in one day and had time to answer questions. Bob had used Sndmsg before and knew how to login.

On November 3 after reviewing the Basic Course, taught the Introduction to Structure and Viewing Course.

November 4 during the morning I gave Bob a demo of DNLS and allowed an hour or so for him to use the Display. Since the NSWC does not have a lineprocessor I didn't attempt to teach a formal DNLS course. I think he got a good understanding of DNLS and realized that it can be very nice.

3. ASSISTANCE (other than formal course):

Bob was interested in how to accomplish several specific things. One was sorting, so I explained the sort command. He was very interested in producing documents so I gave him a copy of the Output Processor Guide and explained some of the directives. During the training I gave Bob copies of the Primer and Sample sessions that go along with the second course. He also got copies of the Glossary, Command Summary, Format Library, Letter Tutorial, and Brief Guide to User Programs.

4. APPLICATION

Various Navy R & D Labs are using the NSRDC slot for communication with each other. They are working on a joint project, NELCON, and send files and messages about this.

5. ISSUES

Bob was a little concerned that the other Navy Labs didn't know NLS and hadn't had any training. This is being corrected and we will soon have contacted all of the sites.

User Services Course Report-NSRDC (NSWC)-Oct 31-Nov 4

(J26931) 13-NOV-75 17:13;;; Title: Author(s): Pamela K. Allen/PKA;  
Distribution: /SRI-ARC( [ INFO-ONLY ] ); Sub-Collections: SRI-ARC;  
Clerk: PKA;

26931 Distribution

N. Dean Meyer, James E. (Jim) White, Douglas C. Engelbart, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, James C. Norton, Jeffrey C. Peters, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson, Don I. Andrews,  
Sandra Lee Miranda, Bonny Penny Mosher, Israel A. Torres, Jan H. Kremers, Susan K. Ocken, Raphael Rom, David C. Smith, Buddie J. Pine, Andy Poggio, David L. Retz, Laura J. Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L. Garlick, Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks, Beverly Boli, Rita Hysmith, Log Augmentation, Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Ann Weinberg, Adrian C. McGinnis, Robert S. Ratner, David S. Maynard, Robert N. Lieberman, James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel, Elizabeth J. Feinler, Kirk E. Kelley

professional journals

The problem of not reading enough professional journals that was raised in the last Tuesday's meeting suggests the following idea. Let's subscribe to a few journals (the funds, as I found out, are available) and assign every journal to a staff member who will be responsible to brief everybody else if an article of interest is published.

If you have any objections, suggestions, or would like to recommend journals please let me know.

LET'S MOVE!!!

1

professional journals

(J26932) 13-NOV-75 17:59;;; Title: Author(s): Raphael Rom/ROM;  
Distribution: /SRI-ARC( [ ACTION ] ) ; Sub-Collections: SRI-ARC; Clerk:  
ROM;

26932 Distribution

N. Dean Meyer, James E. (Jim) White, Douglas C. Engelbart, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, James C. Norton, Jeffrey C. Peters, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson, Don I. Andrews, Sandra Lee Miranda, Bonny Penny Mosher, Israel A. Torres, Jan H. Kremers, Susan K. Ocken, Raphael Rom, David C. Smith, Buddie J. Pine, Andy Poggio, David L. Retz, Laura J. Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L. Garlick, Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks, Beverly Boli, Rita Hysmith, Log Augmentation, Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Ann Weinberg, Adrian C. McGinnis, Robert S. Ratner, David S. Maynard, Robert N. Lieberman, James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel, Elizabeth J. Feinler, Kirk E. Kelley