

TRANSMITTAL TO: Bob O'Brien

TRANSMITTAL TO: Bob O'Brien
Cabledata Associates, Inc.
701 Welch Road, Suite 326
Palo Alto, California 94304

FROM: Marcia Keeney (NIC)
Station Agent

1

At your request, I am sending the following documents:

1a

- NIC 14695 NCSS Has Big Plans for T/S Net
- NIC 14696 Institute Strengthens Academic-Application Links
- NIC 13030 THE FLOW DEVIATION METHOD
- NIC 14661 TSO/OS PROJECT "WHITE PAPER" ON FUTURE SYSTEMS.

1a1

NIC 14653 is a book which we cannot lend. It is FEDERAL INFORMATION SYSTEMS by S. Herner.

1b

16415 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: Joan Bebb

TRANSMITTAL TO: Joan Bebb
System Development Corporation
2500 Colorado Avenue
Santa Monica, California 90406

FROM: Marcia Keeney (NIC)
Station Agent

At your request, I am sending NIC 14682 Low Cost Interactive
Message Processing.

1

1a

16416 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: Thomas J'Sullivan

TRANSMITTAL TO: Thomas J'Sullivan
HumRRO
1400 Wilson Boulevard
Arlington, Virginia 22209

FROM: Marcia Keeney (NIC)
Station Agent

1

At your request, I am sending the documents from the National
Research Council of Canada for you to look at. Let me know if you
want any of them issued as CBI notes.

1a

16417 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: John P. Charles

TRANSMITTAL TO: John P. Charles
LOGICON
1075 Camino del Rio South
San Diego, California 92108

FROM: Marcia Keeney (NIC)
Station Agent

1

Your name was entered today in the IDENTFILE of the Network Information Center. Enclosed is a copy of that entry. It will appear as such in the next update to the Network Directory (NIC 5150). If anything in the entry is incorrect, please notify Marcia Keeney at the NIC and she will correct it.

1a

16418 Distribution
Station Agent,

1
1a

Transmittal to R. Kahn

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

NIC 16419
16-MAY-73

TRANSMITTAL TO: Robert E. Kahn
Advanced Research Projects Agency
1400 Wilson Boulevard
Arlington, Virginia 22209

FROM: Jim Norton

Enclosed is an updated copy of the draft of the PRIMER AND SCENARIO
FOR USING TNLS

We would appreciate your comments on it via SNDMSG.

1
2
3
4
5

16419 Distribution
Station Agent,

TRANSMITTAL TO: R. M. Van Slyke

TRANSMITTAL TO: R. M. Van Slyke
Vice President
Network Analysis Corporation
Beechwood, Old Tappan Road
Glen Cove, New York 11542

FROM: Marcia Keeney (NIC)
Station Agent

1

At your request, I am sending a copy of NIC 14693 An Efficient
Algorithm for Finding the Union, Intersection, and Differences of
Spatial Domains.

1a

16421 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: Jean Iseli

TRANSMITTAL TO: Jean Iseli
MITRE Corporation
National Systems Design Dept., W185
1820 Dolley Madison Blvd.
Westgate Research Park
McLean, Virginia 22101

FROM: Marcia Keeney (NIC)
Station Agent

1

At your request, I am sending NIC 14724 THE AUGMENTED KNOWLEDGE
WORKSHOP. NIC 13974 is too long for us to reproduce and distribute;
as it is published by MII-AI, I suggest you obtain a copy from them.
NIC 13964 is not available at this time.

1a

16423 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: David L. Retz

TRANSMITTAL TO: David L. Retz
Speech Communications Research Laboratory, Inc.
800 Miramonte Drive
Santa Barbara, California 93109

FROM: Marcia Keeney (NIC)
Station Agent

1

At your request, I am sending a copy of NIC 14697 and NIC 14678. I suggest you order NIC 6149 from MIF as it is too large for us to reproduce for distribution.

1a

16425 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: Margaret Iwamoto

TRANSMITTAL TO: Margaret Iwamoto
University of Hawaii
THE ALOHA SYSTEM
2540 Dole Street
Honolulu, Hawaii 96822

FROM: Marcia Keeney (NIC)
Station Agent

1

At your request, I am sending the following documents:

1a

1a1

- NIC 14758
- 14605
- 13975
- 13973
- 13970
- 13979
- 13980
- 13991

1a2

1a3

You can order NIC 14187 from BBN. NIC 13999, 13967, and 13998 are books which we do not distribute -- I suggest you contact the publisher. NIC 13974 is too large for us to reproduce -- perhaps you can order it from MIT.

1b

16426 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: NCAR Library

TRANSMITTAL TO: NCAR Library
National Center for Atmospheric Research
Boulder, Colorado

FROM: Marcia Keeney (NIC)
Station Agent

1

At your request, I am sending NIC 10956 and NIC 12112.

1a

16427 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: Larry Fagan

TRANSMITTAL TO: Larry Fagan
MIT Architecture Department
Building 9 - Room 512
Cambridge, Massachusetts 02139

FROM: Marcia Keeney (NIC)
Station Agent

1

At the request of Dave Walden (BBN), your name has been placed on the TIP User's Group mailing list.

1a

Enclosed are TIPUG notes 1-11. You will receive all future notes on regular distribution.

1b

Also enclosed is the Keynote Speech by Ruth Davis at COMPCON '73.

1c

Encl.

1d

- NIC 13027
- 13028
- 13029
- 12403
- 13480
- 13486
- 13887
- 14207
- 14763
- 14758
- 14788
- 16083

1d1

16432 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: Merdelle Porter

TRANSMITTAL TO: Merdelle Porter
NASA Ames - ILLIAC Group
Institute for Advanced Computation Documentation
Center
1095 Duane Avenue
Sunnyvale, California 94086

FROM: Marcia Keeney (NIC)
Station Agent

1

At your request, I am sending 3 copies of the TIP User's guide (NIC 10916) and one copy of BBN 1877 (NIC 7958). I was unable to locate "Primitive and Internal File Structures" by CCA. Do you have any more information on this one?

1a

16433 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: Paule Touzeau

TRANSMITTAL TO: Paule Touzeau
Institut de Recherche d'Informatique et
d'Automatique
Domaine de Voluceau
78 Rocquencourt
FRANCE

FROM: Marcia Keeney (NIC)
Station Agent

At your request, I am sending a copy of NIC 8472 (SUR note #15),
Spectral Analysis by Linear Prediction.

MLK/kk

1

1a

1b

16434 Distribution
Station Agent,

1
1a

Transmittal to Honey S. Elovitz

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

NIC 16435
28 MAY 73

TRANSMITTAL TO: Honey S. Elovitz
Naval Research Laboratory
Washington, D.C. 20375

FROM: Marcia Keeney
Station Agent

1

2

3

At your request I am sending the following documents:

4

- NIC 7147
- 4762
- 8123
- 11283-11289
- 11624
- 11626

4a

NIC 11685 (BBN Report No. 2396) and NIC 11748 (BBN Report No. 2161) may be ordered from BBN. We do not have NIC 11751 -- perhaps you can get it from the publisher. "Phonological Theory" by Makkai is a book (not by SCRL) which we do not have. Dr. Shoup will call you about the monograph No. 6 which is quite large.

5

MLK:ll

6

16435 Distribution
Station Agent,

Transmittal to Martha Ginsberg

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

NIC 16437
22-MAY-73

TRANSMITTAL TO: Martha Ginsberg
Computer Corporation of America
575 Technology Square
Cambridge, Massachusetts 02139

FROM: Marcia Keeney
Station Agent

1
2
3
4

At your request I am sending four black boxes for holding NIC papers.

16437 Distribution
Station Agent,

Transmittal to Martha Ginsberg

(J16437) 25-MAY-73 12:41; Title: Author(s): Marcia Lynn Keeney/MLK;
Distribution: /SA; Sub-Collections: SRI-ARC; Clerk: LLL;
Origin: <LANE>NIC16437.NLS;3, 25-MAY-73 12:40 LLL ;

TRANSMITTAL TO: Kauko Rahko

TRANSMITTAL TO: Kauko Rahko
Helsinki University of Technology
Telephony Laboratory
02150 Otaniemi
FINLAND

FROM: Marcia Keeney (NIC)
Station Agent

1

Your name was entered today in the IDENTFILE of the Network Information Center. Enclosed is a copy of that entry. It will appear as such in the next update to the Network Directory (NIC 5150). If anything in the entry is incorrect, please notify Marcia Keeney at the NIC and she will correct it.

1a

16439 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: Craig G. Anderson

TRANSMITTAL TO: Craig G. Anderson
Naval Undersea Center
Department of the Navy
Undersea Surveillance Division
San Diego, California 92132

FROM: Marcia Keeney (NIC)
Station Agent

1

Your name was entered today in the IDENTFILE of the Network Information Center. Enclosed is a copy of that entry. It will appear as such in the next update to the Network Directory (NIC 5150). If anything in the entry is incorrect, please notify Marcia Keeney at the NIC and she will correct it.

1a

16440 Distribution
Station Agent,

1
1a

TRANSMITTAL TO: Herbert A. Steinberg

TRANSMITTAL TO: Herbert A. Steinberg
Mathematical Applications Group, Inc.
3 Westchester Plaza
Elmsford, New York 10523

FROM: Marcia Keeney (NIC)
Station Agent

1

Your name was entered today in the IDENTFILE of the Network Information Center. Enclosed is a copy of that entry. It will appear as such in the next update to the Network Directory (NIC 5150). If anything in the entry is incorrect, please notify Marcia Keeney at the NIC and she will correct it.

1a

16441 Distribution
Station Agent,

1
1a

<IJOURNAL>16451.NLS;1, 15-MAY-73 09:08 XXX ; .HJOURNAL="AAM 15-MAY-73 07:02 16451"; Title: .HED="Response to NIC#16375"; Author(s): Alex A. McKenzie/AAM; Distribution: /RWW JAKE LPD CHI MDK JBN JEW NJN; Sub-Collections: NIC; Clerk: AAM; .IGD=0; .SNF=HJRM; .RM=HJRM-7; .TABSTOPS=8,16,24,32,40,48,56,64; .PGN=-1; .LBS=1; .PES;

.PEL; .PGN=PGN-1; .GCR; This supercedes (duplicates) journal numbers 16380 & 16381 which the journal system seems to have completely screwed up

I've just read Jim White's note on Host numbers and Site Idents and pretty much agree with his analysis of the subject. I should make a couple of comments relative to BBN-NET documentation of these names and numbers:

1) If you look at Appendix A of the 4/73 revision of 1822 you will see that I am trying to get out of the Ident business entirely. This is because of the constant "DEMANDS" for ident changes from a few sites such as

AFETR - PATRICK - RML
 NCAR - NOAA - DOCB
 SAAC - SDAC

plus the flack I began getting recently about what to call the second MIT IMP (IMP#44). 1822 serves many functions; but I don't view assigning official idents as one of them. Accordingly, I am going to try to stick to the (new) policy of using the full name of each organization rather than any acronyms whatever.

2) There is one problem with the text of the second paragraph of Appendix A if one takes Jim's point of view about the definitions of site and Host. Namely, the last sentence, which begins "Site locations shown" should be changed to "Host locations shown". I will try to remember the change the next time 1822 is published.

3) In the not-too-far-distant future the Network Address field of Host-to-IMP and IMP-to-Host messages is going to get bigger. We can see the day coming when the network will have more than 64 sites and we MUST expand the number of bits used for addressing sites. This is all bound up with R&D work going on regarding "area routing" (at the IMP-to-IMP level) but will probably happen in 1973. In addition, the High Speed Modular IMP is supposed to allow lots more than 4 hosts (64?) so the Host number field will get larger as well. You might as well be aware that this is going to happen.

4) We have tried to let the network community know about forthcoming installations via 1822; perhaps we should let the NIC know directly when we know that a new machine is installed. There are two cases. We know exactly when an IMP or TIP

is installed and can (if we remember to) let you know. On the other hand, when we deliver an interface we can't really tell what machine an organization will actually connect to it, or when (if ever) the connection will be made. For example, I have thought, for several years, that the connection of a 635 (Honeywell/GE) to the Rome Air Development Center IMP was "imminent". Similarly, although I know of no plans to connect a Host to interface number 0 (zero) at "US Department of Commerce, Boulder", a Host COULD be connected there tomorrow and I would be unlikely to notice it for a long time (in fact, maybe one is there already).

5) Appendix A was added to 1822 because it turned out, in the early days of the network, that some Hosts (notably TENEX) wouldn't talk to other Hosts unless they (the other Hosts) had "official" network

addresses. I always thought that this was a grossly stupid implementation, but was never able to influence the offending Hosts. Accordingly, I had to "officialize" the addresses of all possible Hosts by publication in 1822, and it is for this reason that I tend to prefer erring on the side of overcompleteness rather than missing any possible address.

For Carbon Copy Journal Distribution

I've been longing for (journal,16394,) for a long time.

1

For Carbon Copy Journal Distribution

(J16453) 14-MAY-73 19:22; Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /DSK RWW JDH; Sub-Collections: SRI-ARC;
Clerk: DVN;

Duane Stone Should Get The Usage Graphs Too.

His ident is dls.

1

16454 Distribution

Susan R. Lee, Paul Rech, James C. Norton,

Duane Stone Should Get The Usage Graphs Too.

(J16454) 14-MAY-73 19:44; Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /SRL PR(fyi) JCN(fyi); Sub-Collections: RADC;
Clerk: DVN;

Draft of COM Status Board

I have created a branch (vanNouhuys,DPCS,status,:x) To monitor the progress of COM projects of note. So far I have only shown it to you, Walt and Dean. When I've gotten your comments and corrections, particularly Deans (I may have let him off the hook on a few of the jobs I've said are waiting for DDSI reruns) and if it then still seems useful, I will distribute it to all the people whose idents grace it.

1

An x view as in the link, lists projects and dates (we should get some dates). (vanNouhuys,dpcs,status:xbs) shows the state of the project, and (vanNouhuys,dpcs,status,:w) shows what's holding up the show.

1a

I don't propose keeping this up forever, but using it to get our collective heads in order.

1b

16455 Distribution

N. Dean Meyer, Walt Bass,

Draft of COM Status Board

(J16455) 14-MAY-73 21:08; Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /NDM WLB; Sub-Collections: DPCS; Clerk: DVN;

Current State of Boston TNLS

May 14 to NJN

I'm glad things are firming up for Boston TNLS.

It is too much for our system and our humans to teach in effect three classes in a row (two in Boston and one in Chicago) so we would like to keep it to one in Boston. We can come back again some day.

Maybe we can raise the class size. In our experience 8 is tolerable.

I would like to offer one place to Sylvia Mayer at ESD (a separate journal item will come to you about her) and one to Lickleider's group at MIT (through Abay Bushan?). Then we could deal out the remaining 6 places to the most deserving. Do you want to do that or let us? Bushan and Mayer may not want their places, of course.

1

1a

1b

1c

1d

16456 Distribution

Nancy J. Neigus, Marilyn F. Auerbach, Michael D. Kudlick, James C.
Norton,

Current State of Boston INLS

(J16456) 14-MAY-73 21:19; Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /NJN MFA(fyi) WDK(fyi) JCN(fyi); Sub-Collections: NIC;
Clerk: DVN;

ADDRESS User Program

I use ADDRESS all the time, it is really great the way it puts the name in. However, no matter where I point, I can't get two spaces in front of the name. e.g.: TRANSMITTAL TO: Name... Kirk

1

16457 Distribution
N. Dean Meyer,

ADDRESS User Program

(J16457) 14-MAY-73 19:17; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /NDM; Sub-Collections: SRI-ARC; Clerk: KIRK;

Elephant Meeting

Contradictions have been alleged in our description of the elephant. 1
The review meeting will be at 3:00in the project room. 2
A recursive redefinition plan should emerge. 3

16458 Distribution

Michael D. Kudlick, Marilyn F. Auerbach,

Elephant Meeting

(J16458) 15-MAY-73 09:58; Title: Author(s): Guest O. ARC/ARCG;
Distribution: /MDK MFA; Sub-Collections: SRI-ARC; Clerk: ARCG;
Origin: <GUEST>MEMO.NLS;2, 15-MAY-73 09:56 ARCG ;

Elephant Meeting

- Contradictions have been alleged in our description of the elephant. 1
- The review meeting will be at 3:00 in the project room. 2
- A recursive redefinition plan should emerge. 3

16459 Distribution

Michael D. Kudlick, Marilyn F. Auerbach,

Elephant Meeting

(J16459) 15-MAY-73 10:28; Title: Author(s): Guest O. ARC/ARCG;
Distribution: /MDK MFA; Sub-Collections: SRI-ARC; Clerk: ARCG;
Origin: <GUEST>MEMO.NLS;2, 15-MAY-73 10:22 ARCG ;

Reply to Robert Lieberman Questions in (16335,) and sndmsg

I was very pleased to meet with you and your people last week. 1

Sorry to be so slow about answering your Journal message and its questions. 2

Yes, I notice that viewspec t is not shown on the TNLS que card, now that you mention it. Marilyn Auerbach, who made the card, is at Mitre this week, but I'll leave her the note. Hmmm anyway, t means: show first line only as you may already know. Thanks. 2a

New TNLS permits entry into the identification system by: gOTO IDENTIFICATION SUBMODE CA rather than execute identification. 2b

Readmail is a subsystem as is NLS. You can't continue to another subsystem unless you do the following: 2c

As you leave NLS, use the gOTO eEXEC command. This opens a "lower-level" exec for you. Then use readmail and when through, return to the exec (fc). Then use the QUIT command. This puts you back "up" at the higher level exec. Then a continue and you will be back in NLS. 2c1

There is also a command at the exec level: eEXEC that puts you at the lower level exec in a way similar to the goto exec NLS command. Subsequent actions are the same. 2c2

If this does not work for you, let me know. 2c3

Message.txt is a permanent file and is set up so it can't be deleted, although its contents can be deleted. It will then be there when people send you messages. I'll admit its news to me too. But that's what Smokey says. 2d

From your sndmsg question list: 2e

The undelivered mail file stays around in your directory until it is delivered. If you change your mind and want to dump the whole thing, just delete it, otherwise ignore it. 2e1

The F: filename echo thing looks like a bug to me offhand. I'll turn it in to those who can do something. 2e2

We didn't see any printer stuff here as you were trying sendprint..at least I haven't found anyone who did. Yes, a space is needed before typing in a directory and filename like <NSRDC>printfile. if no space first, the default <printer>xxxxxx will be used and it will come out on our lineprinter. I guess you've got it. (?) 2e3

Reply to Robert Lieberman Questions in (16335,) and sndmsg

Viewspec e sets the depth of following b viewspecs to be taken relative to the level of the address you last indicated. Maybe this is what you mean? example print branch .1a CA xeb CA will print two levels in the branch .1a the x having set one line one level, but the levels being subsequently reset by the eb to two levels at that spot.

2e4

Hmmm.. you might be asking if selected statements from some, say, middle levels might be the only ones to print...like suppressing levels higher than the address specified..if so, its not a feature (yet) but might be worth considering. Am I close with my first assumption; second guess, or just not getting your idea?

2e4a

Your journ.nls file: it is not a special thing that I know of. If you had made such a file inadvertently while in NLS and then had left with !C to the exec and then tried to delete and expunge, it may have been kept around by the system since NLS expected you back and was staying ready to load that file for you. Note that NLS keeps tabs on the last 5 files you have been working on and your views in those files..you know, the S for "jump file return" and the @ for "jump file ahead" (familiar?). Is the file finally gone? Hope so. If not clear (haha) let me know. Maybe you really do have a phantom file or something like that.

2e5

16461 Distribution

Robert N. Lieberman, Marilyn F. Auerbach,

JCN 16-MAY-73 08:03 16461

Reply to Robert Lieberman Questions in (16335,) and sndmsg

(J16461) 16-MAY-73 08:03; Title: Author(s): James C. Norton/JCN;
Distribution: /RLL MFA(for info); Sub-Collections: SRI-ARC; Clerk: JCN;
Origin: <NORTON>TOBOB.NLS;2, 16-MAY-73 08:02 JCN ;

bob, say hello if you sign on

1

16462 Distribution
Robert M. Escavich,

(J16462) 16-MAY-73 07:33; Author(s): M. R. Leavitt/MRL;
Distribution: /RME; Sub-Collections: NIC; Clerk: MRL;

Example of Site, etc. Naming Questions

The following message is quoted with my insertions of "sic" for emphasis to indicate some facets of the matter of giving names/numbers/idents to hosts/sites/groups/associates:

Date: 18-APRIL-73 0914
From: WALDEN at BBN-TENEX [sic]
Re: "OFFICIAL" [sic] NAME FOR THE BBN PDP-1D [sic]
cc: TOMLINSON, WALDEN
- - - -

RAY AND JEANNE,
WE WOULD APPRECIATE IT IF YOU'D CHANGE [sic] EVERYTHING YOU HAVE JURISDICTION OVER [sic] SO THE NAME OF HOST 305 (OCTAL) [sic] PRINTS AS BBN-PDP1.[sic]

JEANNE,
PLEASE DO NOT CHANGE OUR GROUP NAME TO BE ANYTHING OTHER THAN BBN-NET.[sic]

16464 Distribution

Richard W. Watson, Elizabeth J. (Jake) Feinler, L. Peter Deutsch,
Charles H. Irby, Michael D. Kudlick, James E. (Jim) White, Nancy J.
Neigus, Alex A. McKenzie,

Example of Site, etc. Naming Questions

(J16464) 16-MAY-73 09:35; Title: Author(s): Jeanne B. North/JBN;
Distribution: /RWW JAKE LPD CHI MDK JEW NJN AAM; Sub-Collections:
SRI-ARC; Clerk: JBN;
Origin: <NORTH>SITEXAMP.NLS;1, 16-MAY-73 08:57 JBN ;

see the mail I sndmsg'd to neumann yesterday. cheers, map

1

16465 Distribution
Perry Gluckman,

(J16465) 16-MAY-73 08:41; Title: Author(s): Michael A.
Padlipsky/MAP; Distribution: /PG; Sub-Collections: NIC; Clerk: MAP;

EXPERIMENTAL DEVELOPMENT OF A
SMALL COMPUTER-AUGMENTED INFORMATION SYSTEM

JBN 2-JUL-73 15:01 16508
SRI-ARC 15 APR 73 16508
Annual Report to ONR

Appendices A-H in hardcopy version include 16737, 11841, 14797, and files

<SIGART>NEWS.NLS;24 dated 16-APRIL-73,

<DOCUMENTATION>SRI-ARC-CSO.NLS;3

<DOCUMENTATION>SERVICE.NLS;1 and NLS;3

and copies of pages from SIGART NEWS, etc.

INTRODUCTION

1

ONR Research Contract N0014-70-C-0302 is a project to develop a small computer-augmented information system designed to serve the intelligence needs of a research and/or development community. The project, called RINS (Research INtelligence System), ended its third year of development on 14 April 1973.

1a

The RINS system is being developed within SRI's Augmentation Research Center (ARC) that pursues a continuing, closely coordinated set of objectives year after year (3906,) (5140,) (8618,) (10045,). Since the beginning of its augmentation system development in 1963, ARC has evolved a sizable set of integrated tools and techniques to support the process of computer-system development, especially the development of systems for increasing the effectiveness of organizations doing complex knowledge work. The experimental prototype system whose development and use serves as ARC's laboratory is a system for augmenting an organization of knowledge workers who specialize in the development of complex information systems. The staff of ARC make extensive use of the experimental system in their everyday work.

1b

For ARC, RINS is an important project in a long-term activity in which all components are being continuously developed. The RINS project is unique and valuable to ARC because in it ARC strives to produce an operating intelligence system to provide its own system developers with the information they need. Based on the ARC community's experience, a system is evolving to provide a larger community of system developers with the information they need to understand their outside world. It is ARC's plan to expand steadily the number of R&D groups among systems developers that interact and collaborate to their mutual advantage through computer network and online services, and to begin to enlist groups that are developing customer-oriented systems in difficult knowledge-work areas.

1c

For the Office of Naval Research, RINS is an investment in the development of a system to aid knowledge workers such as those engaged in ONR-sponsored research to perform their personal work with information and to work with teams, mostly geographically separate, using the computer tools developed in RINS. The tools are designed to increase productivity of researchers, research teams, and others, by allowing them to use a system for handling information, both informal and formal, about their area of work. This should help increase communication among people working on similar problems, stimulating their thinking and reducing unintentional duplication of effort.

1d

RELATIONSHIP OF RINS TO THE KNOWLEDGE WORKSHOP

2

In the total effort to augment the knowledge workshop, many modules are contributed by the RINS effort. However, in giving a summary of progress, the RINS-supported efforts are so fully integrated in the whole ARC activity that there can be confusion in identifying the extent of work attributable directly to RINS. To place RINS-supported efforts in perspective with RINS aims and the entire ARC effort, they may be cast in the following outline, with references to sections of this report.

2a

RINS-Supported Efforts	Section	2b
Intelligence System Studies		
System Developer's Needs	3c2a	
Information Services	3c3a	
People Support Operations Procedures	3c3b	
Intelligence Collection		
NIC and ARC Reference Selection	3c4a	
RINS Literature Searches	3c4b	
Intelligence Processing		
Individual Use of Tools	3c2b	
Catalog Support System	3c1a	
Intelligence Storage		
Online Files and Their Updates	4b	
Intelligence Retrieval		
Query Language	4a	
LOCATOR Design	4c	
Thesaurus Study	3c4c	
Intelligence Dissemination		
Announcement Bulletins	4d	
Design of Online Journals, ARPANET NEWS and SIGART NEWS	4e 4f	

SUMMARY OF RINS ACTIVITY

3

ARC proposed the following tasks for its third year of development:

3a

(1) Adding to and modifying computer aids that will be used to support RINS processes.

3a1

(2) Continued integration of RINS data base and tools into the working life of ARC researchers and selected Network users.

3a2

(3) Continued development of augmented management and operations techniques for running the research intelligence process.

3a3

(4) Adding to its developing research intelligence data base over a limited subject domain.

3a4

In each of these general tasks a substantial degree of progress was achieved. As in previous years, and in conformance to our "bootstrapping" strategy, the particular timely needs of the ARC and its network communities suggested the specific areas in which development took place. In the first year of RINS project activity, the emphasis was on the development of information-handling tools, preparatory to offering them to a user community (8616,). These tools included: special catalog files with structure and syntax conventions; special computer processes for analyzing, collecting, sorting, and formatting the information extracted from the files; and methods for producing hardcopy listings and indexes. During the second year the greatest RINS effort went toward the development of management systems for acquiring, coding, storing, and manipulating information. The second year saw the development of the Catalog, with programs for indexes. It also saw procedures developed for the unconventional clerical operations that were needed for the development of an online information center (10045,)

3b

During this third year the emphasis was on provision of prototype online information services. In a following section the particular information services provided are described. First, a report on activity in the four general task areas is given here.

3c

(1) Adding to and modifying computer aids that will be used to support RINS processes.

3c1

Catalog Support System

3c1a

The Catalog Production Processor underwent further

development, refinement, and use in the current year. As described in the previous year's report (10045,), the Processor is being designed to allow the production of online and offline, and incremental and cumulative, indices and lists of various kinds, using the Master Catalog data base (14537,)

Three editions of the Current Catalog of the NIC Collection, as well as numerous revisions of the Directory of Network Personnel, were run using the CPP.

Following the year's experience with the growing Master Catalog and the use of the Catalog Production Processor, a reevaluation of the entire catalog production design is under way. The limitations of the present computer system for handling the expanding Catalog files have caused ARC to start a study of alternative means for catalog production (15078,)

Closed Circuit TV for Meetings

3c1b

The recent acquisition of a camera and projector for closed circuit TV has offered a new potential for RINS activity. The new equipment has been found useful for demonstrations to large groups, and for small ARC meetings. A file can be constructed containing the agenda and can be projected for information and to form an outline for recording the transactions. During the meeting, facts presented and conclusions reached may be input and edited to record the discussion and reflect the opinions of the attendees. This was found to be a very satisfactory means of focusing on the questions to be handled and of recording consensus in a realtime mode that allows for immediate verification or correction (13579,)

Shared Screen

3c1c

A highly useful tool for RINS dialogue was regained (it had been developed for the previous computer) in the shared screen capability. A user at a display can view the same text simultaneously with another user across the country and can share the operations to be performed on files thus seen. This capability is a tremendous step forward in the stimulation of collaborative creation and use of research intelligence.

(2) Continued integration of the data base and tools into work of knowledge workers.

3c2

RINS Study of System Developers' Needs

3c2a

During the year, the RINS effort was responsible for several preliminary studies of needs of the community and means of satisfying them (10806,) (11331,) and (16737,). (Report 16737 appears as Appendix A).

Application of Tools to One Worker's Information Needs

3c2b

During the year, the Hardware Director of ARC's Computer Service Operations made extensive use of the ARC text-handling tools to keep his records. He created files of information and indexes to his records, into which he could immediately record new information and from which he could immediately obtain references and retrieve the information recorded. He designed the files to suit his needs, using the NLS features for both entry and retrieval and the Query Language for an alternate means of retrieval.

The design and extent of the use of ARC tools by this knowledge-worker can be briefly indicated by the copies of some of his files that are included as Appendix H.

Application of Tools to Work of a Group, at NSRDC

3c2c

In its network activity, ARC has succeeded in having its tools used by various groups. Of particular interest to ONR might be the experience of Naval Ship Research and Development Center in using the text preparation capabilities offered at ARC.

Two NSRDC people who had become aware of NLS text-editing capabilities made a rush request for user documentation to enable them to train a staff and have the staff prepare an important report within a two-week period. The hardcopy documentation was slow to reach them, but in the meantime the staff plunged ahead. ARC members who noticed the heavy weekend activity of the NSRDC users on the ARC system assisted the NSRDC staff by online tutoring. The production of the report exemplified the usefulness of ARC-developed RINS tools in the work of a geographically distant community of researchers.

ARC User-Prepared Programs

3c2d

Several ARC members who are not programmers adapted NLS program features to produce high-level user programs for preparation of indexes and bibliographies, preparing formatted letters, and the like (14603,) (12119,).

(3) Continued development of augmented management and operations techniques for running research intelligence processes.

3c3

Study of Information Services

3c3a

ARC has made a preliminary review of other operating bibliographic systems and has formulated a set of questions to guide further work on this project.

Visits were made to several sites to learn about and to use information handling systems in operation at these sites. ARC internal documents (11779,) and (10806,) were prepared as RINS efforts.

Design of People Support Operations Procedures

3c3b

ARC has continued to improve working procedures for handling acquisition and input of RINS information items. Some RINS conventions have been established for integration of the ARC Journal and for gathering intelligence information.

Procedures designed for the People Support Operations (13037,) are directed at meeting the needs of RINS in these areas. They include secretarial, clerical, documentation, and library type operations. ARC Journal indexing programs are designed to facilitate retrieval from online files of messages as well as retrieval of citations. These efforts are mainly RINS supported, with benefit to all ARC projects.

(4) Data base development.

3c4

Using the coding manual and procedures developed earlier, and refining them as practical, an ARC cataloger coded, abstracted, and entered into the online data base about 600 documents of all types. (10937,) (10923,). About 400 citations were added as a result solely of RINS activity.

3c4a

Literature searches, at hourly cost, were performed by SRI library personnel on RINS-related subjects of man-machine interface, management information systems, and computer network systems, yielding about 1000 items. From these, valuable items are being selected, acquired and cataloged. These items were selected solely on the basis of RINS interest.

3c4b

Work was started on analysis of the vocabulary that had been used in the supplying of subject terms (keywords) by agencies that produce or distribute formal reports cataloged at ARC, and of the vocabulary that had been used at ARC in assigning subject terms to documents for later retrieval. ARC has been inserting the subject terms into the online record of a document exactly as the terms were recorded in the document or as they occurred to the ARC Cataloger. Now that the data base is of significant size, it is time to study the vocabulary used, to start to set up for these terms an authority file with cross-references. An authority file of subject terms is the tool that allows a person assigning subject terms to an item to refer to previous assignment practices. This reference to previous practice gives consistency to subject term assignment and in turn allows a person to retrieve items on a subject with some consistency.

3c4c

ONLINE INFORMATION SERVICES

4

Query Language

4a

ARC had been aware for some time of the place in a Research Intelligence System for a simple but powerful retrieval language, one that would allow a novice user to gain quick access to highly structured data bases without his being required to know the structure. The International Conference on Computer Communications (ICCC) in Washington in October 1972, attended by many foreign computer scientists, offered an incentive to the development of such a system designed for access by teletype.

4a1

Query Language at ICCC

4a2

At the ICCC users with no experience with the ARC text-handling system NLS were given access to highly structured files prepared in NLS and were led by instructions to retrieve specific paragraphs of information. The data base was of interest to the users because it contained the Network Resource Notebook, with outline descriptions of Sites on the Network.

4a2a

NIC/Query in 1973

4a3

A second version of Query has been released with the following features:

4a3a

i) Any person logging into SRI-ARC can enter the system by typing NIC and a carriage return. A simple response gives him directions and options.

ii) It enables users to load any NLS file through the "bring" command.

iii) The Network Resource Notebook, consisting of a number of files of information on resources available on the Network, can be "brought" into view by typing the letter R, the ARPANET NEWS can be brought by the letter A, and so forth. A directory of less-frequently used files can be accessed by typing the letter D. The directory gives further instructions in using the data bases.

iv) When the user is in need of further instructions in the use of the language, he can type a question mark to obtain a complete description of commands.

v) Whenever a file is "brought", a jump is executed to the first statement in that file. Here a data base administrator can place instructions to the user to lead him in use of the file.

vi) A template is always given to the user so that he is aware of the structure below the present level. However, any statement more than one level down from a named statement is invisible to online users. This allows the masking of long textual information.

NIC/Query for ARPANET NEWS

4a4

The Query language is ideal for Network users to access the current issue of the online periodical ARPANET NEWS without needing to know the issue's date or having knowledge of any user language. A description of the NEWS and its access in Query, in NLS, and in hardcopy is given in a later section.

4a4a

NIC Online Files

4b

The files of reference citations and of membership in various groups have long been accessible online but until recently the online versions were identical to the hardcopy that was generally available.

4b1

It is not now, and is not likely to be, feasible to issue hardcopy of a directory or index every time a change is made to the file. The advantage of online files is that they may be kept current, by the day or hour if desirable.

4b1a

In the last few months the goal was achieved of keeping lists of documents issued in series by groups (for example the Speech Understanding Research Group) current with the latest issuance.

4b2

Group membership lists also are now kept up-to-date for online reference.

4b3

LOCATOR

4c

To simplify reader access to the many useful online files now generated at ARC, an index-like file was created that contains links to many files, allowing easy scanning of the files available and quick loading of the files selected. This file, called LOCATOR, requires use of NLS and rewards the users with great maneuverability in the files accessed. It has many user-tutorial features.

4c1

Announcement Bulletin

4d

Two issues of an Announcement Bulletin of new documents cataloged at the NIC were prepared and distributed in hard copy to 150 Network members and associates. These bulletins were issued on a monthly schedule starting in February 1973. The text for these bulletins is prepared by programs used to produce the document catalogs. Each bulletin is actually a number listing, with abstracts, of formal documents of Network interest held in the collection at ARC.

4d1

The response to the issuance of this Bulletin has been a stream of requests for the documents listed. These requests are frequently sent online.

4d2

ARPANET NEWS

4e

Among the tools clearly needed by a knowledge-working community is an online publication medium that serves as the computer-augmented counterpart of the traditional professional journal.

4e1

This year, under RINS activity, two experimental online publications were designed. These were developed independently, one for ACM SIGART group and the other for the ARPANET. Each was tailored for its expected readership and had its particular editorial philosophy.

4e2

Although inaugurated to reach the ARPANET community, the ARPANET NEWS was designed as a prototype for an online news service for any research community. It is still in the process of development, and may continue so for some time, as the mode of operation suggests further capabilities not foreseen. At the present time, the ARPANET NEWS has these characteristics:

4e3

(1) Online Editorial Direction

4e3a

The joint editors, at MITRE and at ARC, communicate frequently, and almost entirely, through Network Send Message, through online links, and through the NIC Journal.

(2) Online Manuscript Submission

4e3b

All material submitted for publication is received online, in NLS or in TECO.

(3) Online Editing

4e3c

All editing is performed with NLS text manipulation.

(4) Online Publication

4e3d

Each monthly issue takes shape at NIC in a public file, that is easily loaded and read by anyone on the network. Many people do look at it in this form, as evidenced by comments and corrections received before the issue has been announced as published.

The issue is prepared in two forms: one file for access by Query language and one file for access from NLS for consecutive printout on a teletype or lineprinter. (See Appendices C and D).

Through the Query language, the reader can turn to a particular section (the feature articles for example) by a one-letter and a three-letter command, and browse through the headlines until he sees something of interest. He can then retrieve the item by statement name.

Through NLS, the reader sees a version formatted slightly differently, that he can browse through, but that is intended for printing out by main section or in its entirety. An announced file contains the cover and masthead, for those who want to print the complete NEWS on a lineprinter for reproduction and large-scale distribution.

Online updates are inserted in separate sections as the news is received, and this news is incorporated in the next issue.

SIGART NEWS

4f

The SIGART News of the ACM Special Interest Group on Artificial Intelligence was a successful, highly regarded hardcopy journal that its editor wished to augment by online preparation and production. ARC volunteered the online storage space, the tutoring to show the editor what could be produced, and the experienced staff to input the text in a form that would produce a reasonably attractive printout master for publication by ACM.

4f1

An unusual feature designed for this publication is the capability to attach comments to existing articles, so that online readers can learn what additions, corrections, and so on, that other readers have made. This is accomplished by a program that accepts a comment sent by an online correspondent,

formats it and places it at the end of the actual article.
Further plans for the publication include the encouragement of
online submission, online access, and comments.

4f2

SUMMARY OF INVESTIGATION PLANNED FOR COMING YEAR

5

In moving toward the building of a Research Intelligence System, ARC will concentrate during the coming period on two specific subobjectives:

5a

Primary Subobjective

5a1

Development and study of conventions to enable individuals and working teams to input, modify, and retrieve items of research intelligence using a system involving people and computer support, particularly ARC's Journal system and catalog management system. Sources of these items will include: visit reports, conversation records, working notes, clippings, correspondence, books and papers, and marginal comments. An important part of this objective is the training and study of users so as to create a system adapted to their and the project's day-to-day work needs.

5a1a

The effectiveness of the input and retrieval features of the experimental ARC systems, as used by ARC and other system developers, will be studied.

An associated study of known user-controlled file systems will be made, to compare their features with those developed for RINS.

Related Subobjective

5a2

The design of an integrated interface to publicly available data bases of interest to system developers: abstracting publications and services, information clearing houses, information center data bases, and research libraries.

5a2a

Means will be explored of integrating the intelligence records created by individuals and teams with the resources of large institutional data bases. One goal is to integrate into the intelligence system a methodology for effective utilization of outside sources of information; no research group wanting to use a RINS can afford to duplicate research work of others. Another goal is to allow the user to draw on the bibliographic or data entry work of others to eliminate repetitive effort in entering intelligence references to a data base.

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Appendices

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

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

Appendix C: ARPANET NEWS via the Query Language

Appendix D: ARPANET NEWS via IYY

Appendix E: ARPANET NEWS in Hardcopy

Appendix F: SIGART NEWSLETTER instructions

Appendix G: SIGART NEWSLETTER in Hardcopy

Appendix H: CSO Indexes

EXPERIMENTAL DEVELOPMENT OF A
SMALL COMPUTER-AUGMENTED INFORMATION SYSTEM

JBN 2-JUL-73 15:01 16508
SRI-ARC 15 APR 73 16508
Annual Report to ONR

(J16508) 2-JUL-73 15:01; Title: Author(s): Jeanne B. North/JBN;
Sub-Collections: SRI-ARC; Clerk: KIRK;
Origin: <NIC-WORK>ONR73.NLS;36, 20-JUN-73 01:57 JBN ;

Requesting Tom to review our writeup of his 3 May ARC visit

Tom: I decided to send both a Journal message and a SNDMSG this time. As you can see from the history below, the SNDMSG mail system finally told me that you weren't there at USC-ISI; so this time I'll try SNDMSG to you via SRI-ARC. (I had thought tha all ARPA guys were using ISI for their SNDMSG traffic.)

Net mail from site USC-ISI (to Engelbart) rcvd at 15-MAY-73 20:59:01

Date: 15-MAY-73 1209
From: MELVIN at USC-ISI
Re: MisAddressed Mail
- - -

Doug, the following message arrived here and we have no such user as O'Sullivan.

10-MAY-73 13:29:16,824
Net mail from site SRI-ARC rcvd at 10-MAY-73 13:29:12
This mail mis-addressed to O'SULLIVAN

Date: 10-MAY-73 0939 [To O'Sullivan from Engelbart]
From: ENGELBART at SRI-ARC
Re: Your checking over the log of your ARC visit
- - -

Tom: I'd like to have your approval of my "Journal Log" of your 3 May visit here, before I journalize it. Enter NLS, do "Print Branch (engelbart, log, o'sullivan: wymJ) CA CA" and you will get it printed out, with statement numbers so you can cite them if you want to come back with specific comments. (Ask us for help if it doesn't work). Give me a SNDMSG or Journal acknowledgement of this message, and I'll wait a reasonable time for you to execute the review. O.k.?? We enjoy your visits, and are very much hoping the CBI Community things mature well. Best regards, Doug.

you can use RSEXEC to find out what TENEX sites (if any) O'Sullivan is located and then SNDMSG to him.

/john
----- (end of returned-message string)

Requesting Tom to review our writeup of his 3 May ARC visit

And so, Sir Thomas, I shall still be waiting to hear from you.
Doug (again)

3

16626 Distribution

Thomas O'Sullivan, Dirk H. Van Nouhuys,

Requesting Tom to review our writeup of his 3 May ARC visit

(J16626) 16-MAY-73 09:55; Title: Author(s): Douglas C. Engelbart/DCE
; Distribution: /to dvn ; Sub-Collections: SRI-ARC; Clerk: DCE ;

Novice/Expert Items to be Reviewed

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

Novice/Expert Items to be Reviewed

The Novice/Expert Design Team has generated this list of miscellaneous items for your review.

Command Language Changes

CHI is preparing a paper on fairly extensive planned modifications.

In addition to those, we have these:

1. Move "Insert Command Form" out of the Journal system and into regular NLS. We suggest I<nsert> J<ournal Command Form> as the new command.

2. We have had fairly extensive discussions on Substitute. Please note CFD's recent changes in <rel-nls>xnls which he documented recently in the Journal. Try it out and give him feedback.

3. TNLS help needs a little work. The subsystem you are in should always be typed out when you request help (?) at the top command level of a sub-system. Also, CHI's recent TNLS prompts (A:, T:, etc.) need explanation at the top command level help.

4. We want to try leaving the message area's last message up until it gets rewritten or cleared out through the normal mechanism - just as an experiment. People seem to be disturbed by

the need for the "--type CA" following messages like "Bad file", etc. (The system wants to be sure the user sees the message.)

the fact that some messages disappear anyway before you see them

DNLS Help

We propose allowing the DNLS user to type a '?' at the top command level and be popped into a Query-driven system where "SHOW" is the only command and the data base contains explanations of command syntax and perhaps some other useful information, such as what to do about certain error messages,

Ultimately, in MPS, we want to be able to arm the '?' character in such a way that the user may type it no matter where he is stuck or confused and the system can be smart about his exact state and feed him very relevant information. CFD has spoken to us about

Novice/Expert Items to be Reviewed

this and it appears that it is being kept in mind as they design the new parsing apparatus.

3b

In the meantime, we hope to provide meaningful assistance to the novice who is willing to enter SHOW commands to get information.

3c

EXEC Help

4

MDK is working on a data base for this new proposed Query-driven system, accessible from the exec as Nic-Query is.

4a

16627 Distribution

Elizabeth K. Michael, Richard W. Watson, James E. (Jim) White,
Charles H. Irby, Dirk H. Van Nouhuys, Marilyn F. Auerbach, Michael D.
Kudlick,

Novice/Expert Items to be Reviewed

(J16627) 16-MAY-73 13:35; Title: Author(s): Diane S. Kaye/DSK;
Distribution: /EKM RWW JEW CHI DVN MFA MDK; Sub-Collections: SRI-ARC;
Clerk: DSK;
Origin: <KAYE>NEREVIEW.NLS;2, 16-MAY-73 13:19 DSK ;

Origin Statement in Author Branch

Alex-- I showed your screwed-up-initial-file listing to Dave Hopper (JDH) (the Journal man). He doesn't really understand, though it's possible that your initial file could be left in such a state if the system crashed or a hardware failure occurred during on-line Journal delivery. The probability of that's happening is increased now that Journal delivery happens every hour.

1

16628 Distribution

Alex A. McKenzie, J. D. Hopper,

Origin Statement in Author Branch

(J16628) 16-MAY-73 13:22; Title: Author(s): James E. (Jim)
White/JEW; Distribution: /AAM JDH; Sub-Collections: SRI-ARC; Clerk: JEW;

BTNLS

Dirk--

A class size of 8 (which I think is the maximum we can handle in terms of hardware) would allow BBN only six people if my arithmetic is correct. I have a list of 18 (eighteen) people who want to take the class, including 11 from Sutherlands group. I don't think there will be any more since today is the last day they can tell me if they want it. None of them have trouble with June dates. Implication: I am going to have alot of trouble cutting out two thirds of them. It would be a bit easier if I could give them ome idea of when you would be back again for a second class.

Then there is the question of picking out "the most deserving". Do you have an algorithm for that? Would you like to tell it to me, or do I muddle through this myself? I may turn the list and the job over to you if it is too much of a hassle for me. I will wait till the end of the week to hear from you on this before I pick up the hatchet.

--Nancy

1

16629 Distribution
Dirk H. Van Nouhuys,

BTNLS

(J16629) 16-MAY-73 14:01; Title: Author(s): Nancy J. Neigus/NJN;
Distribution: /DVN; Sub-Collections: NIC; Clerk: NJN;

Part 1B of a response to NIC#16375

1 2) There is one problem with the text of the second paragraph of Appendix A if one takes Jim's point of view about the definitions of site and Host. Namely, the last sentence, which begins "Site locations shown" should be changed to "Host locations shown". I will try to remember the change the next time 1822 is published.

3) In the not-too-far-distant future the Network Address field of Host-to-IMP and IMP-to-Host messages is going to get bigger. We can see the day coming when the network will have more than 64 sites and we MUST expand the number of bits used for addressing sites. This is all bound up with RED work going on regarding "area routing" (at the IMP-to-IMP level) but will probably happen in 1973. In addition, the High Speed Modular IMP is supposed to allow lots more than 4 hosts (64?) so the Host number field will get larger as well. You might as well be aware that this is going to happen.

4) We have tried to let the network community know about forthcoming installations via 1822; perhaps we should let the NIC know directly when we know that a new machine is installed. There are two cases. We know exactly when an IMP or TIP

1

1 16630 Distribution

1

1a Richard W. Watson, Elizabeth J. (Jake) Feinler, L. Peter Deutsch,
Charles H. Irby, Michael D. Kudlick, Jeanne B. North, James E. (Jim)
White,

1a

Part 1B of a response to NIC#16375

(J16630) 14-MAY-73 06:45; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /RWW JAKE LPD CHI MDK JBN JEW; Sub-Collections: NIC;
Clerk: AAM;

Letter to Judy Clapp

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

Judy Clapp
Mitre Corp.
Box 208
Bedford, Mass. 01730

Dear Judy:

I'm expecting to talk with you and John Morgenstern in New York City on Tuesday, 5 June 1973, 10 a.m. at a place you designate. I will be staying at the New York Hilton. 1

The topic of John's current interest there at Mitre, "Crisis Management" (if I got the terms straight in your phone call) is one that I have often thought about in extropolating our augmentation system on into the future. You mentioned such an instance as a very high level decision maker, in a time of crisis, who may be faced with extremely critical needs to access information, confer with people, analyze situations, assess alternatives, etc.; yes, to take a thorough systematic approach to support and training for such a case would be to my mind a very significant way to advance the state of knowledge about augmenting people. We'd be pleased if any of our developments were useful. Also, I will look forward to telling you about the collaborative-framework that we are setting up for supporting special-application experiments. It might even be feasible for John's project to consider exploring some sort of direct utilization of our techniques, on your site, by means of the Utility service that we are establishing -- see references (12445,), (13537,), and (14724,). 2

Sincerely,

D. C. Engelbart, Director
Augmentation Research Center

kfb

Clapp/Engelbart

Page 1

Letter to Judy Clapp

P.S. I am sending the following documents:

- 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.) 4a
- D. C. Engelbart, "Intellectual Implications of MULTI-ACCESS COMPUTER NETWORKS", A paper for the Proceedings of The Interdisciplinary Conference on Multi-Access Computer Networks in Austin, Texas, April 1970. (XDOC -- 5255.) 4b
- D. C. Engelbart and Staff of Augmentation Research Center. "Advanced Intellect-Augmentation Techniques", Final Report, July 1970. (XDOC -- 5140.) 4c
- D. C. Engelbart, "Network Information Center and Computer Augmented Team Interaction", Technical Report, June 1971. (XDOC -- 8277.) 4d
- 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 -- 12445.) 4e
- D. C. Engelbart, SRI-ARC SUMMARY for IPT CONTRACTOR-MEETING, summary report of work done at ARC during 1972. (Journal -- 13537.) 4f
- 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.) 4g

16631 Distribution

Bonnar Cox, David R. Brown, Richard W. Watson, James C. Norton, Duane
L. Stone,

Letter to Judy Clapp

{J16631} 16-MAY-73 15:40; Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /BC DRB RWW JCN DLS; Sub-Collections:
SRI-ARC; Clerk: KFB;
Origin: <ENGELBART>CLAPPLETTER.NLS;3, 16-MAY-73 15:19 DCE ;

ADDRESS: after two spaces

If you bug the second of two spaces, ADDRESS will put the name after that second space. Normally, it puts it after the bugged visible.
Dean

1

16633 Distribution
Kirk E. Kelley,

ADDRESS: after two spaces

(J16633) 16-MAY-73 14:47; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /KIRK; Sub-Collections: SRI-ARC; Clerk: NDM;

elephant meeting

CONTRADICTIONS have been alleged in our description of the ELEPHANT.	1
The review meeting will be at 3:00 in the project room.	2
Only wise, blind men should attend.	3
A recursive redefinition plan should emerge.	4
(one) twinkle, twinkle	5
(two) Little star	6
(Three) How I Wonder	7

16634 Distribution

Michael D. Kudlick, Marilyn F. Auerbach,

elephant meeting

(J16634) 17-MAY-73 12:33; Title: Author(s): Alfred Bork/AB;
Distribution: /MDK MFA; Sub-Collections: NIC; Clerk: AB;
Origin: <GUEST>MEMO6.NLS;4, 17-MAY-73 12:17 AB ;

TELEGRAM

WOW IT FINALLY WORKS

16635 Distribution
Marilyn F. Auerbach,

TELEGRAM

(J16635) 17-MAY-73 13:35; Title: Author(s): Alfred Bork/AB;
Distribution: /MFA; Sub-Collections: NIC; Clerk: AB;