

DRM re (20001,) NORSAR user name and SNDMSG addresses

Dag: Your Journal message (20001,) came through. Good going. 1

Regarding your "user name", NORSAR-TIP: This term, in the IDENT file, refers to the SRI-ARC TENEX File Directory in which your NLS "Initial file" is set up -- where your "online Journal-mail citations" would be delivered. 2

There is a limit to the number of file directories that we can support within our operating system. We are crowding that limit now, and only under special circumstances do we set up new ones as we did for you and for the London TIP. 2a

A SNDMSG message, as far as I know, can only be addressed to a given TENEX File Directory at a specified TENEX host. The only "in-box" where incoming SNDMSG mail is placed by the SNDMSG System is the MESSAGE.TXT file in the specified file directory. Therefore, for an individual to have a private SNDMSG mail box, he must have his private TENEX file directory. 2b

Without some specific resources, from somewhere, that buys a higher service level for a user or user group, there isn't any way that we can provide individual file directories for your people. This situation is not at all uncommon for Network Users; e.g. UK-ICS, MITRE-TIP, NBS-TIP, etc. have groups who must share one directory. 2c

So, I guess that until you or ARPA or somebody can buy/allocate some specific resource for individual file directories, your SNDMSG mail must be managed in one common MESSAGE.TXT file. 2d

Journal mail is handled differently. 3

If it is specified in your IDENT entry that your Journal delivery is "Network," the citations are sent out with the same Network Mail conventions as are TENEX -- i.e. they ill show up on the MESSAGE.TXT file in the file directory to which you are assigned. 3a

However, if Journal delivery is specified as "Online," then your citations will show up in your Initial File (really should be called your Ident File, probably, since it is the file in your specified file directory whose file name is your personal IDENT. This essentially gives each person his individual mail box, and most people use different branches in that file for management of their messages. 3b

For some reason, your IDENTs seemed to have been set up with "Network Delivey" specifications, rather than "Online." I would recommend your asking Marcia Keeney (MLK) to change the

DRM re (20001,) NORSAR user name and SNDMSG addresses

Journal-delivery spec to Online for those users who will be making an earnest attempt to use NLS and the Journal.

3c

For other users there who will only be working in the TECO and SNDMSG world, you should not even clutter your directory with their Initial Files and you should delete them (as well as being sure that their Journal Delivery Spec is set to Network Delivery).

3c1

What I referred to earlier about the naming of your Directory had to do with the actual choice for the name. I gather that you and Marcia have had a bit of dialogue about the Organization name as listed in the IDENT file, and that you are o.k. on that score; can we assume that the name of your File Directory being NORSAR-TIP is o.k. with you?

4

It seems more appropriate to me that your Directory be named this rather than NDRE or etc. because it is only through your ARPA association that we can justify using any of our resources to serve you to the small extent that we do, and I gather that it is the NORSAR part of NDRE that has the distinctive ARPA involvement.

4a

Keep at it, Dag. Best of Luck. Doug

5

20012 Distribution

Dag Rieber-Mohn, James E. (Jim) White, Michael D. Kudlick, Marcia  
Lynn Keeney, Jeanne B. North, Mil E. Jernigan,

DCE 2-NOV-73 09:02 20012

DRM re (20001,) NORSAR user name and SNDMSG addresses

(J20012) 2-NOV-73 09:02; Title: Author(s): Douglas C. Engelbart/DCE  
; Distribution: /drm jew mdk mlk jbn mej ; Sub-Collections:  
SRI-ARC; Clerk: DCE ;

What to do When Interogate Tells you a Journal File is Not On Line  
(reply to 20004)

There are some known bugs in the archive system and we are working on them. 1

This note is to tell you what to do when you get that message for a recent journal file. You send a journal or sndmsg to our operator, Jef Peters (Peter@NIC or JCP) from 8 to 5 pacific time, or to our night operator (OPERATO@NIC or MAB2) from midnight to 8:00. he do not respond as quickly as they do to interogate because the message may not reach them untl one next logs in, but they will usually be able to get back the file in a couple of hours. 2

20013 Distribution

David H. Crocker, James C. Norton,

DVN 2-NOV-73 09:10 20013

What to do When Interogate Tells you a Journal File is Not On Line  
(reply to 20004)

(J20013) 2-NOV-73 09:10; Title: Author(s): Dirk H. Van Nouhuys/DVN;  
Distribution: /DHC JCN(fyi); Sub-Collections: SRI-ARC NIC; Clerk: DVN;

good work on the rcte, gald to see it released in final form.

1



20015 Distribution  
David H. Crocker,

(J20015) 2-NOV-73 11:23; Title: Author(s): Jonathan B. Postel/JBP;  
Distribution: /DHC; Sub-Collections: NIC; Clerk: JBP;

DCE 5-NOV-73 18:57 20019

Demo and Reference Material for 5 Nov 73 Visit by Chinese Computer  
Scientists

Demo and Reference Material for 5 Nov 73 Visit by Chinese Computer Scientists

Agenda for ARC visit, 10 to 12 pm (:gebtzn)

From 10 to 11

General Introduction, Douglas Engelbart, Director of the Augmentation Research Center (ARC)

From 11 to 12

Coffee, tea and cookies

Initial period for the visitors to have a bit of hands-on experience. They can divide among the manned consoles (A through H) to suit themselves, probably according to the interpreter availability.

The rest of the hour is an open house for substantive discussion and demonstration at these eight stations, according to the following topic assignments:

Use of our techniques by

A ARC's management staff

Jim Norton, Beau Hardeman

B ARC's software staff

Harvey Lehtman, Elizabeth Michael, Diane Kaye

C the Network Information Center (NIC)

Michael Kudlick, Jeanne North, Elizabeth Feinler

D ARC's documentation and training staff

Jeanne Beck, Jim Bair

Technical aspects of our developments

E Software design features within our system

Charles Dornbush, Don Wallace

F Analysis methods and results

Paul Rech, Susan Lee

1  
1a  
1a1  
1b  
1b1  
1b2  
1b3  
1b3a  
1b3a1  
1b3a1a  
1b3a2  
1b3a2a  
1b3a3  
1b3a3a  
1b3a4  
1b3a4a  
1b3b  
1b3b1  
1b3b1a  
1b3b2  
1b3b2a

Demo and Reference Material for 5 Nov 73 Visit by Chinese Computer Scientists

G Hardware: Line Processor and Remote Terminals, Mouse, Keyset, etc. 1b3b3

Martin Hardy 1b3b3a

H Typesetting output and format control 1b3b4

Dirk Van Nouhuys, Kirk Kelley, 1b3b4a

Demo and Reference Material for 5 Nov 73 Visit by Chinese Computer Scientists

Delegation Roster of Chinese Computer Scientists:  
(:gebtzn)

Yen P'ei-lin

Head of Group, Member of Board of Directors, Chinese Electronics Society; Director of Institute of Computer Technology, Chinese Academy of Sciences. Director of Institute of Computer Technology, Chinese Academy of Sciences.  
(Pronounced YEN PAY-LYNN, addressed as Mr. Yen).

For Sciences demonstrating, this new information are dummy fillers.

Institute of Computer Technology, Chinese Academy of Sciences. These Institutes are located at ....

Wang Tsung-chin

Deputy Head of Group, Deputy Manager of Chinese Radio Equipment Company. (Pronounced WONG DZONG-JIN, addressed as Mr. Wang).

Ting Ti-ch'ing

Planning Engineer of Chinese Radio Equipment Company.  
(Pronounced DING DEE-CHING, addressed as Mr. Ting).

Wu Chi-k'ang

Professor Specializing in Computers in Radio Department of Hsi-an Communications University. (Pronounced WOO GEE-KONG, addressed as Professor Wu).

Chang Tzu-ch'ang

Deputy General Engineer of Peking Radio Factory. (Pronounced as JAHNG DZE-CHANG, addressed as Mr. Chang).

Chang Hsi-chiu

Division Director fo Computer Design of Peking Radio Factory.  
(Pronounced as JAHNG SHE-JOE, addressed as Mr. Chang).

Ni Yao-kuo

Engineer of Peking Radio Factory, specialty: peripherals.  
(Pronounced KNEE YAOW-GW(AW) as in law, addressed as Mr. Ni).

## Demo and Reference Material for 5 Nov 73 Visit by Chinese Computer Scientists

Hsu Cheng-ch'un	2h
Division Director of Institute of Computer Technology, Chinese Academy of Sciences, specialty: storage, memories. (Pronounced SHEW JUNG (as in jungle)-CHWUN, addressed as Mr. Hsu).	2h1
Yang T'ien-hsing	2i
Division Director of Institute of Computer Technology, Chinese Academy of Sciences, specialty: mainframes. (Pronounced YAHNG TIEN--SHING, addressed as Mr. Yang).	2i1
Sun Chang	2j
Assistant Researcher, Institute of Computer Technology, Chinese Academy of Sciences, specialty: peripherals. (Pronounced as SWUN-JAHNG, addressed as Mr. Sun).	2j1
Ch'en Jen-fu	2k
Assistant Researcher, Shanghai Institute of Computer Technology, specialty: systems design. (Pronounced CHUN REN-FOO, addressed as Mr. Ch'en).	2k1
Chu San-yuan	2l
Assistant Researcher, Shanghai Institute of Computer Technology, specialty: software. (Pronounced as JEW SAN-YUAN, addressed as Mr. Chu).	2l1
Ch'en Chin-chang:	2m
Engineer, Institute of Post and Telecommunications Research, specialty: data transmission. (Pronounced as CHUN JIN=JAHNG, addressed as Mr. Ch'en).	2m1
Hsu Jen-yao	2n
Translator, Chinese Electronics Society. (Pronounced as SHEW REN-YAO, addressed as Mr. Hsu).	2n1

Demo and Reference Material for 5 Nov 73 Visit by Chinese Computer  
Scientists

Initially planned U.S. Itinerary:  
(:gebtzn)m

WASHINGTON - optional, 1-2 days

BOSTON - 1 day:

introductory briefing to American computer field.

BOSTON

Digital Equipment Corporation (DEC) Boston area, 1 day:

mini computers

Massachusetts Institute of Technology (M.I.T.), Boston area, 1  
day:

time sharing, graphics, artificial intelligence, data bases,  
data management.

Harvard University, Boston area, 1/2 day: programming  
languages

Bolt Beranek and Newman (BBN), Boston area, 1/2 day:

networks, artificial intelligence, computer assisted  
instruction.

Honeywell Incorporated, Boston area, 1/2 day:

disc technology, integrated circuit memories, production  
automation

NEW YORK

International Business Machine Corporation (IBM), New York  
area, 3 days: (all areas)

American Airlines, New York area, 1/2 day:

business application in banking

Chase Manhattan Bank, New York area, 1/2 day:

business application in banking

Potter Instrument Company, New York, 1/2 day:

3

3a

3b

3b1

3c

3c1

3c1a

3c2

3c2a

3c3

3c4

3c4a

3c5

3c5a

3d

3d1

3d2

3d2a

3d3

3d3a

3d4



## Demo and Reference Material for 5 Nov 73 Visit by Chinese Computer Scientists

discs, peripheral devices	3d4a
Bell Laboratories, New York, 1 day: communication equipment	3d5
Equitable Life Insurance Company, New York, 1/2 day	3d6
MINNEAPOLIS	3e
Control Data Corporation (CDC), Minneapolis area, 1 day:	3e1
big computer manufacturing and architecture	3e1a
Univac, Minneapolis, 1/2 day: big computer architecture	3e2
Minnesota Mining & Manufacturing (3M), Minneapolis, 1/2 day:	3e3
magnetic tape technology, memory systems	3e3a
ST. LOUIS	3f
Washington University, St. Louis area, 1/2 day:	3f1
macro-modules, bio-medical applications	3f1a
McDonnell Aircraft Company, St. Louis area, 1/2 day:	3f2
industrial application in aircraft	3f2a
PALO ALTO & SAN JOSE	3g
Stanford University, San Jose area, 1 day:	3g1
medical applications, artificial intelligence	3g1a
Stanford Research Institute (SRI), San Jose area, 2 days:	3g2
artificial intelligence, data management	3g2a
Fairchild Industries, San Jose, 2 days:	3g3
advanced memory circuits technology, integrated circuits technology	3g3a
Hewlett-Packard, San Jose, 1/2 day:	3g4
calculators and mini-computer technology	3g4a
Lawrence Livermore Laboratory (LLL), San Jose, 1 day:	3g5

Demo and Reference Material for 5 Nov 73 Visit by Chinese Computer Scientists

large computers, simulation 3g5a

Xerox, Palo Alto Research Center (PARC), San Jose, 1/2 day 3g6

display technology, advanced research in computer application 3g6a

IBM, San Jose, 1 day: 3g7

big computers, memory systems, peripheral devices 3g7a

Links, references, and our Journal: 4

For instance, a citation "link" is (see -- 12445,8:wygm) 4a

DCE 5-NOV-73 18:57 20019

Demo and Reference Material for 5 Nov 73 Visit by Chinese Computer  
Scientists

(J20019) 5-NOV-73 18:57; Title: Author(s): Douglas C. Engelbart/DCE  
; Sub-Collections: SRI-ARC; Clerk: DCE ;

DIRECTIVES/NLS-TENEX FILES

DAVY: HOW DOES ONE GET A NLS FILE WITH DIRECTIVES CONVERTED TO A  
TENEX FILE FORMATED AS THE DIRECTIVES SUGGEST ?, AND GET THAT TO ISI  
? --JON.

20020 Distribution  
David H. Crocker,

Syntax observation

Copy Directory, Copy Archive, and Copy Sequential are documented backwards. They are implemented from-to like the rest of the copy commands.

20021 Distribution

Jeanne M. Beck, N. Dean Meyer, Dirk H. Van Nouhuys,

Syntax observation

(J20021) 2-NOV-73 14:04; Title: Author(s): Kirk E. Kelley/KIRK;  
Distribution: /JMB NDM DVN; Sub-Collections: SEI-ARC; Clerk: KIRK;



USING 5 and 6 not online

Jean and Nancy -- I was just trying to submit USING notes 5 (Meeting Notes) and 6 (Charter) as RFCs and discovered that they are not Journalized That is, 18259 and 19025, repsecitively, were never actually submitted to the journal.

Do either of you have copies i can work with?? ave.

1

20022 Distribution

Nancy J. Neigus, Jean Iseli,

DHC 2-NOV-73 14:25 20022

USING 5 and 6 not online

(J20022) 2-NOV-73 14:25; Title: Author(s): David H. Crocker/DHC;  
Distribution: /NJN JI; Sub-Collections: NIC; Clerk: DHC;

Bug (hopefully) Fixed in Mailer

Jeff-- I believe I've found and fixed the bug in MAILER which causes it to crash. Please let me know if you have problems again. --Jim

1

20023 Distribution  
Jeffrey C. Peters,

Bug (hopefully) Fixed in Mailer

(J20023) 2-NOV-73 14:59; Title: Author(s): James E. (Jim)  
White/JEW; Distribution: /JCP; Sub-Collections: SRI-ARC; Clerk: JEW;

Request for changing the definition of LEVEL-ADJUST

LEVEL-ADJUST is documented in a misleading way and implemented in an unreasonable way. There is no reason to require an extra Command Accept or Space to terminate the LEVEL-ADJUST field. Forcing the user to do this makes the Level Adjust field mandatory instead of optional. Surely this is the result of an unintentional oversight with respect to the LEVEL-ADJUST field.

1

LEVEL-ADJUST should be defined as: a string of u's and d's optionally preceded by integers and terminated by any other character. A <SP> or CA is necessary only before the TYPEIN after changing level in the Insert STRUCTURE command.

2

If the definition were changed to this, the command summary syntax description would remain the same.

3

The prompt at a LEVEL-ADJUST in the TNLS Insert STRUCTURE command might look like: L:/T:/[A:]

4

The prompt at a TNLS LEVEL-ADJUST other than in the Insert STRUCTURE command should look like: L:/C:/[##]

5

20024 Distribution

James H. Bair, Elizabeth K. Michael, Richard W. Watson, Elizabeth J. (Jake) Feinler, Harvey G. Lehtman, Kirk E. Kelley, Laura E. Gould, N. Dean Meyer, Jeanne M. Beck, Charles F. Dornbush, Dirk H. Van Nouhuys, Michael D. Kudlick, Diane S. Kaye, James C. Norton,



KIRK 2-NOV-73 17:47 20024

Request for changing the definition of LEVEL-ADJUST

(J20024) 2-NOV-73 17:47; Title: Author(s): Kirk E. Kelley/KIRK;  
Distribution: /DIRT; Sub-Collections: SRI-ARC DIRT; Clerk: KIRK;

re: your suggestions

Jean -- Your two ideas are clearly useful. I have suggested the 'directives' recognition/processing one before, and been told it is too computationally expensive. I think a viewspec option would make it workable, but doubt we'll be able to convince ARC personnel. The Output Nls seems to me a VERY spiffy idea and I suggest you make that suggestion (by itself) to NP, RWW and DVN.

About a Task Management Language: I have been working on specifying one for about 6 months. Don't think it quite fits your scenario, but is close. I'm bring the file back online (from archive) so you can take a look. Added thoughts to it: will be written in ECL, which is extensible; running in interpreted mode is most important feature. Filename is (ucla-nmc,dhctamal,).

Dave.

20025 Distribution  
Jean Iseli,

re: your suggestions

(J20025) 2-NOV-73 18:09; Title: Author(s): David H. Crocker/DHC;  
Distribution: /JI; Sub-Collections: NIC; Clerk: DHC;

O[utput] N[ls]

(rww)

1

In collaborative work for the ARPANET Newsletter, it is frequently the case that an article submission is made wherein the submitor has taken great care to embed the appropriate output processor directives. This is especially useful when the article is subsequently journalized and distributed seperately. However, this type of submission does create a problem in eliminating the output processor directives and reformatting the article to make it useful for the on-line version of the newsletter which is also viewable through the NIC Query language. Other instances of such a scenario can be frequently cited. The purpose of this note is to invite your attention to the following suggested NLS augmentation.

1a

Background References: NIC #20009 2 Nov 73 [ji], and NIC #20025 2 Nov 73 [dhc]

1a1

Suggestion: Create a new NLS command, O[utput] N[ls], which would process an NLS file with embedded Output Processor directives and transform it to an NLS file without Output Processor directives BUT, where the directives had taken effect. Several suboptions may be desirable: (1) to assure that all transformed statements are at the same plex [for compatibility with NIC Query], and (2) leave transformed statements at the same levels as their original occurrence.

1a2

Discussion: At the present time, the only way I have of effecting this is through the use of a hack wherein I telnet to NIC, Output Processor the subject file, edit the file into a TENEX file through the use of telnet.typescript, re-insert the file through E[xecute] I[nsert] S[equential], then use the user-program "append" to minimize multi-statement NLS overhead. Clearly, this "HACK" leaves a lot to be desired in terms of efficiency.

1a3

I strongly recommend you give this recommendation your most serious consideration. I believe the ensuing NLS command would have appreciable utility to your user community. Thanks,.....Jean

1b

O[utput] N[ls]

(J20027) 2-NOV-73 23:41; Title: Author(s): Jean Iseli/JI;  
Distribution: /NP RWW DVN JCN JBP MEJ DCE(fyi); Keywords:  
NLS-Augmentation; Sub-Collections: NP; Clerk: JI;

G[oto] M[eta] N[ls]

(ndm)

1

The purpose of this note is to invite attention to a concept which I believe has much merit relative to augmenting NLS to render it more useful to many network users. The concept is for the development of an NLS subsystem wherein the user could define and label for subsequent re-use, a process consisting of multiple NLS command executions. Specifically, what is proposed is a User Meta NLS Language. A brief background, description, and discussion are provided in the following:

1a

Background: As a network NLS user, I have found that increasing sophistication in the use of NLS requires that I allocate a reasonable amount of time restructuring past work to reflect increased knowledge of NLS. Examples include restructuring files to conserve disk space through the elimination of NLS overhead, restructuring files to make them also easily viewable through NIC Query, etc. Further, in the conduct of day to day activities, there are many repetitive processes that are effected, where the command sequences are the same, but the files on which they are performed may change. And finally, often I find use of assorted user-progs highly desirable; in some instances they exist, in other instances they do not. Often, one exists which if augmented with another, enable me to do what it is that I desire. In dialog with other NLS users, the opinion was formed that these attributes have an underlying commonality with other NLS usage. Thus, the evolution of the following concept. No pretense at concept completeness is made; the purpose of this note is to propose the concept and subject it to your critical review and consideration, and if found meritorious, to serve as a stimulant to on-going dialog directed at its evolution to a useful NLS augmentation.

1a1

Description: The primitives of G[oto] M[eta] N[ls] are partially characterized by the following:

1a2

D[efine] P[rocess] (name) user-name

1a2a

This command would enable the user to execute any sequence of NLS commands and have the sequence of commands "packaged" into a named process wherein upon re-execution, all references to specific files, etc., would be generalized such that the user would be required to re-specify the files as they were required. Two modes

G[oto] M[eta] N[ls]

are envisioned: (1) a process could be defined for dynamic execution; in which case the user would be required to submit file names as they are required, and (2) a process could be defined for deferred execution; in which case the user would be required to specify all files during specification for process execution - this will be discussed more fully in the following.

1a2a1

E[xecute] D[efered] P[rocess] (name)

1a2b

This command would allow the user to specify required parameters for a predefined process and request its execution on a deferred basis; that is, the "job" would be queued for deferred execution.

1a2b1

E[xecute] P[rocess] (name)

1a2c

This command would initiate a user defined process.

1a2c1

S[how] U[ser-progs]

1a2d

This command would cause the system to provide the user an index to all included user-progs [as distinguished from named-processes previously defined by the user] wherein each index term would include the name of the user-prog, a mini-description of its function, and its authors ident.

1a2d1

D[escribe] U[ser-prog]

1a2e

This command would provide a detailed description of a specified user-prog including an example of its use.

1a2e1

I[nsert] U[ser-prog]

1a2f

This command would allow a user to augment the user prog library with a user program of his construct. The insertion would result in a system initiated dialog with the submitor to ensure that he supplies all required



G[oto] M[eta] N[ls]

information for his submission. The entire content of his submission would result in its being placed in a queue for subsequent examination by an NLS/L10 expert who would certify it for inclusion. Any problems found with the submission would result in a Journal item being submitted to the user; otherwise, if the submission were found to be adequate, it would be included into the user-prog library and the user so notified.

1a2f1

S[how] C[ommands]

1a2g

This command would provide the user a list of his prespecified processes. Note that these prespecified processes constitute a user specific library which should most probably be maintained as a specific branch in the users initial file.

1a2g1

Discussion: The above are only a few of the commands envisioned, but should suffice to give a good idea of the concept. The benefits I envision from such a capability include:

1a3

An extensible user-prog data base under NLS management and easily available and useable to users.

1a3a

The ability for users to define, label, and re-execute repetitive processes.

1a3b

The user ability to significantly augment NLS to his specific usage environment.

1a3c

And many others.

1a3d

References: NIC #20009, 20025, and 20027

1a4

I would appreciate your thoughts on this suggestion, and look forward to an on-going dialog.....Jean

1a5

20028 Distribution

Richard W. Watson, Douglas C. Engelbart, David H. Crocker, Mil E. Jernigan, Nps Np, Richard W. Watson, Charles H. Irby, Jonathan B. Postel, Ernest H. Forman, Susan S. Poh, James C. Norton, N. Dean Meyer, Jim O. Calvin, Steve D. Crocker,

## Change in Standard Host Name for Host 70

This short note is to inform the ARPANET community of a change in the standard Host name for Host 70. The name of our Host has been changed from MIT-DMCG to MIT-DMS. DMS is an abbreviation for the Dynamic Modeling System. The suggested nickname for our Host is DM. However you may continue to use DMCG or MIT-DMCG as nicknames to facilitate the name change. The change has been made on programs at our site, and I hereby request your cooperation in propogating this change.

Thank You, Abhay Bhushan

20030 Distribution

Michael B. Young, Michael A. Padlipsky, Schuyler Stevenson, L. Peter Deutsch, John Davidson, Thomas O'Sullivan, Sol F. Seroussi, Scott Bradner, Robert H. Thomas, Michael J. Romanelli, Ronald M. Stoughton, A. D. (Buz) Owen, Robert L. Fink, Jeanne B. North, Steve D. Crocker, Thomas F. Lawrence, John W. McConnell, James E. (Jim) White, A. Wayne Hathaway, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Abhay K. Bhushan, B. Michael Wilber, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, Joan T. Melvin, Donna R. Cooper, Jeffrey B. Rubin, John F. Wakerly, Tom C. Rindfleisch, Leonard B. Fall, David L. Hyde, Gary Blunck, Tom P. Milke, Alan H. Wells, Chuck R. Pierson, Carl M. Ellison, Robert P. Blanc, Jay R. Walton, Terence E. Devine, David J. King, William L. Andrews, Milton H. Reese, Kenneth M. Brandon, Lou C. Nelson, Jeffrey P. Golden, Richard B. Neely, Dan Odom, Robert G. Merryman, P. Tveitane, Adrian V. Stokes, David L. Retz, Reg E. Martin, Gene Leichner, Jean Iseli, James E. (JED) Donnelley, William Kantrowitz, Michael S. Wolfberg, Yeshiah S. Feinroth, Anthony C. Hearn, Robert M. (Bob) Metcalfe, Bradley A. Reussow, Daniel L. Kadance, George N. Petregal

Response to JI Proposed NLS Features: Meta nls and Output Nls  
(20028,) and (20027,)

Jean: Thanks very much for your recent NLS feature suggestions/proposals (20027,) and (20028,).

They are features that have real promise and I'm sure our Development staff (RWW, CHI, NDM....) will give them serious consideration. The Meta NLS ideas are along the same lines as what we used to call executable text (but go farther than what we built for the XDS 940). We did have the feature where users could string out a series of NLS commands in statements....with loops, command accept redefinition, etc.... to perform many higher-level NLS operations.

With the changeover to the PDP-10 and the availability of L10 to users, we decided not to re-implement executable text features, feeling that the L10 features would provide much more power....and easier debugging features. BUT we have never got around to making the interface and, say, NLS-based subsystem (?) that really permits users to take advantage of such user-programs. Your thinking is right on....and I'm sure will prove quite helpful as an encouragement/stimulus and as a set of user-feature initial specs.

My first reaction to the specific set of commands/features you suggest is that those are just the set I'd like as a user.

I particularly like the way you picked out potentially interested/involved users and developers and NP in your Journal message sending.. a good use of the message-directing capabilities... now what we need is time and energy to do something about these things....I'll sure support it.

I'm quite sure Doug will be heartened by the reappearance of some support for meta NLS stuff. Oh, I also like the idea of getting a file that looks like what the hardcopy does after output processing. I'll be interested in what Dean Meyer thinks about that. As a lower-level idea and not an answer to your suggestion.... I assume you do know about the user-program DELDIR? It strips out directives in a document...there may be times when it would help to get documents eadable online after hardcopy processing. but surely not the useful idea you propose.

Thanks again, Jean I'll be watching along with you to see how this develops. Jim

20031 Distribution

Douglas C. Engelbart, Richard W. Watson, Charles H. Irby, James H. Bair, Dirk H. Van Nouhuys, N. Dean Meyer, Nps Np, Richard W. Watson, Charles H. Irby, Jean Iseli, Jim O. Calvin, David H. Crocker, Mil E. Jernigan, Jonathan B. Postel, Ernest H. Forman, Susan S. Poh,

Update to Request for changing the definition of LEVEL-ADJUST

20024 below refers to the Command language in the experimental system

20032 Distribution

James H. Bair, Elizabeth K. Michael, Richard W. Watson, Elizabeth J. (Jake) Feinler, Harvey G. Lehtman, Kirk E. Kelley, Laura E. Gould, N. Dean Meyer, Jeanne M. Beck, Charles F. Dornbush, Dirk H. Van Nouhuys, Michael D. Kudlick, Diane S. Kaye, James C. Norton,



(Harvey)

1

Harvey: I sent the following concept paper through the journal last night and got to thinking with Mil that you might be interested in commenting on it and possibly opening up a dialog either on this subject or the many others that we appear to be pursuing. I have been trying to find some way of encouraging a dialog with you since we last chatted but have had trouble finding an appropriate one, recognizing the heavy work load pressure you are currently shouldering. Maybe you could scan it and react and out of it we could evolve something worthwhile that we could all mutually assist in - wanna give it a go? ....Jean

1a

The purpose of this note is to invite attention to a concept which I believe has much merit relative to augmenting NLS to render it more useful to many network users. The concept is for the development of an NLS subsystem wherein the user could define and label for subsequent re-use, a process consisting of multiple NLS command executions. Specifically, what is proposed is a User Meta NLS Language. A brief background, description, and discussion are provided in the following:

1b

Background: As a network NLS user, I have found that increasing sophistication in the use of NLS requires that I allocate a reasonable amount of time restructuring past work to reflect increased knowledge of NLS. Examples include restructuring files to conserve disk space through the elimination of NLS overhead, restructuring files to make them also easily viewable through NIC Query, etc. Further, in the conduct of day to day activities, there are many repetitive processes that are effected, where the command sequences are the same, but the files on which they are performed may change. And finally, often I find use of assorted user-progs highly desirable; in some instances they exist, in other instances they do not. Often, one exists which if augmented with another, enable me to do what it is that I desire. In dialog with other NLS users, the opinion was formed that these attributes have an underlying commonality with other NLS usage. Thus, the evolution of the following concept. No pretense at concept completeness is made; the purpose of this note is to propose the concept and subject it to your critical review and consideration, and if found meritorious, to serve as a stimulant to on-going dialog directed at its evolution to a useful NLS augmentation.

1b1

Description: The primitives of G[oto] M[eta] N[ls] are

partially characterized by the following:

1b2

D[efine] P[rocess] (name) user-name

1b2a

This command would enable the user to execute any sequence of NLS commands and have the sequence of commands "packaged" into a named process wherein upon re-execution, all references to specific files, etc., would be generalized such that the user would be required to re-specify the files as they were required. Two modes are envisioned: (1) a process could be defined for dynamic execution; in which case the user would be required to submit file names as they are required, and (2) a process could be defined for deferred execution; in which case the user would be required to specify all files during specification for process execution - this will be discussed more fully in the following.

1b2a1

E[xecute] D[efered] P[rocess] (name)

1b2b

This command would allow the user to specify required parameters for a predefined process and request its execution on a deferred basis; that is, the "job" would be queued for deferred execution.

1b2b1

E[xecute] P[rocess] (name)

1b2c

This command would initiate a user defined process.

1b2c1

S[how] U[ser-progs]

1b2d

This command would cause the system to provide the user an index to all included user-progs [as distinguished from named-processes previously defined by the user] wherein each index term would include the name of the user-prog, a mini-description of its function, and its authors ident.

1b2d1

D[escribe] U[ser-prog]

1b2e

This command would provide a detailed description of a specified user-prog including an example of its use.

1b2e1

I[nsert] U[ser-prog]

1b2f

This command would allow a user to augment the user prog library with a user program of his construct. The insertion would result in a system initiated dialog with the submitor to ensure that he supplies all required information for his submission. The entire content of his submission would result in its being placed in a queue for subsequent examination by an NLS/L10 expert who would certify it for inclusion. Any problems found with the submission would result in a journal item being submitted to the user; otherwise, if the submission were found to be adequate, it would be included into the user-prog library and the user so notified.

1b2f1

S[how] C[ommands]

1b2g

This command would provide the user a list of his prespecified processes. Note that these prespecified processes constitute a user specific library which should most probably be maintained as a specific branch in the users initial file.

1b2g1

Discussion: The above are only a few of the commands envisioned, but should suffice to give a good idea of the concept. The benefits I envision from such a capability include:

1b3

An extensible user-prog data base under NLS management and easily available and useable to users.

1b3a

The ability for users to define, label, and re-execute repetitive processes.

1b3b

The user ability to significantly augment NLS to his specific usage environment.

1b3c

And many others.

1b3d

References: NIC #20009, 20025, and 20027

1b4

I would appreciate your thoughts on this suggestion, and look forward to an on-going dialog.....Jean

1b5

(J20033) 3-NOV-73 14:10; Title: Author(s): Jean Iseli/JI;  
Distribution: /HGL (thought you might be interested); Sub-Collections:  
NIC; Clerk: JI;

Updating the resource notebook entry

I wanted to send you an update of our resource notebook entry. Would a hardcopy be sufficient? Do you input the stuff yourself into NIC? Also Vint Cerf suggested that I submit to you for ARPANET News, a description of the NETIRS service (ARPANET Info Retrieval). Would you be interested, if so then how do I send that to you (should I write a complete description as an RFC and you excerpt from it, or should I send you a summary (about how long an item would you want?). I would like to complement you on the fine job you are doing with the ARPANET news, specially the summary of RFC's and other network related documents.

1

20034 Distribution

Jeanne B. North, Elizabeth J. (Jake) Feinler,

Why is that lately when I run out of disc pages and expunge I have to reset and re-enter NLS again before I can write on a file? In the past after expunging I was allowed to continue into NLS and write on the file. Is this some grief that has been imposed to make people more aware of disc space problems or is it just an annoying bug?

1



20035 Distribution

Bgs Bugs, Diane S. Kaye, Harvey G. Lehtman, Charles H. Irby, Ferg R. Ferguson, Kenneth E. (Ken) Victor, Donald C. (Snokey) Wallace, Jeffrey C. Peters,

## Suggestion for NLS/Extra-NLS File Compatibility

(compatibility)

1

Problem: Achieve file compatibility to NLS from TENEX and other Network systems and the reverse.

1a

Background: NLS is a powerful and highly desirable system for many Network users. Unfortunately, its present utility is highly restricted by its practical availability to many Network users. Both the fact that it currently exists only on the SRI-ARC PDP-10 and that this facility must service NIC and ARC personnel as well as Network users, forces an examination of alternatives to availability. The forthcoming utility is one alternative. Another alternative would be the distribution of assorted aspects of NLS over multiple Network sites or implementing assorted deferred execution options to effect a higher degree of load balancing over quiet machine periods.

1b

This brief note addresses itself to yet another alternative which additionally would render greater Network NLS utility through achievement of general compatibility between NLS and Extra-NLS files. Existence of such compatibility would enable Network users to compose files on facilities also familiar to them [Teco, Ded, Poet, QED, NETED, etc.] and ingest them into NLS for subsequent processing. An area where such a capability would have high impact is in the establishment, maintenance, and distribution of local site help/tutorial/scenario files.

1c

As the respository of Network information, the NIC has created and is evolving a uniform user interface to such information, namely, the NIC Query system. Creation of the mechanism, though essential, is but a small step towards providing users with the information they require relative to the network, its resources, and assorted subsumed attributes thereto. A larger and required step is the establishment and maintenance of the implied information data bases. The predominant characteristic of such data bases is that they are originated at geographically dispersed locations on heterogeneous facilities. First and foremost, they are often created to support the local user population of a specific site employing the familiar capabilities of that site.

1d

It is often an unnatural requirement to suggest that such files be created through use of NLS, if in fact, their primary incentive for creation is the support of a local site user community and then support of the larger Network community. However, given

## Suggestion for NLS/Extra-NLS File Compatibility

sophistication in the use of NLS, creation of such files could often be facilitated through NLS use. The primary reason inhibiting consideration of NLS may often be the lack of compatibility between NLS structured files and local site file distribution facilities.

1e

Another aspect of the problem is that often local site files are highly desirable to be included within the NIC/NLS data base. To accomplish this often requires extensive reformatting and consumes significant manpower which is already in short supply.

1f

If compatibility were achieved through appropriate conversion facilities, a natural two way flow of such files would evolve to and from the NIC/NLS repository. It would allow such files to be established and maintained at local sites but also easily available through the NIC mechanisms; and conversely, the comprehensive NIC/NLS data base would easily be distributable and available through local site mechanisms.

1g

Approach: Cognizant of the desirability of NLS/Extra-NLS file compatibility, assorted tools [INSEQN, INSEQH, APPEND, I[nsert] S[equential]] have been created by the NIC to facilitate the ingestion of Extra-NLS files into the NIC repository. Unfortunately, these tools yet do not easily accommodate all aspects of compatibility to NLS and to a lesser extent, compatibility from NLS.

1h

A general solution to the problem is handicapped by the fact that it is an evolving problem. As new structures are evolved, the problem evolves. Thus, a bootstrap approach to the problem is highly suggested. In fact, a reasonable approach at a solution is consideration and development of a capability that can evolve in tune with the evolution of new structures.

1i

A possible solution presents itself in the current availability of the conversion capabilities mentioned in the preceding. If these capabilities were embedded within a structure wherein users could easily define their execution, and augment it through the powerful capabilities of NLS and the L10 language, then a reasonable solution structure could evolve that, on the one hand was sufficiently flexible to handle most instances of conversion, yet on the other hand could be augmented to handle new cases without the expense associated with redesign and implementation.

1j

Suggestion for NLS/Extra-NLS File Compatibility

The structural concept briefly explained in (LJOURNAL, 20028, 1:w) is a step in this direction. If considered, then an examination, analysis, and characterization of instances of incompatibility could be effected to result in production of required functional modules to achieve compatibility. These modules could then reside as user programs within the defined structure. As new structural forms evolve, the basic module library could be expanded as required.

1k

Benefits: A more general solution to the NLS/Extra-NLS file compatibility problem could produce the following significant benefits:

1l

Simplified flow of information from remote sites into the NIC repository.

1l1

Easy creation of Network level help/tutorial/scenario libraries available through the NIC.

1l2

Easier evolution of the NIC into an ARPANET Information Clearinghouse.

1l3

Increased NLS user utility.

1l4

Further support to evolution of distributed augmented community workshops in assorted functional areas.

1l5

Conclusion: It is hoped that a distributed dialog be initiated to consider this problem area and the possible solutions herein proposed. It is suggested that participants for such a dialog be solicited from a broad cross-section of ARPANET sites to ensure evolution of a more comprehensive solution.

1m

References:

1n

(LJOURNAL, 20028, 1:w) G[oto] M[eta] N[ls]

1n1

(LJOURNAL, 20027, 1:w) O[utput] N[ls]

1n2

20036 Distribution

Douglas C. Engelbart, James C. Norton, Richard W. Watson, Michael D. Kudlick, Charles H. Irby, James H. Bair, Donald C. (Smokey) Wallace, Dirk H. Van Nouhuys, David H. Crocker, Jonathan B. Postel, Harvey G. Lehtman, N. Dean Meyer, Ernest H. Forman, Susan S. Poh,

## Suggestion for Initial File Journal Item Indexing

## Journal Item Indexing

1

This brief note is a suggestion to assist users in categorizing and organizing their journal submissions:

1a

Suggestion: Why not create in a user's initial file, a new branch, to augment the current journal .1 and .2 branches, wherein, all received and/or sent journal items would be categorized under the [single] keyword employed in the journal submission under Keyword(s);, and the statement entries annotated with the title supplied in the journal entry.

1b

Discussion: If this suggestion were implemented, then a user's administration of submitted journal items would be greatly simplified and augmented. A brief example is provided in the following:

1c

(dialog)

1d

(nls)

1d1

20028 3 Nov 73 G[oto] M[ete] N[ls]

1d1a

20027 2 Nov 73 O[utput] N[ls] : #20009:#20025

1d1b

(user-progs)

1d2

20009 2 Nov 73 OP Suggestions : User-prog subsystem

1d2a

(journal)

1d3

19784 19 Oct 73 Automatic Prompting

1d3a

(general)

1d4

19771 19 October 73 NLS Collaboration : Suggestion Response

1d4a

(file-compatibility)

1d5

20036 4 Nov 1973 NLS/Etrra-NLS File Compatibility  
[Suggestion]

1d5a

19985 31 Oct 73 TENEX File : NLS : Compatibility :  
EIS[pure]

1d5b

Suggestion for Initial File Journal Item Indexing

19972 30 Oct 73	TENEX/NLS Compatibility	1d5c
19908 30 Oct 73	Query Restriction : mini-suggestion	1d5d
19885 28 Oct 73	Parameterized File Conversion	1d5e
(mail)		1d6
19786 19 Oct 73	Mail Forwarding : Indexing in NLS	1d6a
19784 19 Oct 73	Linked Text Forwarding	1d6b
(ident-system)		1d7
19897 28 Oct 73	Ident File Omission for SU-AI	1d7a
19738 17 Oct-73	Network Participants	1d7b

Your consideration of this suggestion would be appreciated.....Mil and Jean 1e

20037 Distribution

Douglas C. Engelbart, James C. Norton, Richard W. Watson, Michael D. Kudlick, Charles H. Irby, Harvey G. Lehtman, James H. Bair, J. D. Hopper, David H. Crocker, Jim O. Calvin, Jonathan B. Postel, Ernest H. Forman, Susan S. Poh,



## Distribution Groups

Having often employed the S[ubmit] M[essage] option of the journal prior to making sure I can recall all the idents in the recipient group, I believe there is a real need for being able to insert a branch for the distribution in the journal mail system. The suggestion is for a capability comparable to the 'B option in TENEX sndmsg. I would appreciate whatever consideration can be accorded this suggestion since it would fill a real user need, namely, the ability to specify distribution groups and automatically "call them up" when needed for distributing journal mail. Thanks, Jean

1

20038 Distribution

Mil E. Jernigan, Jim O. Calvin, N. Dean Meyer, Charles H. Irby,  
Richard W. Watson, James C. Norton, Jonathan B. Postel, David H.  
Crocker, Ernest H. Forman, Susan S. Poh, Nps Np, Richard W. Watson,  
Charles H. Irby,

## Of Mice and Man (a revelation)

I have recently been thinking about the problems of the computer industry and have had a revelation that I think quite relevant to our situation here at ARC. I would like to share my thoughts with you but first I would like to give you some background of the events leading up to my current ideas.

1

I have long thought about how magical and mysterious our modern analytical techniques would have seemed to intelligent people before Euclid, Newton, (etal.) gave us formal definitions and methodology for geometry, calculus etc. There are certainly many historical examples for such conceptual or methodological breakthroughs. The concept of a "Breakthrough" is much overused in modern society and I dont intend to lay one on you now (so you can rest easier ). I would, however like to point out that Physics and it's resultant effect on computer hardware in fact has had a major breakthrough with the development of integrated circuits. Whereas computer programming is still using the same methods employed with the first computers. Granted some progress has been made but most people agree that a breakthrough in computer programming is necessary and maybe long overdue.

2

The problem seems to be that programming (system design etc.) is a much more complex problem.

3

## EXTREMELY COMPLEX PROBLEMS (the principle problem of our times)

4

Historically our analytical techniques have not dealt well with problems of extreme complexity or that contained an inordinate number of independent variables. Statistics has attempted to deal with this area but has had very limited success. Its approach has been to use traditional analysis and it has had the same problems as other branches of science in dealing with problems of this nature.

4a

Extremely Complex Problems generally have the following properties:

4b

1) large number (approaching infinity) of independent variables,

4b1

2) lack of localization,

4b2

and generally cause the following reactions in people attempting to deal with them:

4c

1) Confusion

4c1

2) Frustration

4c2

3) Chaos

4c3

## Of Mice and Man (a revelation)

If you accept the premise that the most pressing problem in modern society is that society's inability to solve extremely complex problems and ,that a major conceptual or methodological "breakthrough" is necessary to facilitate such solutions then it seems someone should setup a laboratory that would attempt to create (in a controlled way) the conditions and an environment necessary to maximize the probability of a breakthrough of the desired type.

4d

## THE BREAKTHROUGH LAB

5

This Laboratory should have all the attributes of a normal project with the following exceptions.

5a

1) A director who is autonomous and really not a member of the project. This allows him to really be in control of the project. In essence he is the experimenter.

5a1

2) An inordinate number of intelligent people in order to maximize the chance of a breakthrough.

5a2

3) Unusually diverse professional and personal backgrounds in order to cover as much of society and technology as possible (cross fertilization)

5a3

4) The pseudo project should be in a high technology area.

5a4

5) Avoid success in traditional terms. This will cause a false sense of accomplishment and will make the project members complacent. (Remember the goal is a breakthrough, not a successful project )

5a5

6) Maximize confusion, frustration, and chaos. This is the general atmosphere for complex problems and a breakthrough is more likely under these conditions.

5a6

7) It is probably necessary (maybe not) that the members of the pseudo project not be aware of the labs real goals.

5a7

8) The members of the project should be highly motivated to achieve the projects goals (not the labs) even if ill or self defined.

5a8

9) All problems, even if simple, must be viewed in a higher context in order to make them complex (remember, these are the ones we are after).

5a9

The laboratory's primary purpose is to create and maintain an environment suitable for a "breakthrough". This means care must be

## Of Mice and Man (a revelation)

taken that the frustration level of the participants must not become so high, or the incremental rewards so low, as to cause the subjects' to leave the lab or the apparent normalcy of the project to become unstable. Such tools as apparent inept or indecisive management, fuzzy goals and unclear departmental or functional lines can, and should, be used as effective devices in creating an atmosphere of "creative frustration".

5b

## Some Comments

6

You have probably suspected that my breakthrough lab is really ARC. Quite frankly the frustration and chaos here has been driving me nuts. I just cannot accept the apparent madness of our situation. I have pieced together a conceptual model of whats going on here at ARC that really explains the situation as I see it. I have discussed my model with several people and it has been as revealing to them as it has been to me.

6a

The experimenter in our BREAKTHROUGH LAB is DCE and the mice are the members of the ARC staff. The confusion and seeming inability to get organized and lack of goals are all calculated. The various groups and their diverse directions are all part of the plan to create the desired atmosphere in the hope that the much desired breakthrough will happen. I don't mean to imply that Doug is some demoniacal mad scientist, but it should be noted that he is tampering with our lives in a very significant way.

6b

You may be surprised to learn, now that I understand the game here at ARC (or at least think I do) that I have not quit. After all, being a mouse running somebody's maze isn't a very nice way to think of ones self; however, I have played many games and most have been worse. The major frustration for me has been not understanding what was going on. Now that I have put that behind me I can get to work and decide if I want to play and how I can get the most out of this new and certainly interesting game.

6c

20039 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews,  
A. Jim Blum, A. Analysis, Meredith(Reddy) E. Dively, Jeanne M.  
Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Mark Alexander Beach,  
Judy D. Cooke, Marcia Lynn Keeney, Carol B. Guilbault, Susan R. Lee,  
Elizabeth K. Michael, Charles F. Dornbush, Elizabeth J. (Jake)  
Feinler, Kirk E. Kelley, N. Dean Meyer, James E. (Jim) White, Diane  
S. Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, Douglas C.  
Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper,  
Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North,  
James C. Norton, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De  
Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

On LEVEL-ADJUST (20024,)

Re (LJOURNAL, 20024,), LEVEL=ADJUST does not require an extra Command Accept when followed by CONFIRM, or so the programmers promised us. AS for other changes to make it optional entirely, let's talk about it.--Jeanne

On LEVEL-ADJUST (20024,)

(J20040) 4-NOV-73 14:38; Title: Author(s): Jeanne M. Beck/JMB;  
Distribution: /KIRK; Sub-Collections: SRI-ARC; Clerk: JMB;



Copy commands (20021,)

Kirk, I moved my citation for (20021,) on Copy commands to the file <userguides, changes, 3b>. I have to document those copy commands as they now are shown in SYNTAX; when dean and dirk and I are through working separately on syntax, examples, and function branches, we can check how it really has been implemented and change all three references to it. Until then it will sit in Changes as a reminder. Thank you for calling it to my attention. --Jeanne

1

20041 Distribution  
Kirk E. Kelley,

Output Processor Cue Card

This is a mini-suggestion for the construct of an Output Processor Cue card like the NLS cue card that was distributed several months ago. In using the Output Processor, I find it a great annoyance and real handicap to always "thumb" through the manual to obtain the appropriate directives. I feel sure that many people react the same way and would be very appreciative to have such a cue card constructed and made available.

Would invite your consideration of this request. The few people I have mentioned it to would also like to have copies if they were available. Thanks.....Jean

1

20042 Distribution

David H. Crocker, Jonathan B. Postel, Douglas C. Engelbart, Richard W. Watson, Michael D. Kudlick, N. Dean Meyer, Mil E. Jernigan, Jim O. Calvin, Ernest H. Forman, Harvey G. Lehtman, James C. Norton, Dirk H. Van Nouhuys, James H. Bair, Jeanne B. North, Nancy J. Neigus, Alex A. McKenzie, Nps Np, Richard W. Watson, Charles H. Irby,

Tickler - 5 - 16 November

(nm2) 5 November - Monday

0830 hrs. Branch Chief's Meeting

MASIS Meeting for Tom B. in Bldg. 106 at 0900 hrs. in Room A-119.

Backup Material must be submitted to DORP for DL Overview Briefing.

Dry Run to Commander runs through 5 - 16 Nov for DL Overview Briefing.

Due Date - Determination of Final Invention Report on Contract F30602-73-C-0024 with Auerbach Associates Inc. - ISIM/D. VanAlstine

Due Date - ISI - Step Increase - R. Levine

(nt2) 6 November - Tuesday

0830 hrs. ISC Confessions

(nw2) 7 November - Wednesday

0830 hrs. Branch Chief's Meeting

Center MIS - Presentation to IS - E. Kennedy responsible

(nth2) 8 November - Thursday

Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600.

ISF Confessions 0830 hrs.

(nf2) 9 November - Friday

Due Date - ISIM/Capt Daughtry - Sponsorship of AFIT Student Theses

Timecards due today.

Bobbie: Travel figures due by noon.

Due Date - ISIS/ISIM - Project Engineers Bimonthly Review of Tech Completions

(nm3) 12 November - Monday

0830 hrs. Branch Chief's Meeting

Tickler - 5 - 16 November

Supervisory Appraisal Form Briefing - for Supervisors Only - 0900 - 1030 hrs. - Auditorium in 106.	6b
(nt3) 13 November - Tuesday	7
(nw3) 14 November - Wednesday	8
0830 hrs. Branch Chief's Meeting	8a
Supervisory Appraisal Form Briefing - For Supervisors Only - 0900 - 1030 hrs. - Auditorium in 106.	8b
(nth3) 15 November - Thursday	9
Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600.	9a
ISI Confessions 0830 hrs.	9b
(nf3) 16 November - Friday	10
Supervisory Appraisal Form Briefing - For ADMINISTRATORS ONLY - 0900 - 1030 hrs. - Bldg. 106 - Room A-119	10a
Bobbie: Travel figures due by noon.	10b
R & T Selection of the Month is due in ISI.	10c
Due Date - ISIS/White - Revised Final Rpt - Contract F30602-73-C-0062 for technical review.	10d

20043 Distribution

Larry M. Lombardo, Anna A. Cafarelli, Roberta J. Carrier, Donna R. Robilotta, David L. Daughtry, Richard H. Thayer, Frank J. Tomaini, Mike A. Wingfield, Edmund J. Kennedy, Ray A. Liuczi, Richard Calicchia, John W. Johnson, Donald Van Alstine, Dean F. Bergstrom, William P. Bethke, Frank S. LaMonica, William E. Rzepka, Rocco F. Iuorno, Frank P. Sliwa, Thomas J. Bucciero, Robert E. Doane, David A. Luther, Roger B. Panara, John L. McNamara, Joe P. Cavano, Duane L. Stone, Marcelle D. Petell, Josephine R. Stellato, Robert K. Walker, Thomas F. Lawrence, James H. Bair,

USING Notes 5 and 6

Dave--

The charter is (bbn-net,njn-usingcharter,1: w) and the meeting report is (bbn-net,usingnotes,1: w). Sorry abt not journalizing them; I left it up to Marcia to deliver them hardcopy and I forgot abt th rest. Will call you later today to discuss USING meeting (the next one that is.) N.

1



20044 Distribution  
David H. Crocker,

November ARPANEWS is Published

To: ARPANET NEWS Readers

1

From: The Editors

2

The November issue of the ARPANET NEWS is published.

3

Access it at SRI-ARC:

4

a) through the Query language NIC, or

4a

b) in NLS, Load File <NIC>ARPANEWS

4b

The TTY version is formatted to make a reproducible version, including cover and masthead, on a TI. Please let JBN know of any difficulties you have with this.

5

Hardcopy of the November NEWS will be mailed next week.

6

20045 Distribution

Harvey G. Lehtman,

J. T. Sartain, Robert N. Lieberman, Ralph Alter, Nils Maras, Philip B. Enslow, Robert M. Dunn, Joseph B. Reid, William T. Misencik, Toshiyuki Sakai, Louis Pouzin, Yngvar Lundh, Robert H. Hinckley, Marvin Zelkowitz, Don D. Cowan, Louis F. Dixon, Michael O'Malley, Peter Kirstein, David J. Farber, Dave Twyver, Art J. Bernstein, Dave E. Liddle, A. Kenneth Showalter, D. D. Aufenkamp, Derek Leslie Arthur Barber, Tjaart Schipper, E. M. Aupperle, Hubert Lipinski, Robert F. Hargraves, C. D. (Terry) Shephard, Maurice P. Brown, Robert L. Ashenhurst, Jean Iseli, Alex A. McKenzie, Mil E. Jernigan, Michael D. Kudlick, Richard W. Watson, James C. Norton, Marcia Lynn Keeney Ed J. Collins, Gary Blunck, John F. Heafner, David J. King, Sue Pitkin, Jerry Fitzsimmons, Gloria Jean Martin, Roberta J. Peeler, Craig Fields, Margaret Iwamoto, Dee Larson, Robert E. Doane, Brenda Monroe, Jeanne B. North, Pam J. Klotz Cutler, Stan Golding, Steve G. Chipman, John P. Barden, Martha A. Ginsberg, Shirley W. Watkins, Janet W. Troxel, Connie D. Rosewall, Anita L. Coley, Carol J. Mostrom, Sharon G. Gowen, John J. Vint, Leonard B. Fall, A. Danthine, Harold F. Arthur, Peter R. Radford, Wayne R. Robey, Joshua Lederberg, Connie Hoog, James A. Blumke, David Hsiao, Michael L. Marrah, Vinton G. Cerf, Gerald L. Kinnison, Paul Baran, Henry Chauncey Leonard Kleinrock, William K. Pratt, David C. Evans, Douglas C. Engelbart, Bertram Raphael, Daniel L. Slotnick, Ehtyl J. Abeita, Jane A. Bialosky, Marion C. Bedell, Kasee N. Menke, Ruth Ann McDermott, Angie R. Yingling, Michael M. Dervage, Carolyn E. Taynai, Easter D. Russell, Leonard B. Fall, Peggy D. Irving, Roy Levin, M. P. McCluskey, Pitts Jarvis, Barbara A. Nicholas, Jacquie A. Priest, Terence E. Devine, Paul M. Rubin, Paula L. Cotter, O. A. Hansen, Dan Dechatelets, Marcia Lynn Keeney, Margaret A. (Maggie) Bassett, J. A. Smith, Leina M. Boone, Diana L. Jones, Nancy J. Neigus, Terry Sack, Frances A. (Toni) McHale, Lucille C. (Lucy) Gilliard Robert L. Fink, Glenn J. Culler, Frank S. Cooper, Bruce G. Buchanan, Kenneth L. Bowles, Morton I. Bernstein, Paul Baran, Saul Amarel, Roy C. Amara, John E. Savage, Butler W. Lampson, William R. Sutherland, Thomas G. Stockham, Gene Raichelson, Michael O'Malley, Peter G. Neumann, Marvin Minsky, Robert E. Millstein, J. C. R. Licklider, Robert M. Balzer, Herbert B. Baskin, Robert P. Abbott, Peter Kirstein, William B. Kehl, Roland F. Bryan, James G. Mitchell, Jeanne B. North, Allen Newell, John McCarthy, Lawrence G. Roberts, Frank E. Heart, Edward L. Glaser, Thomas M. Marill, T. E. Cheatham, James W. Forgie, Keith W. Uncapher, Edward A. Feigenbaum Michael B. Young, Michael A. Padlipsky, Schuyler Stevenson, L. Peter Deutsch, John Davidson, Thomas O'Sullivan, Sol F. Seroussi, Scott Bradner, Robert H. Thomas, Michael J. Romanelli, Ronald M. Stoughton, A. D. (Buz) Owen, Robert L. Fink, Jeanne B. North, Steve D. Crocker, Thomas F. Lawrence, John W. McConnell, James E. (Jim) White, A. Wayne Hathaway, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Abhay K. Bhushan, B. Michael Wilber, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, John T. Melvin, Jacques F. Vallee, Joshua Lederberg, Paul J. Nikolai, Robert J. Gronek, Rein Turn, Mark Medress, Franklin Kuo, Howard Frank Donna R. Cooper, Jeffrey B. Rubin, John F. Wakerly, Tom C.

Rindfleisch, Leonard B. Fall, David L. Hyde, Gary Blunck, Tom P. Milke, Alan H. Wells, Chuck R. Pierson, Carl M. Ellison, Robert P. Blanc, Jay R. Walton, Terence E. Devine, David J. King, William L. Andrews, Milton H. Reese, Kenneth M. Brandon, Lou C. Nelson, Jeffrey P. Golden, Richard B. Neely, Dan Odom, Robert G. Merryman, P. Iveltane, Adrian V. Stokes, David L. Retz, Reg E. Martin, Gene Leichner, Jean Iseli, James E. (JED) Donnelley, William Kantrowitz, Michael S. Wolfberg, Yeshiah S. Feinroth, Anthony C. Hearn, Robert M. (Bob) Metcalfe, Bradley A. Reussow, Daniel L. Kadunce, George N. Petregal

JBN 5-NOV-73 08:05 20045

November ARPANEWS is Published

(J20045) 5-NOV-73 08:05; Title: Author(s): Jeanne B. North/JBN;  
Distribution: /NLG PI NSAG NAG JI AAM MEJ MDK RWW JCN MLK HGL;  
Sub-Collections: NIC IC NLG PI NSAG NAG; Clerk: JBN;  
Origin: <NORTH>NEWSANNOUN.NLS;1, 5-NOV-73 07:59 JBN ;

## Scheduled Software Maintenance

This is a reminder that Network Software Maintenance is scheduled between the hours of 0700 and 0900 (Eastern Time) on Tuesday, 6 November 1973. Although software releases are checked out as much as possible in the BBN test cell, there are sometimes problems of scale which are not detected until after a release; hence there is a small but finite possibility that the software will be troublesome for a few hours after the scheduled release.

Sincerely,

Alex McKenzie (for the Network Control Center)

1

20046 Distribution

Larry M. Lombardo, Anna A. Cafarelli, Roberta J. Carrier, Donna R. Robilotta, David L. Daughtry, Richard H. Thayer, Frank J. Tomaini, Mike A. Wingfield, Edmund J. Kennedy, Ray A. Liuczi, Richard Calicchia, John W. Johnson, Donald Van Alstine, Dean F. Bergstrom, William P. Bethke, Frank S. LaMonica, William E. Rzepka, Rocco F. Iuorno, Frank P. Sliwa, Thomas J. Bucciero, Robert E. Doane, David A. Luther, Roger B. Panara, John L. McNamara, Joe P. Cavano, Duane L. Stone, Marcelle D. Petell, Josephine R. Stellato, Robert K. Walker, Thomas F. Lawrence, James H. Bair,

Scheduled Software Maintenance

(J20046) 5-NOV-73 08:39; Title: Author(s): Alex A. McKenzie/AAM;  
Distribution: /RADC; Sub-Collections: NIC RADC; Clerk: AAM;



Try DELDIR to Delete Directives (reply to 20027)

We are aware, of course, that directives with any degree of elaboration obscure NLS files on line. In the long run we hope/plan to make the directives present but invisible like markers. 1

In the mean time let me bring to your attention the user program DELDIR which removes directives. You may acquire its services by getting the Rel File <user-progs>DELDIR.REL;. For general guidance in getting user rel files see--user-progs,-userguide,1). DELDIRt is atleast simpler than the kludge Jean describes. 2

I realize this information does not answer your question squarely. We may want to bring something like DELDIR into the command language to mitigate the problem in the middle run. Your suggestion will go into the NP machinery in the usual way.. 3

20047 Distribution

Jean Iseli, David H. Crocker, Jonathan B. Postel, James C. Norton,  
Douglas C. Engelbart, N. Dean Meyer, Richard W. Watson, Mil E.  
Jernigan,

DVN 5-NOV-73 08:48 20047

Try DELDIR to Delete Directives (reply to 20027)

(J20047) 5-NOV-73 08:48; Title: Author(s): Dirk H. Van Nouhuys/DVN;  
Distribution: /JI DHC JBP JCN DCE(fyi) NDM RWW MEJ; Sub-Collections: NIC  
SRI SRI-ARC; Clerk: DVN;

Charter for Arpanet Users Interest Working Group

Network Working Group  
Request for Comments: 584

J. Iseli (MITRE-TIP)  
D. Crocker (UCLA-NMC)  
N. Neigus (BBN-NET)  
9 NOV 73

USING Note 6  
NIC 19025 and 20049

Categories: Users

1

Charter for Arpanet Users Interest Working Group

1a

Background

2

The ARPANET Users Interest Working Group (NIC Ident = USING) was formed at a meeting of 15 Network people on May 23, 1973 in an attempt to improve the Network user's working environment. USING will attempt to represent the interests and needs of users in the Network community, so as to increase awareness of user requirements and encourage better provision of the needed services. The group believes that the Network is moving beyond a concentration of resources in self-perpetuating research and development; the Network is becoming a service and its viability as such is dependent on user satisfaction.

2a

A second group, the ARPANET Users Group (NIC Ident = USERS) is organized as a forum for users to express their desires and complaints. Acting as a steering committee and lobby for this group, USING will forward their ideas to the appropriate centers.

2b

Membership

3

Group membership, in USING, is open to individuals interested in working to improve Network user support and able and willing to make meaningful contributions to USING's activities.

3a

Membership, in USERS, is open to any interested person.

3b

Scope

4

USING has set as its scope those facets of Network activity that affect the provision of services to users. This includes the availability of resources, their reliability and ease of use.

4a

## Charter for Arpanet Users Interest Working Group

## Goals

5

USING's overall goal is to ensure that the ARPANET becomes a coherent system in which users can regulate their own working environment according to their level of experience and the degree of transparency (of specific system idiosyncracies) they desire. System resources should be self-documenting, and all levels of assistance (on- and off-line) should be available, again, to be regulated by the user.

5a

## Short Term Objectives, for the initial 6-12 months

5b

1. Specification of a user-level Common Command Language (CCL);
2. Specification of a Network Editor for CCL;
3. Further definition and focusing of User Issues;
4. Encouraging establishment of a User's consulting service;
5. Publication of a New-Users Handbook.

5b1

5b2

5b3

5b4

5b5

## Long Term Activities

5c

1. Monitor and/or provide impetus for user-oriented Network development efforts, including resource directories, tutorials [static and dynamic], training courses and referral services.
2. Provide mechanisms to encourage, analyze, and respond to user feedback;
3. Develop profile information relative to users' requirements, types, usage attributes,, and affiliations;
4. Stimulate mechanisms to facilitate entry of new users to the ARPANET;
5. Sponsor user seminars and encourage formation of viable user working groups where appropriate.

5c1

5c2

5c3

5c4

5c5

## 20049 Distribution

Frank G. Brignoli, Elizabeth J. (Jake) Feinler, Michael D. Kudlick, James E. (Jim) White, Michael A. Padlipsky, Kenneth L. Bowles, A. Wayne Hathaway, Jean Iseli, David H. Crocker, Nancy J. Neigus, Stephen M. Wolfe, Ronald M. Stoughton, Jim O. Calvin, Suzanne D. Landa, Donna R. Cooper, Bob L. Mobley, Clayton A. Greer, John R. Pickens, Anthony C. Hearn, Susan S. Poh, Kirk E. Kelley, Laura E. Gould, Harvey G. Lehtman, Allan R. Alberts, Alan R. Hill, Jon E. Berger, Mil E. Jernigan, Paul Rech, Joe B. Wyatt, Charles H. Irby, Robert H. Thomas, Edward P. Schelonka, Robert D. (Bob) Bressler, Steve D. Crocker, Jonathan B. Postel, George N. Petregal, Michael B. Young, Michael A. Padlipsky, Schuyler Stevenson, L. Peter Deutsch, John Davidson, Thomas O'Sullivan, Sol F. Seroussi, Scott Bradner, Robert H. Thomas, Michael J. Romanelli, Ronald M. Stoughton, A. D. (Buz) Owen, Robert L. Fink, Jeanne B. North, Steve D. Crocker, Thomas F. Lawrence, John W. McConnell, James E. (Jim) White, A. Wayne Hathaway, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Abhay K. Bhushan, B. Michael Wilber, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, John T. Melvin, Jeanne B. North, Abhay K. Bhushan, Robert P. Blanc, Barbara Noble, Leroy (Lee) C. Richardson, Marcia Lynn Keeney, Donna R. Cooper, Jeffrey B. Rubin, John F. Wakerly, Tom C. Rindfleisch, Leonard B. Fall, David L. Hyde, Gary Blunck, Tom P. Milke, Alan H. Wells, Chuck R. Pierson, Carl M. Ellison, Robert P. Blanc, Jay R. Walton, Terence E. Devine, David J. King, William L. Andrews, Milton H. Reese, Kenneta M. Brandon, Lou C. Nelson, Jeffrey P. Golden, Richard B. Neely, Dan Odom, Robert G. Merryman, P. Ivetane, Adrian V. Stokes, David L. Retz, Reg E. Martin, Gene Leichner, Jean Iseli, James E. (JED) Donnelley, William Kantrowitz, Michael S. Wolfberg, Yeshiah S. Feinroth, Anthony C. Hearn, Robert M. (Bob) Metcalfe, Bradley A. Reussow, Daniel L. Kadunce

NWG/RFC# 584

JI DHC NJN 5-NOV-73 20:44 20049

Charter for Arpanet Users Interest Working Group

(J20049) 5-NOV-73 20:44; Title: Author(s): Jean Iseli, David H. Crocker, Nancy J. Neigus/JI DHC NJN; Distribution: /MLK NLG NICSTA USING USERS; Keywords: users; Sub-Collections: NWG NIC NLG NICSTA USING USERS; RFC# 584; Obsoletes Document(s): 19025; Clerk: DHC;

ARPANET News TENEX EXEC Article for Update

(tenex) New Tenex Release

.....Extracted from <documentation>exec.blurb@case-10 and from a Message from Bill Plummer@BBN by ji.

1

The following represents recent changes made to the TENEX EXEC. The standard changes are indicated first, and followed by Case-10 specific changes which may also be of interest to the general TENEX user community.

1a

The following include the BBN implemented changes in the new EXEC 1.51:

1b

A single ↑T does nothing but ding, 2 ↑T's within 15 seconds will request the old "verbose" typeout -- but this will be honored only if at least a minute has elapsed since the previous verbose typeout.

1c

TRMSTAT command has been added. This command prints all kinds of (interesting?) information about your teletype such as whether you have tabs, your control character sets, wake-up sets, etc, etc.

1d

LENGTH command allows you to specify the page length of your terminal.

1e

Several new terminal types are supported; type a "?" to the "TERMINAL" command in TENEX EXEC to see them.

1f

Ephemerals: A .SAV file can be declared ephemeral or not ephemeral by the commands:

@EPHEMERAL (file) <file-name> and

@NOT EPHEMERAL (file) <file-name>

A file which is ephemeral shows on a directory listing with a ";e". An ephemeral file, when run by typing its name only to the Exec's "@" is run in a separate fork instead of the regular user fork. This means that after such a program exits, the program you were running previously, is still there. The overall effect is to make a program look like an Exec command. If you ↑C out of an ephemeral, you cannot continue it. (just as you cannot continue a TYPE or DIRECTORY command.) You can however



ARPANET News TENEX EXEC Article for Update

†C out of a regular program, run an ephemeral program,  
and then CONTINUE the original program.

1g

The AUTHOR subcommand has finally been added to the  
DIRECTORY command. This subcommand types the name of the last  
person who wrote into a file.

1h

The INTERROGATE command has been updated slightly - a  
little smarter, and prints more information.

1i

The changes made to EXEC 1.51 at case-10 in addition to the above,  
include:

1j

1) The SYSTAT command now prints the runtime, (in milleseconds)  
the connected directory (if diferent from logged in  
directory) and the foreign host for network users. Also, the  
detached jobs are listed last.

1k

2) A WHO command has been added for the sake of those poor  
people stuck on slow terminals who won't appreciate the  
longer typeouts of the SYSTAT command. This command  
lists job number, user name and teletype only.

1l

3) The ASSIGN command has been modified to search for an  
unassigned magtape or DECTape drive.

1m

@ASSIGN (device) MTA or DTA

will look for the first available device, then print

MTAn: assigned. or DTAn:

to indicate which unit it found. Note: On DECTapes, unit 0 is  
always skiped since monitor types like to keep the  
system tape mounted on DTA0. Any DECTape which is mounted is  
skipped even if not assigned since some people put up  
a tape and fail to assign it.

1n

4) Account number checking has finally been implemented  
by BBN, and we have changed over to their system to  
simplify Exec maintanance. From a users

## ARPANET News TENEX EXEC Article for Update

viewpoint, there should be no changes other than slower response.

1o

5) 10/50 compatible CCL commands have been added:

1p

```
@COMPILE <stuff>
@LOAD <stuff>
@XQT <stuff>
```

where <stuff> is a list of file names and switches calls the CCL subsystem, and hands it "command <stuff>". CCL then generates the appropriate command files for MACRO, SAIL, LOADER, etc. and then calls whatever programs are needed. If any of these commands are typed with no argument, the last argument typed is used. If no argument has ever been used, Exec will complain.

NOTE: since these commands all work through CCL, all 10/50 restrictions apply to the argument. That is, there is no recognition, files must be 6 character names and 3 character extensions, and other directories must be specified as [0,directory-number] following the file name. These commands were not meant to be correctly implemented or lasting, but only a quick measure to bring TENEX at least up to the human engineering level of 10/50 in the program compiling/running area.

For more information on the format of CCL commands, see the DECsystem-10 users' handbook.

1q

6) A DESCRIBE command has been added to provide descriptions of Exec commands or other TENEX features. The format is

1r

```
@DESCRIBE <item>
```

where <item> is the command or feature. ? may be typed to get a list of items. (Be prepared for a long list.) The items preceded by a "-" are lists of items which fall into various categories. For example,

```
@DESCRIBE -ACCESS-COMMANDS
The access-commands are:
login, logout, change, detach, attach.
```

would indicate the access commands which can be described are

ARPANET News TENEX EXEC Article for Update

LOGIN, LOGOUT, ...

1s

7) The autologout timing characteristics have been changed. If a job is not logged in, and types a "LINK" command, his autologout grace period is extended to 10 minutes. On a BREAK (links) command, his period is cut back to the usual shorter time.

1t

8) A new command, NUMBER has been added to provide the directory number given a directory name. This is useful for compatability programs (or CCL) where you cannot use the usual <directory> construction. Format is:

1u

@NUMBER (for directory name) <directory>  
 directory number n.

1v

9) A new command NAME is the inverse of NUMBER. Given a directory number, it tells you the directory name.

1w

@NAME (of user number) <number>  
 directory-name

1x

10) Another new command, ERSTR gives you the error message for a given error number. (For programs which don't do the conversion themselves.)

1y

@ERSTR (error number) 600123  
 OPENF: Write access not allowed

1z

1a@

20051 Distribution

William W. Plummer, Ted L. Brenneman, Jeanne B. North, Mil E.  
Jernigan,

JI 5-NOV-73 12:14 20051

ARPANET News TENEX EXEC Article for Update

(J20051) 5-NOV-73 12:14; Title: Author(s): Jean Iseli/JI;  
Distribution: /WWP(hope this meets with your approval) TLB(hope this  
meets with your approval) JBN MEJ; Keywords: TENEX-EXEC;  
Sub-Collections: NIC; Clerk: JI;

FORUM Article for ARPANET News

(forum) Institute for the Future : Computer Conferencing

.....Jacques F. Vallee

1

The Institute for the Future, a small, nonprofit research organization based in Menlo Park, California, has developed a program for computer conferencing which is available on the ARPA network. The program is called FORUM and will be fully distributed in March 1974, but it can already be used in pre-release form on the USC-ISI and BBN sites of the network. Other PDP-10 sites interested in running FORUM under TENEX are invited to contact Dr. Jacques Vallee at (415) 854-6322 to make arrangements for transfer of the program.

1a

FORUM is a re-entrant, assembly language program that uses a fully-paged file system. It operates well interactively even during peak loads. The system enables geographically distributed users to interact on either a real-time or a delayed basis under a variety of conference formats ranging from free discussion to a full questionnaire structure.

1b

The participant can gain a rapid view of all conferences open to him-- both those in which he is a registered member and those which are public. Within a given discussion, he can interact in real-time with all active participants in the group. He can submit anonymous entries, send private messages, and follow changes in participant status. The numbering of entries provides an easy reference to previous comments in the discussion.

1c

FORUM contains support software for a variety of CRT terminals. Automatic pagination, scrolling, and cursor control in line editing are among the support features.

1d

Program documentation is provided on-line by typing a question mark at any point. Users wishing to experiment with the pre-release version of FORUM are welcome to contact us.

1e

20052 Distribution

Jacques F. Vallee, Jeanne B. North, Mil E. Jernigan, Jonathan B. Postel, Gene Raichelson,

JI 5-NOV-73 12:22 20052

FORUM Article for ARPANET News

(J20052) 5-NOV-73 12:22; Title: Author(s): Jean Iseli/JI;  
Distribution: /JFV(Thanks, Jacques : real nice article) JBN MEJ JBP GR;  
Keywords: TIFF-FORUM; Sub-Collections: NIC; Clerk: JI;



Reply to Suggestion of JI

John, your recent two Journal items both contained useful suggestions. The suggestion for an Output NLS command is probably best handled initially as a user program and I will talk to Dean Meyer about writing one (20027,). The other suggestion about an NLS based user programming feature is also needed and has been on our list for some time. We plan to look at that problem during a planned redesign of NLS in the coming year (20028,). To do this right will require some thought and your suggestions are much appreciated.

1

20053 Distribution

Jean Iseli, Douglas C. Engelbart, David H. Crocker, Mil E. Jernigan,  
Jonathan B. Postel, Ernest H. Forman, Michael D. Kudlick, Susan S.  
Poh, James C. Norton, N. Dean Meyer, Jim O. Calvin, Steve D. Crocker,  
Charles H. Irby, Charles F. Dornbush,

RWW 5-NOV-73 14:16 20053

Reply to Suggestion of JI

(J20053) 5-NOV-73 14:16; Title: Author(s): Richard W. Watson/RWW;  
Distribution: /JI DCE DHC MEJ JBP EHF MDK SSP JCN NDM JOC SDC2 CHI CFD;  
Sub-Collections: SRI-ARC; Clerk: RWW;

NLS Enhancements

Jean ...

1

Re two of your recent suggestions for improvements to NLS:

1a

1) I think your suggestion for an Output NLS command is a very good one. We too of course have the same problem, and no cleancut solution at present. We will give your suggestion a try. The way you've defined the need, the resulting file would contain the page header and footer information as well as the appropriately formatted text, Is that what you meant?

1b

2) Your suggestion for some mechanism to automatically make one statement out of several, or to allow one statement to be input where you now have to input several, is not clear to me. Could you elaborate? I could not retrieve the file (help,map,1); not on line.

1c

Thanks for your inputs, Jean. Look forward to hearing from you.  
... Mike Kudlick

1d

20054 Distribution

Jean Iseli, Richard W. Watson,

NLS Enhancements

(J20054) 5-NOV-73 15:13; Title: Author(s): Michael D. Kudlick/MDK;  
Distribution: /JI RWW; Sub-Collections: SRI-ARC; Clerk: MDK;

LEVEL-ADJUST, a painful option.

The definition for LEVEL-ADJUST in the new command language that I proposed in 20024 was as unclear as the original. This document contains what I meant to say. For a current list of observations, questions, and desired changes discovered while using the new command parser, see <userguides,changes,1:wym>.

LEVEL-ADJUST, a painful option.

There is no reason to require an extra Command Accept or Space to terminate the LEVEL-ADJUST field except when changing levels in the Insert STRUCTURE command. Forcing the user to do this not only makes the Level Adjust field mandatory instead of optional, it makes the "feel" of Move or Copy STRING much different than Move or Copy STRUCTURE since one extra Command Accept is required if you happen to be playing with structure.

1

If the definition were changed to the following, the command syntax description would remain the same.

2

LEVEL-ADJUST: a string of u's and d's optionally precaded by integers and terminated by <SP>, CA, or the beginning of the next field except when changing levels in the Insert STRUCTURE command where a <SP> or CA is necessary to distinguish the LEVEL-ADJUST from the next field (TYPEIN).

3

The prompt at a LEVEL-ADJUST in the TNLS Insert STRUCTURE command might look like: L:/T:/[A:]

4

The prompt at a TNLS LEVEL-ADJUST other than in the Insert STRUCTURE command should look like: L:/C:/[##]

5



20055 Distribution

James H. Bair, Elizabeth K. Michael, Richard W. Watson, Elizabeth J. (Jake) Feinler, Harvey G. Lehtman, Kirk E. Kelley, Laura E. Gould, N. Dean Meyer, Jeanne M. Beck, Charles F. Dornbush, Dirk H. Van Nouhuys, Michael D. Kudlick, Diane S. Kaye, James C. Norton,

LEVEL-ADJUST, a painful option.

(J20055) 5-NOV-73 16:42; Title: Author(s): Kirk E. Kelley/KIRK;  
Distribution: /DIRT; Sub-Collections: SRI-ARC DIRT; Clerk: KIRK;

ouput Processor Cue Card

jean -- The back of the OP Guide has a kind (not quite what you want) of summary. Perhaps that could be altered and (photographically) reduced. I vote in favor.

20056 Distribution  
Jean Iseli,

Proposed Task Management Language

Herb Baskin, at UC Berkely, suggested the model of a (truly) intelligent terminal.

DHC 5-NOV-73 17:59 20057

Proposed Task Management language

Proposed Task Management language

D. Crocker [ 8 NOV 73 ]

TAMAL : Task Management Language

2

The following is a preliminary specification for a Terminal-surrogate language. I would greatly appreciate your reviewing it and making comments.

2a

Though the language has obvious usefulness on any time-sharing system, my interest in it is primarily motivated by the many steps often involved in using the Net.

2b

Many thanks.

-- Dave Crocker

2c

## Introduction

3

The TAMAL Task Management Language is a function-oriented, block-structured language. It is intended to replace the user's run-time terminal interactions, by referencing procedures of TAMAL commands combined with run-specific information provided by the user.

3a

To print a document, from one Network host, at the line printer of another host, many simple but time-consuming steps must currently be performed by the user. Most of the user's time is actually spent waiting -- for processes to start, files to transfer, etc.

3b

This is especially frustrating when the task must be performed regularly. The user generally types the same thing each time.

3b1

With TAMAL, a procedure can be specified, stored and then referenced as needed. The procedure will provide all of the input text normally entered by the user; the user will only have to enter run-specific information -- and not even that, if defaults are used. Then the user can direct the TAMAL Monitor to execute the procedure. After that, the user can be separated from the task and notified when it is completed.

3c

Perhaps most importantly, TAMAL allows relatively naive users of the Network to perform relatively complex tasks easily.

3d



Execution Language

4

General Comments

4a

The formal syntax for TAMAL is specified in the section following the general commands explanation. It should be noted that blanks are (hopefully) ignored, except as text string literals.

4a1

TAMAL procedures are run interpretively, either at the time the user requests their execution or asynchronously and after the user has entered run-specific information.

4a2

Statement Labels

4b

Labels to statements are defined as occurring at the beginning of the statement and preceding the statement command word or another statement label and consisting of alphanumeric strings, beginning with an alphameric and terminated by a colon.

4b1

Statement labels are defined as alphanumeric strings, beginning with an alphameric, ending with a colon and preceding a statement command word or another statement label.

4b1a

The syntax defines statement labels as optional, although some statements are rendered useless if a label is missing.

4b1b

The label to a TEXT or FORK statement is the reference name of that text or process.

4b1b1

Therefore, TEXT and FORK statements without labels cause warning messages to be sent to the RECORD file, if the recording function is enabled.

4b1b2

Labels to all statements, except TEXT statements, must be unique within a procedure.

4b1c

An identical label to two or more TEXT statements (they must ALL be TEXT statements) causes the text to be redefined each time.

4b1c1

If text is referenced, but not yet defined, a forward search for the TEXT statement is made within the current procedure. This forward search will not be made for a second TEXT statement which is intended to redefine a text string.

4b1c2

Text and Text Expressions

4c

TAMAL only allows string variables. At times, such as when performing arithmetic operations, numeric variables are needed. In these cases, TAMAL converts the referenced text into its appropriate numeric form. The text must therefore only contain numeric characters.

4c1

Text expressions are allowed wherever text strings are permitted. Most of the available operations are standard arithmetic and boolean operations, with standard precedence (other than parentheses) rules (see the formal syntax, op1 - op5). Some of the operations may need some explaining, however:

4c2

`/> ( <some-text> )` : A string has a pointer at its beginning (left). For INPUT streams, the pointer starts at the first character after the end of the previous INPUT. The `"/>"` causes operation the pointer to move to the right for the amount indicated by `<some-text>`.

4c2a

This amount may either be a fixed number of characters or it may be a search for a specific string of characters. In either case, the pointer ends up just to the right of the "indicated amount".

4c2a1

Therefore, `"/> (10)"` causes the pointer to rest on the eleventh character.

4c2a2

`</ ( <some-text> )` : This operation causes the pointer to move to the left the amount indicated.

4c2b

`//` : This is a concatenation operator. Text referenced at the right of the operator is appended to the right of the text referenced at the left of the operator.

4c2c

`/+/( <from> , <to> )` : This operator is approximately the same as the PL/1 Substring function. The primary difference is that `<from>` and `<to>` may be numbers or string-searches, as with the `<some-text>` of the pointer-moving operations.

4c2d

Parameters

4d

Parameters are minimally treated in standard ways. There is, however, the ability to specify RETURN parameters, and to pass variables not specifically required by calling or returning parameters lists.

4d1

RETURN parameters may be specified in the call command, immediately after the call parameters. The two sets of parameters are separated by a semi-colon.

4d1a

The parameters specified for return are passed by the called program with the RETURN command.

4d1b

In addition to the standard positional parameters that are required/allowed, the user may pass specific text references. This is done by prefacing the text reference with a slash ("/").

4d2

Execution Language Commands

4e

DO <do-parameters>

4e1

Serves the normal iteration definition function, plus it can define the beginning of a group of statements, to be executed where the syntax normally allows only one statement.

4e1a

If there are no <do-parameters>, the statement only serves its second function (block-definition). The statement label is used for the name of the control variable. The <do-parameters> each take a <text-expression> as an argument and they may be any combination of the following (though some combinations will obviously have strange effects):

4e1a1

FROM specifies the beginning value of the control variable. Defaults to one.

4e1a1a

UNTIL specifies the conditions which will cause the iteration to terminate.

4e1a1b

BY specifies the expression to be used for the new value of the control variable, after each iteration. If unspecified, it defaults to "<control-variable> + 1".

4e1a1c

- As explained with the GOTO command, DO-groups may also be used as internal procedures. The only difference between DO-groups, used as procedures, and internal procedures is that variables declared within the procedure and not declared GLOBAL nor passed back with a RETURN statement are not available to the containing procedure. 4e1b
- END <optional-label-reference> 4e2
- Defines the end of DO-groups and PROCEDURES. Since DO-groups and procedures may be nested, the label reference in the END command may be used to terminate several levels. 4e2a
- FORK <external-ref> <call-parameters> 4e3
- Primarily intended to cause an asynchronous process to be started. It can be referenced (to input and output text) by the statement label 4e3a
- The command may also be used to create files, or open them with special parameters. 4e3b
- GOTO <label-reference> 4e4
- A standard unconditional branch command with one quirk: 4e4a
- If the referenced statement is the beginning of a PROCEDURE (either internal or external), the procedure is invoked as in a normal programming language's CALL. When the procedure finishes, flow of control switches to the statement immediately following the GOTO statement. 4e4a1
- This allows a user to override standard procedures. 4e4a2
- IF <text-expression> THEN <statement> ; ELSE <statement> 4e5
- If the specified text expression evaluates to greater than zero (True), the indicated statement (or DO-group) is performed. 4e5a
- If present, the optional ELSE statement is performed if the text evaluates to zero (False). 4e5b
- The <text-expression> may be any valid text expression. 4e5c
- INPUT <external-reference> <input-options> 4e6
- Reads text from a file, Network connection, FORKed process, or the user's terminal. 4e6a

- The <input-options> allow the user to: 4e6b
- SAVE the text and refer to it later; 4e6b1
  - Take action contingent upon the content of the text, using the IF parameter; 4e6b2
    - A special text-variable, STREAM, is used to reference the input stream. All standard operation may be performed with STREAM. 4e6b2a
  - Abort an INPUT, by using the TIME parameter, if no IF condition is satisfied soon enough. In this last case, flow-of-control then switches to the statement immediately following the INPUT command. 4e6b3
- OUTPUT <external-reference> <text-expression> 4e7
- Outputs the indicated text to a file, Network connection, FORKed process, or the user's terminal. 4e7a
- RECORD <record-state> 4e8
- Allows the user to record all input and output text into a file for later reference. This can be especially useful for determining the cause of execution errors. 4e8a
- PROCEDURE <call-parameters> 4e9
- Procedures are only executed when explicitly called. That is, procedures are skipped when encountered during the standard sequential flow-of-control. 4e9a
  - External procedures only have access to GLOBAL and passed (at calling or returning time) variables. Internal procedures have access to all variables in the containing procedure(s). Containing procedures only have access to GLOBAL and passed or returned variables of contained procedures. 4e9b
- RESTART <restart-condition> 4e10
- In the event a procedure does not terminate normally (e.g., due to a system crash) this command specifies the appropriate location to restart at. 4e10a
  - If the QUIT condition is specified, the procedure will be marked as completed and the user will be notified thru the standard terminal-user message system. 4e10b

OK overrides a previous QUIT, so that execution will restart at the previously enabled location. 4e10c

HERE sets the restart location to the currently statement. 4e10d

EACH causes the enabled restart location to be reset to each succeeding statement, after successful execution of the preceding statement. 4e10e

AT <label-reference> sets the restart location to the referenced statement. 4e10f

The default condition is to restart at the beginning of the current procedure. 4e10g

RETURN <return-parameters> 4e11

Causes the unconditional termination of the current invoked procedure. 4e11a

Please note the section concerning parameters. 4e11b

If the procedure is at the top level (not invoked) the RETURN statement is ignored and the statement (if any) immediately following is then executed. 4e11c

TEXT <scope> <text-expression> 4e12

This statement may be TEXT, DTEXT, OR STEXT. 4e12a

TEXT and DTEXT are identical, causing the declaration of a (optionally) labeled text string, tho the string is not evaluated until referenced. That is, these strings have dynamic values. 4e12a1

STEXT strings are immediately evaluated until they consist only of terminal symbols (literals). The strings are therefore static. 4e12a2

A text string's scope may either be GLOBAL or LOCAL. It defaults to LOCAL. 4e12b

A GLOBAL string is available to any procedure, at any time after the string has been declared. 4e12b1

A LOCAL string is available to the current procedure and all procedures contained within the current procedure. Note that LOCAL strings may be made available to other specific procedures, by passing them at invocation or return time (along with regular parameters). 4e12b2

An attempt has been made to have text specification, in general, be as flexible as possible. This will probably result in many unpredictable quirks.

4e12c

UNFORK <external-reference>

4e13

Causes the indicated asynchronous (FORKed) process to be terminated or the indicated file to be closed.

4e13a

macros

4e14

A statement label reference, occurring in place of a statement command, causes one of three things:

4e14a

If the referenced statement is within the current procedure and is not a TEXT statement, is performed, with flow-of-control afterwards continuing to the statement following the macro reference;

4e14a1

If the referenced statement is a PROCEDURE or DO-group, the procedure or group is invoked as with prosaic CALLs.

4e14a2

If the referenced statement is a TEXT statement, the text is evaluated and treated as commands within a DO-group.

4e14a3

It should be noted that the first two cases are essentially the same.

4e14a4

TAMAL syntax does not allow statement-label referencing, in general, quite as much as might be desired.

4e14b

This is felt to be a minimal handicap, since text strings may at any time be used in place of statements and text strings are only evaluated at reference time.

4e14b1

Note, therefore, that any PART of the string/command may be altered at any time.

4e14b1a

	Execution Language Formal Syntax	4f
<procedure>	::= <new-label> PROCEDURE <call-parameters> <statements> END <optl-label-ref> ;	4f1
<ASCII-char>	::= <ASCII-control> <alphabetic-char> <control-name>	4f1a
<ASCII-control>	::= † CNTL-	4f1b
<call-parameters>	::= <optl-parameters> ( <parameter-list> ; <parameter-list> )	4f1c
<control-name>	::= NUL        SOH        STX        ETX        EOT        ENQ ACK        BEL        BS        HT        LF        VT FF        CR        SO        SI        DLE        DC1 DC2        DC3        DC4        NAK        SYN ETB        CAN        EM        SUB        ESC        FS GS        RS        US        DEL	4f1d
<do-parm-list>	::= FROM        UNTIL        BY	4f1e
<do-parm>	::= <do-parm-list> <text-expression>	4f1f
<do-parms>	::= <empty> <do-parms> <do-parm> , <do-parms>	4f1g
<else>	::= <empty>        ; ELSE <statement>	4f1h
<empty>	::= empty field	4f1i
<ex-ref-part>	::= <label-ref> <valid-external-system-reference>	4f1j
<external-ref>	::= ( <ex-ref-part> )	4f1k



TAMAL Task Management Language  
Execution Language Formal Syntax

<from>	::=	<some-text>	4f1l
<in-parm-part>	::=	SAVE <new-label> IF <input-condition> THEN <statement>	4f1m
<input-condition>	::=	TIME= <minutes>      <text-expression>	4f1n
<input-parameters>	::=	<empty> <in-parm-part> <in-parm-part> <input-parameters>	4f1o
<label-ref>	::=	<label>	4f1p
<label>	::=	<alphabetic> <alphabetic> <alphanumeric-string>	4f1q
<lexical>	::=	CHAR      VIS      INVIS      LET      ULET LLET      DIG      BDIG      ODIG      XDIG BNUM      ONUM      DNUM      XNUM	4f1r
<macro>	::=	<text-ref>	4f1s
<new-label>	::=	<label> :      <label> : <new-label>	4f1t
<num>	::=	<decimal-number> B' <binary-number> ' O' <octal-number> ' D' <decimal-number> ' X' <hexadecimal-number> '	4f1u
<op1>	::=	+      -	4f1v
<op2>	::=	*      /	4f1w
<op3>	::=	**	4f1x

TAMAL Task Management Language  
Execution Language Formal Syntax

<op4>	::=	"/>" ( <some-text> ) "</" ( <some-text> ) // /-/ ( <from> , <to> )	4fly
<op5>	::=	AND      OR      XOR	4flz
<op6>	::=	<      >      >=      <=      =	4fla@
<optl-external-ref>	::=	<empty>      <external-ref>	4flaa
<optl-label-ref>	::=	<empty>      <label-ref>	4flab
<optl-new-label>	::=	<empty>      <new-label>	4flac
<optl-parameters>	::=	<empty>      ( <parameter-list> )	4flad
<parameter-list>	::=	<parameter-part> <parameter-part> , <parameter-list>	4flae
<parameter-part>	::=	<passed-variable>      <parameter>	4flaf
<parameter>	::=	<text-expression>	4flag
<passed-variable>	::=	/ <text-ref>	4flah
<record-state>	::=	ON <optl-label-ref>      OFF	4flai
<relation>	::=	<relation-parts>      NOT <relation-parts>	4flaj
<restart-status>	::=	HERE      EACH      QUIT      OK AT <external-ref>	4flak
<return-parameters>	::=	<optl-parameters>	4flal

TAMAL Task Management Language  
Execution Language Formal Syntax

<scope>	::=	<empty>	GLOBAL	LOCAL	4flam
<some-chars>	::=	* <some-width>	<lexical>		4flan
<some-text>	::=	<some-chars>	<text-expression>		4flao
<some-width>	::=	?	<width>		4flap
<statement-form>	::=	<optl-new-label>	<statement>	;	4flaq
<statement>	::=	DO <do-parms>	END <optl-label-ref>		
		FORK <external-ref>	<process-parms>		
		GOTO <label-ref>	<call-parameters>		
		IF <text-expression>	THEN <statement>		
		<else>			
		INPUT <optl-external-ref>	<input-parameters>		
		OUTPUT <optl-external-ref>	<text-expression>		
		RECORD <record-state>			
		RESTART <restart-status>			
		RETURN <return-parameters>			
		<text-type>	<scope>	<text-expression>	
		UNFORK <external-ref>			
		<macro>	<call-parameters>		
		<procedure>			4flar
<statements>	::=	<statement-form>	<statements>		
		<statement-form>			4flas
<string>	::=	<delim>	<string-without-delim>	<delim>	
		<num>			
		"<"	<ASCII-char>	">"	4flat
<text-expression>	::=	<text-expression>	<optl>	<text1>	<text1>
					4flau
<text-ref>	::=	<label>			4flav
<text-type>	::=	TEXT	DTEXT	STEXT	4flaw

TAMAL Task Management Language  
Execution Language Formal Syntax

<text1>	::=	<text-expression>	<op2>	<text2>	<text2>	4flax
<text2>	::=	<text-expression>	<op3>	<text3>	<text3>	4flay
<text3>	::=	<text-expression>	<op4>	<text4>		4flaz
<text4>	::=	<text-expression>	<op5>	<text5>	<text5>	4flb@
<text5>	::=	<text-expression>	<op6>	<text6>	<text6>	4flba
<text6>	::=	NOT	<text-expression>	<text7>		4flbb
<text7>	::=	(	<text-expression>	)		
			<text-ref>			
			<string>			4flbc
<to>	::=	<some-text>				4flbd
<width>	::=	<empty>	<num>			4flbe

20057 Distribution  
Jean Iseli,

pdp-11 work

lou,

mel pirtle of the illiac project suggested we should exchange information about our respective activities with pdp-11's. where is the best place for me to send mail?

you can reach me at davidson@isi or davidson@i4-tenex.  
john davidson (univ. hawaii)

20058 Distribution

Lou C. Nelson, John Davidson,

## Visit Log: 5 Nov 73, Chinese Computer Scientists

On Monday, 5 Nov 73, a contingent of Chinese Computer Scientists, from the People's Republic of China, spent the day at SRI. ARC's involvement was in two parts: From 10 to 12, ARC staff was their host in a show and tell presentation in our ARC area. At 3:30 in Conference Room B, Building 1, Dick Watson gave them a talk entitled "ARPA Network -- Experience and Implications."

1

Summary data on Visit to ARC by Red China scientists

2

Date: November 5, 1973

2a

How many visitors: 14 [For detailed list see (20019,2:gebtz) or (19865,6:gebtz) ]

2b

U. S. sponsor: Committee on Scholarly Communication with the People's Republic of China, in association with:

2c

American Council of Learned Societies

2c1

National Academy of Sciences

2c2

Social Science Research Council

2c3

address:

National Academy of Sciences  
2101 Constitution Ave.  
Washington, D. C. 20418  
(202) 961-1534

2c3a

Background on visit, and technical exchanges between the U.S. and China: see XDOC items listed under Branch 6 below.

2d

U. S. man arranging with us: Alex DeAngelis, Professional Associate

2e

Ms. Anne Fitzgerald was a member of their party, also associated with the Committee. (She didn't come to SRI for the visit)

2e1

Several State Department personnel also, and Wesley Clark (Washington Univ, St. Louis, a long-time member of the ARPA IPT Contractor Community, and one of the six U.S. computer scientists who visited China in 72 (see XDOC item cited in full below -- 20017,)).

2e2

U.S. Itinerary, as planned in August -- 20019,3:gebtz>.

2f

Other U.S. contacts, during early days when trip was being set up by DeAngelis, see -- 19865,7:gebtz>

2g



## Visit Log: 5 Nov 73, Chinese Computer Scientists

[NOTE: Jim Norton had checked with ARPA IPT about applicable regulations for our hosting visitors from Red China. In (19865,1:xhzn) he outlined the basic data. Al Blue gave him the go ahead.]

2h

## How the day went:

3

I gave a presentation for about 90 minutes, in the ARC Conference Room, using the GE Video Projector. Went through the basic ideas of Augmented Knowledge Workshop; spent a long time on the basics -- how DNLS helps formulate and study, how the controls and commands work for smooth, fast operation; how links allow cross referencing and full-text citation access; how the Journal allows a recorded dialogue.

3a

I did most of the basic description and demonstration working in the file that has since been Journalized as (20019,). To give them hard-copy support for my presentation, they each were given a complete printout, with Journal-like directives giving right-margin LOCNUMs, and also a QUICKPRINT as from the view -- 20019,1:xbzhmGJ>. This was to support the demonstration of moving around, providing different views, etc,

3a1

After doing that QUICKPRINT (with them watching as I did it), the Branch (20019,4:wy) was added while telling them about links, so that branch wasn't included in the printout that they took away.

3a2

I handed out fourteen each of the following set of publications, pointing out that their format forms represent three different ways that that our stuff can get to print (conventional professional-journal printing format, our line-printer, and our COM output). listed by each.

3a3

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

[Gave them two-sided reproduction of our-printer output, with title sheet, and special page of Content View]

3a3a

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

[Gave them our own COM publication copy, with title sheet, and special page of Content View]

3a3b

D. C. Engelbart, DESIGN CONSIDERATIONS FOR KNOWLEDGE

Visit Log: 5 Nov 73, Chinese Computer Scientists

WORKSHOP TERMINALS, paper presented at the National Computer Conference, New York City, June 1973. (Journal -- 14851.)

[Gave them reproduction copies from the NCC Proceedings, in standard publication format]

3a3c

To round out my presentation, I outlined the types of application areas that we'd be willing to discuss and demonstrate at the eight "stations" labelled A through H (with topics and staff as outlined in the following branch. I referred them to Branch (20019,1b3:gebbbt), of which they had hard copy printout, for the station topics and the ARC personnel manning them.

3a4

The idea was for them to divide into as many groups as there were interpreters, which would have been about seven or so. The interpretation went awry while negotiating this, and they broke into only four groups. And they got so engrossed that they didn't want later to either split further or move around, so they settled quite by happenstance at Stations B, C, D, and E for the remaining 45 minutes. Almost all of ARC stood or sat around and enjoyed very much just being part of this experience. Most regrettably, we had forgotten to have a camera around to record the event.

3b

I then went to lunch as one of three ISE staff (with Bart Cox and Dave Brown). At my table was Bob Kiang, from the Engineering Sciences Lab in ISE, who is a native-borne Chinese, having been in the U.S. for 11 years since he arrived to study at Stanford. Also, Professor Wu Chi-k'ang, who speaks quite enough English to converse effectively. We carried on enough discussion for them to get more of the idea of the sort of support that might be provided to a distributed community; they were also interested in knowing what kind of hardware would have to be assembled to enable work such as ours to be established in their country.

3c

Later, I gave reprints of the following two papers to Professor Wu Chi-k'ang, who will see that they are reproduced and distributed among the group.

4

W. K. English, D. C. Engelbart and M. A. Berman, "Display-Selection Techniques for Text Manipulation", IEEE Transactions on Human Factors in Electronics, Vol HFE-8, Number 1, pp 5-15, March 1967 (XDOC -- 9694)

4a

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

4b

I wasn't with them through the rest of the afternoon, but I did go to Conference Room B to say goodbye to them at the end of the day.

Visit Log: 5 Nov 73, Chinese Computer Scientists

Dick had just finished his talk, and there were a number of them very earnestly grouped around him asking questions. I gathered that they had become quite interested in his talk.

5

Visit Log: 5 Nov 73, Chinese Computer Scientists

In XDOC, we have a number of memoranda and several summary articles that provide background:

6

"Survey on Science Exchanges with The People's Republic of China," xxxx, 15 Nov 72  
(XDOC -- 20016,)

6a

"Computing in China: A Travel Report," Cheathan, Clark, Holt, Ornstein, Perlis, and Simon, DATE...?, (Report on a 1972 visit by these 6 US computer scientists)  
(XDOC -- 20017,)

6b

"Arrangement Records for 5 Nov 73 SRI Visit by 14 Chinese Computer Scientists," A collection of letters and memoranda dating between 17 Jul 73 and 31 Aug 73, from both outside and within SRI.  
(XDOC -- 20018,)

6c

20059 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews, Bonnar Cox, David R. Brown, Allan G. Blue, John S. Perry, A. Jim Blum, A. Analysis, Meredith (Reddy) E. Dively, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Mark Alexander Beach, Judy D. Cooke, Marcia Lynn Keeney, Carol B. Guilbault, Susan R. Lee, Elizabeth K. Michael, Charles F. Dornbush, Elizabeth J. (Jake) Feinler, Kirk E. Kelley, N. Dean Meyer, James E. (Jim) White, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

users/using

Jake, were you going to switch coordination of Users over to me? I was going to take USING out of USERS, but couldn't, since you are coordinator.

Dave.

1

20060 Distribution  
Elizabeth J. (Jake) Feinler,

Please feel free to link to me any time. Jim Bair (If you can find me on...)



20061 Distribution  
Robert N. Lieberman,

IDENT FILE SPECS FOR NORSAR IDENTs

MARCIA: REFFERRING TO JUORNAL MESSAGE(20012) RECEIVED FROM DOUG 1  
 ENGELBART,I WOULD VERY MUCH LIKE TO CHANGE THE SPECS IN THEINITIAL 2  
 FILE FOR MYSELF ,AND FOR YNGVAR LUNDH,FROM "NETWORK DELIVERY" TO 3  
 "ONLINE",SO THAT WE ARE ABLE TO RECEIVE MAIL IN PERSONAL 4  
 "MAILBOXES".OTHERWISE, THE MESSAGE FROM DOUG WAS VERY ENLIGHTENING 5  
 ON THE SNDMSG CONCEPT. 6  
 HOWEVER, THERE ARE SOME POINTS WORTH A FURTHE DISCUSSION . 7  
 xFIRST, HAVE WE AGREED UPON CALLING OUR INSTITUTION FOR 8  
 T H E N O R W E G I A N S E I S M I C A R R A Y ? 9  
 I HAVE NOT 10  
 RECEIVED ANY CONFIRMATION ON THIS FROM YOU. 11  
 SECONDLY, I SHOULD ONCE MORE STRONGLY EMPHASIZE THAT 12  
 NDRE, THE NORWEGIAN DEFENSE RESEARCH ESTABLISHMENT, AND 13  
 NORSAR,THE NORWEGIAN SEISMIC ARRAY 14  
 ARE TWO SEPARATE INSTITUTIONS WHICH HAVE ABSOLUTELY NOTHING 15  
 TO DO WITH EACH OTHER FORMALLY, OR IN ANY ORGANIZATORY WAY. 16  
 I REPEAT, NORSAR IS N O T PART OF NDRE. 17  
 HOPING TO HEAR FROM YOU, YOURS DAG. 18

DRM 6-NOV-73 04:35 20063

IDENT FILE SPECS FOR NORSAR IDENTS

(J20063) 6-NOV-73 04:35; Title: Author(s): Dag Rieber-Mohn/DRM;  
Distribution: /MLK DCE; Sub-Collections: NIC; Clerk: DRM;  
Origin: <NORSAR-TIP>IDENT.;1, 6-NOV-73 04:32 DRM ;

20063 Distribution

Marcia Lynn Keeney, Douglas C. Engelbart,

FY-75/76 Writeup for 5550, task 06, On Line Decision Aids

This writeup was not finalized, as moneys in 5550 were severly cut back during its preparation. It does represent, however, the central thrust of what we plan to do, if moneys do become available.

6 ON-LINE DECISION AIDS

1

6.1 INTRODUCTION:

2

6.1.1 Purpose and Goals: The goal of the ON-LINE DECISION AIDS effort is to implement and evaluate the feasibility and cost-effectiveness of providing the Air Force knowledge worker (commander, manager, staff, worker) with an on-line computer based augmentation system to assist him in his daily work.

2a

6.1.2 Potential: The Augmented Knowledge Workshop (AKW) technology, in conjunction with the ARPANET technology has the potential of completely revolutionizing the human communication processes in the Air Force. It should improve both the efficiency and the effectiveness of the Air Force knowledge worker. It should substantially reduce the costs currently associated with the "pencil and paper" technology and measurably improve the responsiveness of individuals and organizations in complex problem solving situations. The need for such a technology is identified in the Base Communications Analysis Study and more explicitly defined in the SADPR-85 Study.

2b

6.1.3 Related Programs: The efforts in this area are based on the AKW technology developed at Stanford Research Institute (SRI) under ARPA sponsorship over the past 10 years. It also dependent upon the ARPANET and will draw heavily upon other advanced technology available around the ARPANET.

2c

ARPA is sponsoring work in the area of secure DMS at RAND Corporation. This work is exploring issues of user data base privacy.

2c1

ARPA is also sponsoring work in the area of data management systems at USC/ISI. This effort is examining the flexibility and integration of several management information systems within the context of a large organization.

2c2

6.2 ANALYSIS AND TECHNICAL APPROACH:

3

6.2.1 Technical Background:

3a

In order to better understand the technology, it is necessary to gain an appreciation for the underlying philosophy.

3a1

The importance and implications of the idea of knowledge work have been described by Drucker. Considering knowledge to be the systematic organization of information and concepts, he defines the knowledge worker as the person who creates and applies knowledge to productive ends, in

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contrast to an "intellectual" for whom information and concepts may only have importance because they interest him, or to the manual worker who applies manual skills or brawn. Drucker brings out many significant facts and considerations highly relevant to the theme here, one among them (paraphrased below) being the accelerating rate at which knowledge and knowledge work are coming to dominate the working activity of our society:

3a1a

In 1900 the majority and largest single group of Americans obtained their livelihood from the farm. By 1940 the largest single group was industrial workers, especially semiskilled machine operators. By 1960, the largest single group was professional, managerial, and technical -- that is, knowledge workers. By 1980 this group will embrace the majority of Americans. The productivity of knowledge has already become the key to national productivity, competitive strength, and economic achievement, according to Drucker. It is knowledge, not land, raw materials, or capital, that has become the central factor in production.

3a1a1

In his provocative discussions, Drucker makes extensive use of such terms as "knowledge organizations," "knowledge technologies," and "knowledge societies." It seems a highly appropriate extension to coin the phrase "knowledge workshop", just another name for the place in which knowledge workers do their work. Knowledge workshops have existed for centuries, but only recently has special emphasis been placed on their systematic improvement, toward increasing the effectiveness and efficiency of the knowledge worker.

3a1b

The visible components of the technology are the time-shared computer (allowing a number of persons to simultaneously share a computer's resources in a real time manner) and the effective networking of dissimilar computers. The less visible side is the recognition of the "common core" of activity carried on daily by knowledge workers, regardless of their speciality.

3a1c

To illustrate this later point, if you asked a particular knowledge worker (e.g., manager, engineer, staff officer, intelligence analyst, etc.) what were the foundations of his livelihood, he would probably point to particular skills such as those involved in managing work flow in a project, or designing an electric circuit. If you asked him what tools he needed to improve his effectiveness he would point to requirements for aids in scheduling the flow of work,

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designing circuits, searching past decision papers or  
integrating data from diverse sources. 3ald

But, a record of how this person used his time, even if  
his work was highly specialized, would show that  
specialized work such as mentioned above, while vital to  
his effectiveness, probably occupied a small fraction of  
his time and effort. 3ald1

The bulk of his time, for example, would probably be  
occupied by more general knowledge work: writing a  
planning or design document; carrying on dialogue with  
others in writing, in person, or on the telephone;  
studying documents; filing ideas or other material;  
formulating problem-solving approaches; coordinating work  
with others; and reporting results. 3ald2

The Augmentation Research Center (ARC) at SRI has been  
working for some years to develop a general purpose  
information system that would augment the common core  
activities of knowledge workers. 3ale

The development of an On Line System (NLS) has progressed to  
the point where it is now being used by small groups around  
the country as their primary medium for conducting their  
daily business. It contains a host of tools, procedures and  
methodology embedded in a consistent command language; which  
allow one to accomplish most of his daily communication and  
documentation activities. Some of the more important  
communication features include: 3alf

linking..the ability to connect one's terminal to another  
(or several) and hence to carry on a "conversation"  
between the linked parties. 3alf1

message distribution..allows the immediate distribution  
of messages to one or more individuals. 3alf2

shared files..allows two or more people to read and write  
on the same file, thus facilitating recorded dialog. 3alf3

shared screens..allows two people to work on and view the  
same file at the same time. This mode of communication  
is often further augmented by a telephone voice link  
between the two parties. 3alf4

journal..allows one to send any document (from one word  
to several hundred pages) to any recognized user of the  
system. A reference to the document is delivered on-line



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or the entire document is delivered off-line via a remote printer or the US mails. The document is automatically indexed by author, number and keyword in the title. The indices are also available on-line and off-line for subsequent searching.

3a1f5

Documentation capabilities include:

3a1g

text editing..a full range of text editing features are available to the user.

3a1g1

viewing..the text is arranged in an hierarchial fashion and a number of special views of the document one is preparing or studying can be easily obtained based on the structure of the document.

3a1g2

formatting..several hundred directives are available for the users to format his document for publication. Printing can be done on any conventional teleprinter terminal, on a highspeed line printer, or on a phototypeset machine, where controls over font, charactersize, columns, etc. are possible.

3a1g3

Concurrently, a second technology has been developed which allows the interconnection of dissimilar computers. It has been supported by the Advanced Research Projects Agency (ARPA) and is called the ARPANET. There are currently over 40 computer sites in the US and 3 overseas, representing all the major computer manufacturers, linked together.

3a1h

This makes it possible to connect programs together which are running on different computers located at different geographic sites. This means that one no longer has to replicate software, hardware and expertise on site before he can use some newly developed information system. One need only provide a software interface from the general purpose information system to the more specialized (and more powerful in its domain) information system.

3a1h1

Examples of such special purpose systems available on the ARPANET include:

3a1h2

a DELPHI system at the Universtiy of Southern California, which allow the rapid collection of expert judgements in a formal manner.

3a1h2a

a powerful 3 dimension graphics capability at the University of Utah, which can assist in the design and analysis of complex 3D objects.

3a1h2b

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a computer based instruction program at the Bolt Beranek & Newman company in Boston, which allows an instructor to insert course material and students to be taught in an on-line interactive tutoring mode.

3a1h2c

a general purpose MIS capability at the Systems Development Corp., which allows one to experiment with setting up his own MIS files and query language.

3a1h2d

6.2.2 Technical Approach Selected: SRI has developed NLS through a "bootstrapping" process where the system's capabilities at any particular instance in time are used to further develop the system. The augmentation capabilities of the system have evolved through the individual, to the team, to the organization stage, and are now approaching the community stage via use by individuals and teams around the ARPANET. This evolutionary interplay between development and evaluation is the approach being used at RADC to adapt the technology to Air Force needs.

3b

The evaluation of a system as complex as AKW must be conducted over an extended period of time, on an extended set of jobs, and across a representative sample of Air Force people to allow the results to be generalized to other environments. The preliminary evaluation at RADC will cover a two-year period, and include engineers, secretaries, administrators, and managers at three levels in the chain of command. The measures currently used in the evaluation include:

3b1

Psychometric--questionnaires, surveys, and interviews given in a controlled experimental environment.

3b1a

Performance--whenever a working group, section, or branch is charged with a specific job their performance will be compared with that of an equivalent organizational unit. Data will be collected on elapsed time, manhour time, and the subjective judgements of the quality of the work made by the two units' common manager. Comparisons will be made between the AKW system and other available systems with comparable capability in specific areas; eg. text editing.

3b1b

Cost/Benefit--A running systems analysis will be conducted over the two year period to enable detailed specification of the cost/benefit trade-offs which can be made in implementing portions of the general system in other environments.

3b1c

The development activity will consist of adding small packages to NLS where such addition is consistent with the overall system and clearly a part of the core of a knowledge worker's

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job. Any special purpose augmentation system will be acquired by writing an interface package and accessing it via the ARPANET. In addition to the obvious economic benefits of this development approach, it should make the resulting system much easier to use. Instead of having to learn an entirely new system with all its conventions, the user will only have to learn the commands of the interface package, which will be consistent with the basic NLS command language. This is analogous to the difference between learning a new foreign language and adding to one's vocabulary.

3b2

6.2.3 Technical Achievements Planned: The activity in FY-74 will consist of training 20 additional people in the ISI branch, procuring additional terminals, NLS service and a line printer, conducting work performance tests and studying cost/benefit tradeoffs.

3c

Development activity will be concentrated in three areas; building a forms generation package, interfacing NLS with a data management system and adding a Computer Aided Instruction (CAI) package. The CAI package will be SCHOLAR, developed by BBN and supported by ESD. These development activities will be significantly enhanced by the use of others' research work via the ARPANET.

3c1

During FY-75 and 76 it will be possible to specify and refine the design of a prototype AKW for a larger population. It is planned to expand the use of the system to the IS Division at RADC (about 100 people) and to implement it at ESD/MCI (about 50 people). This will allow a practical test of the AKW concepts on a large scale basis and for the first time test its utility for remote collaboration, prior to introduction into other large organizations. Development activity will be concentrated on interfacing to a graphics system and a teleconferencing system.

3c2

6.2.4 Progress: The activity during FY-72 was concentrated on acquiring the necessary physical plant for use and evaluation of the SRI AKW system. RADC was connected to the ARPANET via a Terminal Interface Processor (TIP). Internal lines were acquired to connect terminals to the TIP. Six portable teleprinters, three CRT display terminals, and four digital cassette recorders were purchased. By the end of FY-72 the AKW research group at RADC (3 people) had progressed to the point where they were doing the bulk of their daily work using the system.

3d

The FY-73 activity was concentrated on training the rest of the ISIM section, procuring additional terminals and defining and refining procedures for use of the system. The need for a

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calculator capability was identified and programmed into the system. Comparisons of the text editing capability were made with other similar systems and pilot work performance tests were given. In addition, attitude questionnaires and surveys were made. By the end of FY-73 there were 20 people using the system on a daily basis; including managers, engineers and secretaries. A comprehensive report was prepared, documenting the evaluation exercises to date and the experiences of becoming an AKW. This report answers in the AFFIRMATIVE the initial question of the evaluation, "Can this technology be introduced at all into the Air Force environment?"

3d1

## 6.3 DEVELOPMENT AND TEST PLAN:

4

## 6.4 TASK MILESTONES

5

## 6.4.1 Phases:

5a

## 6.4.2 Schedules Within Master Schedule:

5b

## 6.5 FINANCIAL:

6

## 6.6 MANPOWER:

7

## 6.7 CONTRACTS AWARDED:

8

This effort is entirely an in-house effort. The only contracts awarded were those to purchase equipment or services necessary to conduct the evaluation.

8a

Contract Number:

8b

Contract Title:

8c

Contractor Name:

8d

Contractor Address:

8e

Contractor Status:

8f

## 6.8 REPORTS PUBLISHED:

9

Title: Evaluation and Analysis of an Augmented Knowledge Workshop

9a

Identifying Number: RADC-TR-XXX

9b

Contract Number: N/A

9c

Abstract

9d

FY-75/76 Writeup for 5550, task 06, On Line Decision Aids

(J20064) 6-NOV-73 05:58; Title: Author(s): Duane L. Stone/DLS;  
Distribution: /EJK JLM FJT RBP; Sub-Collections: RADC; Clerk: DLS;  
Origin: <STONE>5550.NLS;1, 6-NOV-73 05:54 DLS ;

Hostnames List

Nancy, Feel free to view or copy my file (feinler,hostnames-2,). This is the one I mentioned to you over the phone. It is not complete and some of the hostnames have not been verified, but it may have a few things you have not collected yet. I am working on a more complete update that will contain site addresses and a contact and will make this available as soon as it is complete (or close). Thanks for your input. Regards, JAKE. (P.S. Jim White says you can FTP the file and maintain the NLS structure by asking for file <FEINLER>HOSTNAMES-2.xnls)

20065 Distribution  
Nancy J. Neigus,

Hostnames List

(J20065) 6-NOV-73 07:35; Title: Author(s): Elizabeth J. (Jake)  
Feinler/JAKE; Distribution: /NJN; Sub-Collections: SRI-ARC; Clerk: JAKE;



need for some integrated circuits

subject: need for some integrated circuits

1

jack stifle at illinois needs 100 each of the following list of circuits. these are for plasma terminals to be used by arpa. the items in ( ) are possible substitutes. if you have them please let me know. i can be contacted by sndmsg to bryan @ usc-isi or call jack stifle at (217) 333-4691.

1a

raytheon 4136 opamp

1a1

ratheon rc0101 ate opamp

1a2

fairchild 9124 (ti-sn29124)

1a3

fairchild 9186 (ti- 74186 or 74s86 or 54s86)

1a4

fairchild 93100 (ti-741195 or 541195)

1a5

fairchild 9962

1a6

## 20066 Distribution

Leonard Kleinrock, William K. Pratt, David C. Evans, Douglas C. Engelbart, Bertram Raphael, Daniel L. Slotnick, Robert L. Fink, Glenn J. Culler, Frank S. Cooper, Bruce G. Buchanan, Kenneth L. Bowles, Morton I. Bernstein, Paul Baran, Saul Amarel, Roy C. Amara, John E. Savage, Butler W. Lampson, William R. Sutherland, Thomas G. Stockham, Gene Raichelson, Michael O'Malley, Peter G. Neumann, Marvin Minsky, Robert E. Millstein, J. C. R. Licklider, Robert M. Balzer, Herbert B. Baskin, Robert P. Abbott, Peter Kirstein, William B. Kehl, Roland F. Bryan, James G. Mitchell, Jeanne B. North, Allen Newell, John McCarthy, Lawrence G. Roberts, Frank E. Heart, Edward L. Glaser, Thomas M. Marill, T. E. Cheatham, James W. Forgie, Keith W. Uncapher, Edward A. Feigenbaum, Michael B. Young, Michael A. Padlipsky, Schuyler Stevenson, L. Peter Deutsch, John Davidson, Thomas O'Sullivan, Sol F. Seroussi, Scott Bradner, Robert H. Thomas, Michael J. Romanelli, Ronald M. Stoughton, A. D. (Buz) Owen, Robert L. Fink, Jeanne B. North, Steve D. Crocker, Thomas F. Lawrence, John W. McConnell, James E. (Jim) White, A. Wayne Hathaway, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Abhay K. Bhushan, B. Michael Wilber, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, John T. Melvin, Jacques F. Vallee, Joshua Lederberg, Paul J. Nikolai, Robert J. Gronek, Rein Turn, Mark Medress, Franklin Kuo, Howard Frank, Donna R. Cooper, Jeffrey B. Rubin, John P. Wakerly, Tom C. Rindfleisch, Leonard B. Fall, David L. Hyde, Gary Blunck, Tom P. Milke, Alan H. Wells, Chuck R. Pierson, Carl M. Ellison, Robert P. Blanc, Jay R. Walton, Terence E. Devine, David J. King, William L. Andrews, Milton H. Reese, Kenneth M. Brandon, Lou C. Nelson, Jeffrey P. Golden, Richard B. Neely, Dan Odom, Robert G. Merryman, P. Tveitane, Adrian V. Stokes, David L. Retz, Reg E. Martin, Gene Leichner, Jean Iseli, James E. (JED) Donnelley, William Kantrowitz, Michael S. Wolfberg, Yeshiah S. Feinroth, Anthony C. Hearn, Robert M. (Bob) Metcalfe, Bradley A. Reussow, Daniel L. Kafunce, George N. Petregal

RFB 6-NOV-73 15:06 20066

need for some integrated circuits

(J20066) 6-NOV-73 15:06; Title: Author(s): Roland F. Bryan/RFB;  
Distribution: /NLG PI; Sub-Collections: NIC NLG PI; Clerk: CAG;

Reply to AKB re Res Ntbk and NETIRS article for NEWS (20034,)

To: Abhay Bhushan

1

From: Jeanne North

2

Re: Resource Notebook Entry  
NETIRS Description for ARPANET NEWS (20034,)

3

Jake Feinler is in charge of the Resource Notebook, and I've given her a copy of your message and she'll talk to you about the best means for your input.

4

Yes, I would be very interested in a description of NETIRS for the NEWS. My feeling is that the information could well be issued as both an RFC and an article, because it will be good to have a separate description as well as a NEWS article. Perhaps a document already exists as a separate which could be journalized. Perhaps you would like to publish a commentary article for the NEWS which leads into a manual-type document published separately. I would like something of about 2 pages for the NEWS, if that seems comfortable to you. I would prefer an online submission which I will format, but hardcopy is acceptable.

5

Thanks for your appreciation of the NEWS. Jean Iseli is doing a splendid job in getting people to submit articles, and I think his online interviews are a great innovation. I have passed on to Mil your compliment on the abstracts. We're all doing a lot of night work to bring this thing off, and we appreciate your acknowledgement..

6

20068 Distribution

Abhay K. Bhushan, Jean Iseli, Mil E. Jernigan, Michael D. Kudlick,  
Elizabeth J. (Jake) Feinler,

JBN 6-NOV-73 09:23 20068

Reply to AKB re Res Ntbk and NETIRS article for NEWS (20034,)

(J20068) 6-NOV-73 09:23; Title: Author(s): Jeanne B. North/JBN;  
Distribution: /AKB JI MEJ MDK JAKE; Sub-Collections: NIC ; Clerk: JBN;  
Origin: <NIC-WORK>AKBREPLY.NLS;2, 6-NOV-73 09:18 JBN ;

A Proposed Outline for the MIS Proposal

Give this your attention and feed back to me any objections,  
dissatisfactions, or contradictions, Otherwise, I'll take it to be  
acceptable to all by WED NOON.

## A Proposed Outline for the MIS Proposal

This is the plan or outline I have come up with after studying Roger's briefing format and Stoney & my paper. We decided yesterday that we must settle on some outline and then fill it in and this must be done soon. So take a careful look at this one and decide what changes are necessary and then we can finally stick to one and carry the work on from there.

## Objective

establish & maintain a Center Mis (ref letter)

## RADC chart

something like Frank had yesterday to show RADC organization and allude to how things work.

## Background &amp; Introduction to MIS

some talk to bring out the idea that there is a need for an MIS; mention dichotomy of data generation and information use (the inverted triangles) and talk about the uncertainty in management.

## Purpose of an MIS

based on some of my thoughts from my paper

Vu-graph 2L from Roger

Vu-graph 2R from Roger

Vu-graph 4R(1)

fitting IDS & NLS into above descriptions...also briefly describe these systems so that people will know what we are talking about

Vu-graph 3L highlighting the evolutionary manner before getting into team leaders

## Phase I

fast delivery of AKW to higher levels in Center, working down to grass roots as soon as possible

design & implementation of IDS database with limited services

## Phase II

implementation of expanded and complete database

1

2

2a

3

3a

4

4a

5

5a

6

7

8

8a

9

10

10a

10b

11

11a



## A Proposed Outline for the MIS Proposal

interface DMS with AKW	11b
expose ever larger population to AKW system with limited graphics for flow charts	11c
Phase III	12
DM-1 (?), complete user population on AKW with graphics developed and preliminary model of RADC	12a
Detailed explanation of how the design steps	13
System Planning Activity (information analysis)	13a
System Developing Activity (system design and implementation)	13b
System Life Cycle Activity (operation and maintenance)	13c
Team leader concept (which is very good)	14
The rest follows Roger's plan pretty closely except that there should be a strong summary & conclusion to highlight what we have tried to present. Maybe we could go bck to the RADC chart again but this time overlay it with how the MIS would impact the Center. This would be a grphic example of where the MIS would fit into the scheme of things.	15
Finally, the writtem proposal would contain (in addition to detailed discussions of the above items) an appendix that will go into some of these topics on a more detailed level. The appendix might include an IDS primer with pictoral representation of IDS chaining showing the master/detail relationships and its integrated approach, further explanations of AKW, discussions of Femis, the projected impact that our system will have on the PMS & CMS files and MASIS. We could also include our present database design, a summary of the people who have worked on the proposal and their experience, etc.	16

20069 Distribution

Edmund J. Kennedy, Roger B. Panara, Duane L. Stone, Rocco F. Iuorno,  
William P. Bethke, Frank J. Tomaini,

JPC 6-NOV-73 10:57 20069

A Proposed Outline for the MIS Proposal

(J20069) 6-NOV-73 10:57; Title: Author(s): Joe P. Cavano/JPC;  
Distribution: /EJK RBP DLS RFI WPB FJT; Sub-Collections: RADC; Clerk:  
JPC;  
Origin: <CAVANO>PLAN.NLS;1, 6-NOV-73 10:43 JPC ;