AAM 29-AUG-73 05:39 18701

London site

Vint,
Wrong again. London will be site 42, as per the most recent revision of BBN Report 1822. See you in Sussex
Alex

1

London site

(J18701) 29-AUG-73 05:39; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /VGC; Sub-Collections: NIC; Clerk: AAM;

AAM 29-AUG-73 05:50 18702

Response to a SNDMSG from RADC

Dear Mr. Bair,
I apologize for not sending a message to RADC on Monday morning, August 27, reminding your personnel that Tuesdays are release days. On the other hand, our records show that both RADC and SRI were up and operating correctly from 8am (Eastern Time) on. While I understand your frustration, there is little we can do ex post facto to help diagnose the causes of your trouble. The next time it occurs, would you call Nancy Neigus at the Network Control Center and perhaps we can make some progress.
Regards,
Alex McKenzie

1

AAM 29-AUG-73 05:50 18702

Response to a SNDMSG from RADC

(J18702) 29-AUG-73 05:50; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /JHB NJN; Sub-Collections: NIC; Clerk: AAM;

Net Host Connection Problems -- continued.

For your information -- edification.

Net Host Connection Problems -- continued.

The following is BBN's (Neigus) response to SRI's comment (18642,) about the continuing problem of broken and silent connections. Thanks for your pointer to ILA's message (journal.17838,). It does make sense but is not related to the problem Bair is experiencing. When the load averageis high, the NCP is slow to respond to incomipg RFC's (requests for connection). The TIP has a timeout of about 30 seconds (to receive a responce to the RFC) and if it doesn't come by then, it times out and aborts the login attempt. Most hosts have longer timeout periods in their user Telnets, and the connection attempt is often successful there. The TIP timeout is sufficient for most hosts at most times, but a high load average on a TENEX can cause trouble. One way to get around this on a tip is to do a series of login attempts ina row, until one matches.
--Nancy

1

Net Host Connection Problems -- continued.

(J18703) 29-AUG-73 11:23; Title: Author(s): James H. Bair/JHB;
Distribution: /RADC; Sub-Collections: RADC; Clerk: JHB;

JLM 29-AUG-73 11:29 18704

This is the prop as it now stands .In view of my ESD bit,though i have decided to be proactical and live in clinton.We should get together and make a cut.

The following is a cut at a break out of the su propose effort. 1

Associative processing 2

Feng	160k	2a
APL/Foster	28k	2b
Berra/dms	45k	2c
rudolph	40k	2d
	273k	2e

Software Reliability 3

reynolds	45k	3a
	75k	3b
	120k	3c

DMS Modeling 4

Sargent	45k	4a
	30k	4b
	75k	4c

MIscellaneous 5

pattern reco	28k	5a
Admin/cons	58k	5b
	86k	5c

554k 6

(J18704) 29-AUG-73 11:29; Title: Author(s): John L. McNamara/JLM;
Distribution: /FJT; Sub-Collections: RADC; Clerk: JLM;
Origin: <MCNAMARA>SU.NLS;1, 29-AUG-73 11:04 JLM ;

MTB 29-AUG-73 13:06 18709

Ident change

Marcia -- There has been a minor error in creating an ident. Could you please delete MTB. It has been superceded by MDB (different middle initial). 1

MTB 29-AUG-73 13:06 18709

Ident change

(J18709) 29-AUG-73 13:06; Title: Author(s): Marshall T. Buck/MTB;
Distribution: /MLK; Sub-Collections: NIC; Clerk: MTB;

ISO document request

<MJOURNAL>18710.NLS;1, 29-AUG-73 15:43 XXX ; Title: Author(s):
Vinton G. Cerf/VGC; Distribution: /IWC; Keywords: f; Sub-Collections:
NIC: Clerk: VGC:
Origin: <SU-AI>CONNTON.TXT;1, 29-AUG-73 14:56 VGC ;

VGC 29-AUG-73 14:59 18710

ISO document request

(J18710) 29-AUG-73 14:59: Title: Author(s): Vinton G. Cerf/VGC;
Distribution: /IWC; Keywords: f; Sub-Collections: NIC; Clerk: VGC;
Origin: <SU-AI>CONNTON.TXT;1, 29-AUG-73 14:56 VGC ;

MDK 29-AUG-73 15:28 18711

Review Meeting on HELP Documentation

Proposed Meeting Time: Thurs 30-Aug 2:00 PM

Review Meeting on HELP Documentation

To DVN/NDM/DSK:

After reviewing the current state of the HELP system documentation efforts, Dirk and I agreed that the four of us should meet to discuss several items that need decisions.

These include the syntax, and some aspects of notation and of command categories.

The question of syntax is in two parts: should the syntax used for the HELP system be the same as that used by CHI and CFD for the NLS system programmers' use; and what would we like the syntax to be, from the point of view of users of HELP?

The questions of notation and of command categories are perhaps not as difficult as those of syntax, but there are some parts that need review and decisions, such as the use of SID's rather than statement names in links, the notation for "spaces" and "addresses", how to designate "options" to the user, and the like.

I propose that we meet on Thursday 30-Aug at 2 PM in the Parsley room.

Please let me know if you can't make it ... Mike.

MDK 29-AUG-73 15:28 18711

Review Meeting on HELP Documentation

(J18711) 29-AUG-73 15:28; Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /DVN NDM DSK; Sub-Collections: SRI-ARC; Clerk: MDK;
Origin: <KUDLICK>MEET.NLS;2, 29-AUG-73 11:35 MDK ;

WRF JCN 29-AUG-73 16:20 18712

CURRENT GROUP ALLOCATIONS AND ASSIGNMENTS

This article reflects changes in assignments and allocations which Jim and I have decided upon in the past week. It is another attempt to bring the number of users within a limit which will allow reasonable (??) system response.

CURRENT GROUP ALLOCATIONS AND ASSIGNMENTS

INITIAL ALLOCATIONS 1

The Groups: 1a

THE WORLD	All non-allocated login directories	1a1
SYSTEM JOBS	System utility jobs	1a2
NIC USERS	NIC users less ARC Staff	1a3
RADC	Rome Air Development Center	1a4
STAFF	ARC Management and other staff	1a5
PSO	People Support Operation	1a6
NIC STAFF	Network Information Center -- ARC Staff	1a7
FACILITY	ARC Hardware and Operators	1a8
PROGRAMMERS	ARC TENEX and NLS Programmers	1a9
XEROX	Collaborating Xerox Staff	1a10
DOCUMENTATION	ARC Documentation Processes	

d 1a11

INITIAL GROUP ALLOCATIONS: 1b

Groups	5am-8	8am-2pm	2-5am (Pacific Time)	
WORLD	0	0	0	1b2
SYSTEM JOBS	5	5	5	1b3
NIC USERS	7	4	2	1b4
RADC	5	2	0	1b5
STAFF	1	2	2	1b6
PSO	1	1	2	1b7
NIC STAFF	0	2	2	1b8
FACILITY	1	0	0	1b9
PROGRAMMERS	1	4	7	1b10
XEROX	0	1	1	1b11
DOCUMENTATION	1	1	1	1b12
	--	--	--	1b13
Totals:	22	22	22	

1b14

It important to note that these are the "guaranteed" allocations to groups. Much of the time, individual groups will have more users logged in than these allocated slots indicate, due to the OFFQUOTA and EXPRESS (elog) features of the allocation system. Again, see (16824,1) for details. 1b15

(SYSTEM JOBS)
SYSTEM
PRINTER
BACKGROUND

(STAFF)

DCE	Doug Engelbart
DVN	Dirk van Nouhuys
JCN	Jim Norton
PR	Paul Rech
RWW	Dick Watson
SRL	Susan Lee

(PSO)

BAH	Beau Hardeman

(user guides, groups)

CURRENT GROUP ALLOCATIONS AND ASSIGNMENTS

KIRK	Kirk Kelley
???	Jeanne Leavitt
MEJ	Mil Jernigan
(NIC STAFF)	
CBG	Carol Guilbault
EJF	Jake Feinler
JBN	Jeanne North
JDC	Judy Cooke
MDK	Mike Kudlick
MLK	Marcia Keeney
NIC-WORK	
NETINFO	
(FACILITY)	
EKV	Ed Van De Riet
JCP	Jeff Peters
JR	Jake Ratliff
MAB2	Mark Beach
MEH	Martin Hardy
OPERATOR	
(PROGRAMMERS)	
CFD	Chuck Dornbush
CHI	Charles Irby
DCW	Don Wallace
DIA	Don Andrews
DSK	Diane Kaye
EKM	Elizabeth Michael
HGL	Harvey Lehtman
JDH	Dave Hopper
JEW	Jim White
KEV	Ken Victor
WRF	Bill Ferguson
(XEROX)	
CMG	Chuck Geschke
EHS	Ed Satterthwaite
JGM	Jim Mitchell
LPD	Peter Deutsch
RES	Dick Sweet
(RADC)	
DAL	Dave Luther
DFB	Dean Bergstrom
DLD2	David Daughtry
DLS	Duane Stone
DVA	Donald Van Alstine
EJK	Ed Kennedy
FJT	Frank Tomaini
FPS	Frank Sliwa
FSL	Frank LaMonica
GAB	George Borden
JHB	Jim Bair

CURRENT GROUP ALLOCATIONS AND ASSIGNMENTS

JLM	John McNamara
JPC	Joe Cavano
JRS	Josephine Stellato
JWJ	John Johnson
MAW	Mike Wingfield
MDP	Marcelle Petell
RAL	Ray Liuczi
RBP	Roger Panara
RC2	Richard Calicchia
RED2	Robert Doane
RFI	Rocco Iuorno
RHT2	Richard Thayer
TFL	Tom Lawrence
TJB2	Tom Bucciero
WER	William Rzepka
WPB	William Bethke

(DOCUMENTATION)

NDM	Dean Meyer
JMB	Jeanne Beck
CAT	
DOCB	
DOCUMENTATION	

(NIC USERS)

Individual assignments to the NIC group are made by ARC Operating System people coordinating with the NIC staff.

CURRENT GROUP ALLOCATIONS AND ASSIGNMENTS

(J18712) 29-AUG-73 16:20: Title: Author(s): Ferg R. Ferguson, James C. Norton/WRF JCN: Distribution: /SRI-ARC JIMB; Sub-Collections: SRI-ARC: Clerk: WRF:
Origin: <FERGUSON>F17248.NLS;3, 29-AUG-73 16:10 WRF ;

JAKE 29-AUG-73 17:01 18713

Syntax conventions

I notice that you are calling a meeting of the HELP group to discuss the problem of syntax...again. This has been batted around many times and it was my understanding that there were syntax rules set down that all were supposed to (but don't) follow. If these are going to be changed I would like to know about it because it affects the whole structure of the Resource Notebook. Thanks, JAKE 1

Syntax conventions

(J18713) 29-AUG-73 17:01; Title: Author(s): Elizabeth J. (Jake) Feinler/JAKE; Distribution: /MDK; Sub-Collections: SRI-ARC; Clerk: JAKE;

EJK 30-AUG-73 07:58 18716

Jim Bair's finale

Capt Bair will be making a summary and status report on his findings in the evaluation to-date. Mac' office 1500 30 Aug. Too bad if you don't log in and get your mail - you missed it. 1

18716 Distribution

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,

EJK 30-AUG-73 07:58 18716

Jim Bair's finale

(J18716) 30-AUG-73 07:58; Title: Author(s): Edmund J. Kennedy/EJK;
Distribution: /RADC: Sub-Collections: RADC; Clerk: EJK;

AAM 30-AUG-73 08:49 18717

Network is sometimes better than US Mail

Dear Jeanne and Marcia.
I just received a fat airmail package from the NIC containing about 18 copies of each of the May, June, and July newsletters. As soon as the online (as opposed to Query) version of any newsletter is available. I list it on our TIP's lineprinter many times and give a copy to each of the people on our internal distribution list. Therefore. you can save a lot of postage, and reproduction cost. in the future if you don't send copies to me by mail any more.
Regards.
Alex McKenzie

1

18717 Distribution
Marcia Lynn Keeney. Jeanne B. North,

AAM 30-AUG-73 08:49 18717

Network is sometimes better than US Mail

(J18717) 30-AUG-73 08:49; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /MLK JBN; Sub-Collections: NIC; Clerk: AAM;

EJK 30-AUG-73 10:01 18718

Access to NLS

At this time RADC has a quota of 2 and I am the only one on. If you have difficulty getting on the machine try between 1200 and 1300. No sweat.

1

18718 Distribution

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,

Access to NLS

(J18718) 30-AUG-73 10:01; Title: Author(s): Edmund J. Kennedy/EJK;
Distribution: /RADC: Sub-Collections: RADC; Clerk: EJK;

Another Harrassing Note from Vint

Hi Mort: Sorry if my recent note sounded like the wrath of God. I just recently tried to connect to SDC yesterday and actually got conntected, but I was unable to get any response or herald and gave up after trying a while. Help! If Arie Shoshani is still around and doing Network type things, maybe you could ask him to give me some advice about the proper way to access ADEPT. The ICCC scenario notebook example no longer seems to work. Hasta Banana. Vint
P.S. I will send a copy to Arie and also Gerry Cole, just to see if they look in their mailboxes very often!

1

18719 Distribution
Morton I. Bernstein, Arie Shoshani. Gerald D. (Jerry) Cole,

Another Harrassing Note from Vint

(J18719) 30-AUG-73 10:02; Title: Author(s): Vinton G. Cerf/VGC;
Distribution: /MIB AS GDC: Sub-Collections: NIC; Clerk: VGC;

RBP 30-AUG-73 11:18 18720

MASIS Reporting

MASIS and JOCAS are two AFSC/DL reporting systems under which we are required to report on technical progress, funding,manpower expenditures, etc. for efforts which are being accomplished. Request you get together with Lou Cassetta ASAP and fulfill these requirements for the DM-1 contract with Auerbach. Since the original two work units resulted in only one contract, one work unit will have to be cancelled. Please inform me when you have completed the necessary actions.

1

18720 Distribution
Dean F. Bergstrom,

MASIS Reporting

(J18720) 30-AUG-73 11:18; Title: Author(s): Roger B. Panara/RBP;
Distribution: /DFB; Sub-Collections: RADC; Clerk: RBP;
Origin: <PANARA>MASIS1.NLS;1, 30-AUG-73 11:08 RBP ;

.hello

(hello) hello sheri and lynn. 1

i hope that this effort will be rewarded with a useful system for editing and distribution of documents. 2

it seems like it will be good.
especially if the response time is decreased. 3

18721 Distribution
Sheri L. Beck, Lynn A. Rossiter,

MTB 30-AUG-73 12:05 18721

.hello

(J18721) 30-AUG-73 12:05: Title: Author(s): Marshall T. Buck/MTB;
Distribution: /SLB LYNN: Sub-Collections: NIC: Clerk: MTB;

EJK 30-AUG-73 12:12 18723

Emergency - delete bad message

Please delete the message relating to Jim Bairs Finale - summary & status report. This message has a control-shift z in it which causes the IMLAC to crash- immediately. Therefore the deletion shoul be made on an Execuport. Sorry about that neighbors. 1

18723 Distribution

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,

EJK 30-AUG-73 12:12 18723

Emergency - delete bad message

(J18723) 30-AUG-73 12:12; Title: Author(s): Edmund J. Kennedy/EJK;
Distribution: /RADC: Sub-Collections: RADC; Clerk: EJK;

Hello

(hello) Do you think this is confusing work? I really find that it is hard to remember what to do in this program. It is very hard because the program is veery complex. Yes? 1

How are you doing on the NLS project? Is this confusing work? 2

18724 Distribution
Sheri L. Beck. Marshall T. Buck.

Hello

(J18724) 30-AUG-73 12:26: Title: Autho°(s): Lynn A. Rossiter/LYNN;
Distribution: /SLB MTB; Sub-Collections: NIC; Clerk: LYNN;

DLS 30-AUG-73 14:14 18725

RADC MIS--comments on the plan

These are my personal feelings about the draft plan prepared by Rog Weber. I don't really understand the "ball game", so some of them may be "off base".

DLS 30-AUG-73 14:14 18725

RADC MIS--comments on the plan

Comments on the draft PLAN FOR EVOLVING A RADC MIS CAPABILITY by D. Stone 1

RADC MIS--comments on the plan

Philosophy: 2

The need for a philosophy to guide the implementation of any information system within the Center is implied throughout the draft plan. In the AKW group, we have come to grips with this same problem several times, and have evolved a philosophy which guides our work. It is borrowed from Peter Drucker, Doug Englebart, and our own experience with implementing ideas and systems. The story that we tell goes like this: 2a

In this country, the fastest growing segment of the working population is the Knowledge Worker (KW). Drucker estimates that by the late 70's the KW will comprise 50% of the working population. Drucker makes a pitch for international competition based primarily on the competence and productivity of the US KW. 2a1

We are more concerned with the Air Force. The exact % of Air Force employees that could be classified as Knowledge Workers is not known, but it is suspected to be at least as great as the population of the US as a whole. Examples of AF organizations which are almost entirely composed of KWs are; AFSC with all its subordinate commands and labs, the Inteligence divisions of the major commands, the staff within headquarters at every echelon from USAF to RADC. 2a2

Doug Englebart believes that his group at the Augmentation Research Center (ARC) are developing a system to help or augment the knowledge worker. He thinks that there is a common core of activity which permeates the KW's daily activity, regardless of his particular speciality. 2a3

To illustrate: any particular KW may be an Action Officier on staff, an intelligence analyst, an engineer, or a top, middle or line manager. If you ask him what type of computer based system he needs to help him in his job, he might well reply; an on-line conferencing system, an automated library, a circuit design system, and a Management Information System; respectively. However, if you look at what the man does throughout the day, it consists primarily of communicating with his coworkers, studying, composing and documenting others' and his own ideas, perhaps some straight forward calculation and maybe some line drawings. He may occasionaly need access to a special purpose Augmentation System like an MIS, but the bulk of his daily activity could be better augmented by a general purpose system, like that being developed at ARC, which addresses the communication and documentation needs outlined above. 2a3a

If these assumptions are true, then it makes more sence to augment

the core activity and to provide smooth interfaces between the general-purpose augmentation system and the various special-purpose augmentation systems; which probably have more power in their area of speciality. This approach has several implications, both plus and minus, in the areas of training, terminals, telecomunications, and computer services. 2a4

Training..This means that an individual will have to learn an operational subset of NLS before he can start working with an interfaced MIS. Learning NLS has been compared to learning to drive a car. It is difficult, but the rewards are great enough such that the learner is willing to undertake the learning process, despite the possiblility of "crashes". Once he has mastered a subset of the NLS commands and procedures, he then need only add those peculiar to the MIS. This can be likened to the difference between adding to one's vocabulary and learning another language. 2a4a

Equipment..It should not be necessary to have a different terminal to access different systems. To require this is not only not cost-effective, it adds a training burden to the user. 2a4b

Computer services..One can not afford to have the gereral-purpose augmentation system and the various special-purpose augmentations systems resident on his own computer. Both the developmental and the maintenance costs are prohibitive. One should expect to use them where they exist, and only pay for that portion which is actually used. Also one cannot expect a developmental facility to provide a reliable and stable service. 2a4c

Telecommunications..To accomplish the above in an integrated and smooth manner, one must have access to a telecommunications network, which links the hardware facilities containing the augmentation systems of interest. Fortunately, we are connected to the ARPANET, which gives us access to the major experimental research facilities in the country. As particular sites develop a stable and useful system, it is expected that utilities will be formed which will sell blocks of service in their particular specialty. NLS is now undergoing the transformation from research facility to service utility. 2a4d

SPECIFIC COMMENTS: 3

Overview Summary: 3a

Para (1)...resources are available via ARPANET and other nets, but many are (for the most part) in the developmental stage, and hence may be sporadic and inconsistent in their daily operation. This is OK if the users understand and accept this. Our experience has been however, that users may start out agreeing that a particular system is experimental, but if it is of real use to them they become dependent upon it and complain bitterly if it is unavailable or changes drasticly. 3a1

Para (2)...text processing may be a soft spot in planning, but its hard to say its a soft spot in technology. There is a spectrum of commercially available systems from IBM's word processing system on the lower end to entire computer systems dedicated to text processing; ref. Modern Data survey article. 3a2

"bottom-up" approach...this is good! An additional motivational factor that seems to be necessary, is to have the immediate line managers (group leaders and section chiefs) use the data generated by the engineer. If they do not use it, then the engineer soon sences this and regardless of the utility of the augmentation system, he will slowly let the data deteriorate, since management type information is not of primary interest to him. 3a3

Introduction: 3b

Para (1&2)...I do not know the history of FEMIS or the commitments which may have already been made. It would seem prudent (in light of the above philosophy) to explore other DM type systems that are currently on the ARPANET in parallel with any implementation of FEMIS. ARPA has spent millions in developing data management systems. Some of them ought to be useful by this time. For example, I have played around with CONVERSE at SDC running under the ADEPT Exec on an IBM box. 3b1

Para (3,4&5)...We should seriously consider tying DATA CENTRAL into the ARPANET, if demand for its services rises. If the total cost of DATA CENTRAL services exceeds $150K, this is an attractive alternative. Money could be profitably spent in buying them a TIP and building them an interface to the ARPANET. AFAL might foot the bill for the TIP, since it would be to their benefit to be on the ARPANET and would give DATA CENTRAL wider exposure. 3b2

Para (7)...I would not recommend starting text editing with the Honeywell system, unless funds are very limited. Text Editor is hardly on the "leading edge" of technology. NLS offers a far

advanced text editor plus a document production capability up to typeset quality. In NLS there are the other user programming, calculating and printing capabilities which come essentially "free". 3b3

Para (8)...this is good. The RADC users of NLS have accumulated some 2400 hours of connect time over the past 6 months. Our ideas of hardware, software and user needs have changed considerably during this period based on our practical everyday working experiences. 3b4

STATEMENT OF WORK: 3c

The SOW seems to be heavily slanted toward FEMIS implementation. Its probably good to attempt to implement something. By so doing we should learn a lot about the info needs and implementation problems. This was the case with Joe Cavano's attempt to implement a MIS for the ISI branch using IDS. I would hate to see the Center committed to FEMIS forever. 3c1

Subtask (7)...It would be good if this task could preceed or at least parallel the others. 3c2

I would hesitate to recommend a seperate machine (PDP-11/45) for the initial MIS machine. The H635 would be even a better candidate if it were to be placed on the ARPANET. Plans for doing this have always been vague in my mind, but could be pushed by the proposed AFSC computer network. A third alternative for a MIS machine is somewhere on the ARPANET, as are alternatives for the text editing capability and the library machine. 3c3

One final plus for the ARPANET is that software and protocols for handling most of the common terminals have been developed. There are currently more than 20 terminals on the list, and BBN will add others as the need becomes clear. 3c4

In addition 10s of manyears each year have been, and continue to be, expended in developing protocol for: 3c5

computer-to-computer communication, 3c5a

file transfer, 3c5b

message forwarding, storage and retrieval, 3c5c

data management and 3c5d

graphics. 3c5e

We just don't have the resources, time or talent at RADC to replicate this work under this project. 3c6

18725 Distribution
John L. McNamara, Edmund J. Kennedy, Roger B. Panara, Joe P. Cavano,
Edward F. LaForge,

RADC MIS--comments on the plan

(J18725) 30-AUG-73 14:14: Title: Author(s): Duane L. Stone/DLS;
Distribution: /JLM EJK RBP JPC ELF; Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>RADCMIS.NLS;12. 30-AUG-73 14:10 DLS ;

AKW Group Meeting--24&27 AUG 73 1

PURPOSE: 1a

To discuss the status and goals of the AKW project. 1a1

ATTENDEES: 1b

JLM. EJK, DLS. TFL, JPC. RBP, ELF & various members of the DM group 1b1

DISCUSSION: 1c

The meeting was split between Friday the 24th of Aug and Monday the 27th. It was somewhat rambling in nature and covered, at a gross level, most all topics of concern to individuals within the AKW group. Too some extent this recording of the "minutes" of the meeting will be used as a forum by me (DLS), to highlight those areas I think need attention. 1c1

The more immediate concerns are with preparing for the inclusion of Nelson's section within the NLS user group. There are certain prerequesites for this. They will be discussed seperately under the following headings: 1c2

NLS Service--Sufficient quantity and quality of NLS must be available to the potential users of the system before we can expect to develop an interested and mature user population. The current restrictions on access, file space, and the general instability of NLS and the ARPANET discourage the development of this mature user population. Some of the more interested individuals persist, despite the difficulties. The NLS Utility is generally viewed as a soloution for these problems, but if we are going to train Nelson's section, we may continue to have some access limitations. 1c2a

Terminals--We will generally OK as far as terminals are concerned. We have 11 Execuports, 9 TIs, 5 TYCOMs, 4 Termicettes, 3 IMLACs and 2 line printers either in house or on order. We will be following SRIs development of the cheap DNLS terminal closely, and may attempt a purchase later in the fiscal year if money is available. Our only current problem is a forms printer. IBM may be a source for a split platen high quality terminal/printer. 1c2b

Internal Comm Lines--We do not have sufficient lines to connect to the TIP. It is desireable to have a line to each person's desk. We must take a count of current lines,

decide how many additional are needed and turn our requirements over to the facility and/or TFL. Its up to them to determine whether the lines are dial-up or direct connect. If dial-up lines are available, then we will have to get additional phone numbers and possibly modems for the TIP. 1c2c

Training--We must make provision for adequate training of existing and potential NLS users. SRI will help with the initial training, but we need someone to be thinking about the type and extent needed for each individual, what constitutes a trained NLS user and what effort/cost is involved in training him. 1c2d

Proceedures--Certain procedures for individual and organization use of NLS have to be devised, documented and included in the training. The need is not so great for individual use (except to save him some grief), but it becomes a necessity for coherent organizational use. 1c2e

Longer range considerations can be clumped into the categories of development efforts, evaluation efforts an expanded user population. 1c3

Development--Four areas needing development effort were briefly discussed. These include: 1c3a

Graphics--The need for an elementary line drawing and graphing capability has been known for some time. It should be integrated smoothly with NLS, if not actually embedded within it. It would be used for documenting flow charts of computer programms, graphing tabular data and preparing milestone chats and briefing aids. There are implications for NLS, the ARPANET and terminals; which all have to be considered in defining and implementing any graphics capability. TFL has looked into this in the past, and he may be a good starting point for further investigation. 1c3a1

Data Management--Joe is looking into this. He has indicated some of the alternatives in (cavano,gis,) and (cavano,forms,). The general approach which seems to be shapping up, is to interface NLS with a local DMS, even if it has to be done in an off-line manner in the beginning. To pick a remote DMS, requires that one learn the peculiarities of that system as well as designing an interface. If our facility, particularlly GCOS, is placed on the ARPANET, the interface could be made much neater. 1c3a2

Programmer Aids--It would be desireable to interface some of the programming languages used here at RADC with NLS. The first level might be to write a user program which would reformat source code written on NLS files into a form suitable for input to a local compiler. This would allow a programmer to take advantage of the editing and documentation features of NLS, and still be able to compile and run on the local machine. SRI apparently has BASIC running under TENEX on their machine, so interface to this language might be a first step. 1c3a3

Input--As the use of the system grows, it would seem desireable to have a mechanized means of inputing text which originates outside the AKW community. At SRI they catalogue off-line documents, but input in total only those which are highly relevent to their work. Its difficult to say at this time , what the volume of external documents might be. A wide range of OCR devices are available on the market, but one that can handle a reasonable range of formats and type fonts would probably be expensive. If we get to the point where the entire Center is using the system, we might be able to afford (justify) a versitle OCR device. 1c3a4

Evaluation--The need for a coherent scheme under which to conduct our necessarily limited evaluation efforts was briefly described by DLS. It was suggested that a pencil and paper Systems Analysis (SA) be made. This would serve several purposes: it would make our assumptions about system costs and benifits explicit, it would highlight our current gaps in knowledge, and a sensitivity analysis should reveal those areas of the analysis which are the most significant in determining the outcome of any application of NLS. 1c3b

The whole context of the experimental use and evalution of the system at RADC could be stated as one of "buying managers/decision makers information". Our efforts are aimed at increasing the probability of predicting the benifits and costs associated with implementing the AKW technology within IS, RADC, ESD, etc. What a SA might do for us is to help us wisely spend our limited evaluation resources and thus assure that we get the most and the most relevent information for the $1-2 Million we spend. Without the SA we risk spending $, manower and time on obtaining information about aspects of the system which are relatively minor in their impact on costs and benifits. 1c3c

Population explosion--Even though we have said things like expanding to ESD, AFSC, USAF, etc..we need to seriously

consider the implications in terms of manpower, training, NLS, timing etc. 1c3d

It was generally agreed that manpower limitations will determine the pace at which we proceed and the number of jobs we undertake. There has been an 80% turnover in manpower in the AKW group during the last year, ie out of the 5 people we now have on the project, only one was actively involved with it last year. This means for the short range we will be lacking experience and it looks like in the long range we may be lacking in numbers if the project grows to the Division and probes are made into ESD and/or RADC, AFSC, USAF. One more immediate concern is for a maintenance man, someone who can be relied upon to keep the terminals operational, worry about maintenance contracts, and generally be responsive to users hardware complaints. This need will increase as the number of terminals increase. 1c4

UNRESOLVED ITEMS: 1d

Who will be responsible for which areas? 1d1

Possibilities for increase in manpower? 1d2

ACTION ITEMS: 1e

EJK--assign priotities to jobs and jobs to people. Have them report back in a week with status and projected manning requirements. 1e1

COMMENTS: 1f

18726 Distribution

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,

DLS 30-AUG-73 14:08 18726

AKW Group Meeting..Status and Problems of Project

(J18726) 30-AUG-73 14:08: Title: Author(s): Duane L. Stone/DLS;
Distribution: /RADC: Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>MEET.NLS;8, 28-AUG-73 13:20 DLS ;

Leith Plays at the IMLAC (accompanied by the ELF on the Execuport)

This is a play file for LEITH. 1

Four score and seven years ago, our fathers brought forth on this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal. We are now engaged in a great war testing whether that nation or any nation so conceived and so dedicated may long endure. 2

3

my dear Leith. 4

It has been a pleasure talking to you and watching you and fantazing about you (chastely, that is) for the past few weeks. I'm sorry there is no technique available for sticking you into a deep freeze and storing you for one of my rotten kids, when they are old enough to appreciate your personality, charm, good looks and freckles. Oh, to be forty again! Good luck on your travels and say yes only after considerable search of the spirit and heart. So I can't type too good;what do you want from one of God's chosen people? 4a

signed--the ELF 4a1

5

Now is the time for all good men to come to the aid of their country. What a country. 6

You light up my life 7

You bring me sunshine in the morning 8

You make me believe that anything is possible 9

I never knew how great it could be 10

Until you gave your love to me 11

Album-Fantasy 11a

by Carol King 11b

What a country, starring Ray Liuzzi. 12

Are you reeling in the years-stowing away the time, are you gathering up the tears-have you had enough of mine? 13

Album-Steely Dan 13a

Leith Plays at the IMLAC (accompanied by the ELF on the Execuport)

All I want is a quiet place to live-where I can enjoy the fruits of my labors, read the paper and not have to cry out loud. I can see it crystal clear. etc. 14

School days school days
Dear old golden rule days
Reading and writing and 'rithmetic
Talk to the tune of a hick'ry stick
You were my queen in calico
I was your bashful barefoot beau
You wrote on the slate I love you Joe
When we were a couple of kids! King! 14a

18727 Distribution
Edward F. LaForge, Edmund J. Kennedy, Joe P. Cavano, James H. Bair, Roger B. Panara,

DLS 30-AUG-73 14:19 18727

Leith Plays at the IMLAC (accompanied by the ELF on the Execuport)

(J18727) 30-AUG-73 14:19: Title: Author(s): Duane L. Stone/DLS;
Distribution: /ELF EJK JPC JHB RBP; Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>LEITH.NLS;1, 30-AUG-73 14:16 DLS ;

AAM 30-AUG-73 14:32 18728

Scheduled Software Maintenance

This is a reminder that Network Software Maintenance is scheduled between the hours of 0700 and 0900 (Eastern Time) on Tuesday, 4 September 1973. Although software releases are checked out as much as possible in the BBN test cell, thre 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

18728 Distribution

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, Nancy J. Neigus,

AAM 30-AUG-73 14:32 18728

Scheduled Software Maintenance

(J18728) 30-AUG-73 14:32; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /RADC NJN: Sub-Collections: NIC RADC; Clerk: AAM;

DHC 30-AUG-73 14:38 18729

Location of JWORK files

JWORK files should not be put into the user's Directory. They confuse people who do not understand their purpose. 1

DHC 30-AUG-73 14:38 18729

Location of JWORK files

(J18729) 30-AUG-73 14:38; Title: Author(s): David H. Crocker/DHC;
Distribution: /BUGS: Sub-Collections: NIC BUGS; Clerk: DHC;

18729 Distribution
Diane S. Kaye, Harvey G. Lehtman, Charles H. Irby,

JCN 30-AUG-73 16:15 18730

Visitor Expected 9/4: Larry Day, Bell Canada

I am expecting a visitor from Bell Canada next Tuesday 9/4 or it might slip to 9/5. He is Larry Day. We expect to discuss the Bell Canada Utility contract that I am in the process of geting together. Note that this is the first of a series of messages that I plan to send to you about expected visitors. You might move this branch to a visitors expected branch or such in your initial file, so that when you get the message "you have new journal mail", it will really mean that it is new and not this message. Bye, Jim 1

18730 Distribution
Jeanne M. Leavitt,

JCN 30-AUG-73 16:15 18730

Visitor Expected 9/4: Larry Day, Bell Canada

(J18730) 30-AUG-73 16:15; Title: Author(s): James C. Norton/JCN; Distribution: /JML; Sub-Collections: SRI-ARC; Clerk: JCN;

JCN 30-AUG-73 16:17 18731

Visitor expected 9/21: Don Atkinson, Bell Canada

I am also expecting Don Atkinson of Bell Canada about Friday, 9/21 to discuss the Utility contract. 1

18731 Distribution
Jeanne M. Leavitt,

JCN 30-AUG-73 16:17 18731

Visitor expected 9/21: Don Atkinson, Bell Canada

(J18731) 30-AUG-73 16:17; Title: Author(s): James C. Norton/JCN;
Distribution: /JML; Sub-Collections: SRI-ARC; Clerk: JCN;

18732 Distribution
Duane L. Stone, John S. Perry, James C. Norton, David H. Crocker,

Quarterly Management Report 5: RADC/ARPA Project 1868 -to 9 August 1973

ARPA Order Number: - Program: - 1

Title: "Network Information Center and Augmentation System Development" 1a

Contractor: Augmentation Research Center, Stanford Research Institute. 1b

Date of Contract: 10 May 1972. 1c

Amount of Contract: $2,270,000. 1d

Contract Number: F30602-72-C-0313. 1e

Principal Investigator: Dr. Douglas C. Engelbart, phone (415) 326-6200, ext. 2220. 1f

Contract Expiration Date: 10 February 1974. 1g

I RESEARCH PROGRAM AND PLAN 2

As per our proposal and contract, work is progressing in the following areas: 2a

Developing service functions for: 2a1

External users - the Network Information Center (NIC) 2a1a

Internal users - prototype systems, such as: 2a1b

Dialog Support System (DSS) 2a1b1

Documentation Production and Control System (DPCS) 2a1b2

Software Engineering Augmentation System (SEAS) 2a1b3

System Developers' Handbook System (SDHS). 2a1b4

Developing service delivery and marketing principles and practices. 2a2

Providing operational marketing and delivery of services within the ARC and NIC customer markets. 2a3

II MAJOR ACCOMPLISHMENTS 3

Network Information Center 3a

During the past quarter, the major accomplishment has been a thorough review of the NIC: its costs, services, and plans for the future. The results of this analysis are outlined in our proposal to ARPA for a two-year extension of our contract beginning in February, 1974. 3a1

Upgrading and cleanup of the NIC Query Language is proceeding to make it easier to use and more powerful. 3a2

Dialog Support System 3b

During the last quarter we received in excess of 150 requests for network Journal delivery in response to a recent questionnaire distributed by the NIC, and we updated the Ident system accordingly. Many ARPANET Journal users are now regularly receiving messages and citations at their own sites via the network. 3b1

Our FTP server process was modified to permit a network user to retrieve Journal files in sequential, unstructured form without explicit login to the ARC system or aid from NLS. 3b2

Our File Transfer Protocol (FTP) server process was further modified to permit users to enter messages or files into the ARC Journal from their own local mail systems via the network, again without explicit login or use of NLS. 3b3

Design work for the Multi-site Journal and Ident system is continuing. As an outgrowth of this work, we have designed and specified a mail protocol, currently under review by members of the Network Working Group, for general network use. 3b4

Software Development 3c

In this quarter, we brought into operation a group allocation system to control user login and thus allocate our computer resources. A study made by Analysis indicated that controlling access to the system (login) was an adequate resource allocation scheme. 3c1

We designed and partially implemented a new command language interpreter and a new command language based on user feedback and training experience. 3c2

We began work on Alpha-Numeric Display NLS to permit display NLS to run on many display terminals without graphics capabilities. We designed and built a Line Processor which uses Intel MCS-4 computer chips. 3c3

A Network Graphics Protocol proposal was developed and submitted to the Network Graphics Group. 3c4

We developed mechanisms for generation of a System Guide to NLS based on the object and source code. The guide consists of an alphabetic listing of all data and procedures used in NLS (along with comments, calling arguments, and location in source code files) and an index based on non-trivial words in comments on procedures. A cross reference facility shows what procedures call other procedures, etc. 3c5

Dex II is in operation (missing some of the more sophisticated features). 3c6

The NLS Calculator was released to users. 3c7

Analysis 3d

The identity of the Analysis function within ARC has been emerging steadily. Over the last three months, Analysis has been working in the following areas: 3d1

Analysis of the NIC. 3d1a

Telephone survey of NIC Station Agents. 3d1a1

Evaluation of costs of NLS support for a medium sized community of users. 3d1a2

Survey of NIC-PSO work and expenditures. 3d1a3

Analysis of evolutionary information centers. 3d1b

Technological transfer to VELA community. 3d1c

Analysis of needs for personal information management. 3d1d

Definition of functions of Analysis and participation in proposal writing. 3d1e

Analysis of office automation requirements. 3d1f

Analysis of the Journal system. 3d1g

Comparisons of text editors. 3d1h

Comparisons of user accounts reported by SUPERWATCH and the "Accounts" files (There is still a discrepancy). 3d1i

Login and duration of connection Statistics. 3d1j

Preparation for Workshop Utility 3e

Interaction with Tymshare on Utility computer preparations and staffing continued. 3e1

Tymshare has selected a lead operator and a systems programmer. We are discussing operational procedures and the facility configuration. 3e2

We now estimate service will begin between October 15 and November 1. 3e3

At ARC, we have hired a behavioral psychologist experienced in NLS who will coordinate training and user development for the Utility user groups. 3e4

Our Utility systems programmer is working on procedures for quality assurance as new versions of NLS come into operation on the Utility. 3e5

III PROBLEMS ENCOUNTERED 4

No outstanding problems. 4a

IV FISCAL STATUS 5

Estimated expenditures and commitments to date are: $1,740,000, excluding computer lease commitments. Funds required to complete the work within funding limitations are: $530,000. Estimated date of completion of work: February 10, 1974. 5a

V ACTION REQUIRED BY THE GOVERNMENT 6

None. 6a

VI Next Quarter Plans 7

Network Information Center 7a

Work has begun to allow NIC catalogs to be produced on the 360 at UCSB, which is a more appropriate machine for this type of work than ARC's PDP-10. 7a1

The analysis of the NIC begun last quarter will continue, and changes in NIC services suggested by the analysis will begin . 7a2

Dialog Support System 7b

During the next quarter, our work on the Multi-site Journal will continue. An initial, two-site system will be implemented to support the Utility. Specifications for the full system will be completed, and work on its implementation will begin. 7b1

We will continue to bring our work in this area to bear upon the development of the general network mail protocol. 7b1a

We plan to develop ways to enter items into the journal system without subsequent archival and cataloging and to accept a greater variety of addresses for distribution. 7b2

Software Development 7c

We will finish the new command language which will include extensive help facilities for new users. 7c1

We will get Alpha-Numeric Display NLS to work and modify display support code in Tenex so DNLS can be run under standard Tenex using Imlac protocol or Alpha-Numeric Displays. 7c2

Specification of the Forms System will be completed. 7c3

Specification of privacy features for the Journal will be completed. 7c4

Specification of a new display system for ARC will be completed. 7c5

Specification of the Networks Graphics Protocol (help) will be completed. 7c6

Analysis 7d

Plans for the next quarter are to: 7d1

Continue analysis of the NIC. 7d1a

Begin analysis of the dialog support system. 7d1b

Analyze needs of network communities (energy communities first). 7d1c

Develop the "evolutionary information center" concept and survey other existing information centers. 7d1d

Analyze needs of community special interest groups. 7d1e

Assess our group allocation system which partitions computer access to users according to their type of work. 7d1f

Preparation for Workshop Utility 7e

Final stages of operational planning will take place, leading to initial service late in the reporting period . 7e1

Approved by

:

D. C. Engelbart, Principal Investigator

8

Quarterly Management Report 5: RADC/ARPA Project 1868 -to 9 August 1973

(J18732) 30-AUG-73 16:37: Title: Author(s): Stanford Research Institute /&SRI-ARC: Distribution: /DLS JSP JCN DHC; Sub-Collections: SRI-ARC NIC; Clerk: DVN;
Origin: <VANNOUHUYS>QMR.NLS;1, 19-AUG-73 09:57 DVN ;

Current Assumptions and Progress of Writing the HELP Data Base

What We Expect In the Way of Links: 1

I thought it worth while to record that we are writing with the assumption that the following kinds of links will be available in HELP Query: 1a

links that put the text of the object statement into the prinout instead of the link, as if there were no link, 1a1

links that print the object statement and its menu, 1a2

links that print the object statement but not its menu, 1a3

links that print the menu attached to the object statment, but not the object statement. 1a4

We also assume that in the case of the last three types of links, we may bring the control marker back to the source statement or leave it in the object statement. 1b

In is my impression that as the data base now stands we are using the second type of link almost exclusively and generally expecting to leave the CM in the object statement. 1c

Move Back 2

We are assuming the user can some how move back to his previous menu. 2a

What We are Doing Now 3

On Monday we completed a first draft of the part of the data base devoted to commands <userguides,help.commands> and turned out minds to concepts. After lengthy consideration we proceded to beging by writing the menu of concepts a user should see on entering HELP then, writing the menu that would support the explanation of each concept, but not the concept then, writing the menu that would support each supporting conecept, and so on down. 3a

In the group <userguides,help,access> through <userguides,help,glossary> we created in effect the recorded menues of an indefatigable user who always retraced his steps to pursue the menu of every conept in the data base. Ofcourse many conecepts appear on dozens of menues. From the weary path of the indefatigable user we extracted all the concepts that needed explanation into the file <userguides,nonplus,> (redundant occurrences of a menu item are marked in <userguides,help,> with a). <Userguides,nonplus,>, then, contians one statement for every conecpt we felt it necessary to explain to explain ARC.The 3b

statistically minded may be interestd to know it contains 360 statements. 3b1

We have devided the work of writing as shown by idents e.g. in <userguides,nonplus::/"jmb"/;) and are now writng the definitions of concepts. 3c

18733 Distribution
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, James C. Norton, Nancy J. Neigus,

DVN 30-AUG-73 17:48 18733

Current Assumptions and Progress of Writing the HELP Data Base

(J18733) 30-AUG-73 17:48: Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /DIRT JCN NJN; Sub-Collections: SRI-ARC NIC DIRT; Clerk: DVN:

To: Jack and Erika....GREETINGS!!!!

This is a test message. 1

18734 Distribution
Erika Graf-Webster. Ernest H. Forman.

(n1) ARPANET NEWS September 1973 Issue 7 NIC 18748

Choose one by typing:
(for example) s[how] n5 CR (to display FEATURED SITE)
(or) s[how] u1 CR (to display first update)
To print statement numbers, type v[:type View specs:]mG CR

1

(n2) ARPANET NEWS Information About the Publication

2

Issue 7 September 1973 2a

Hardcopy issue published monthly
Online updates available weekly
Sponsored by: ARPA/IPT
Distributed by: ARPA Network Information Center
Stanford Research Institute
Menlo Park, California 94025 2b

Editors: Jeanne B. North (NIC)
Jean Iseli (MITRE)
Contributing Editor: Susan S. Poh (MITRE)
Mil E. Jernigan (NIC)

2c

The online version is available to all Network members who receive online delivery from NIC. It can also be accessed by anyone who

logs into SRI-ARC and uses the query language named nic.

2d

The online version contains the month's basic issue. Each week a branch is added, containing items received during the week. This update material is added to the new feature articles to produce the next month's issue.

2e

For scanning:

2f

```
control c
nic  CR
a[rpanet news]  CR
s[how]  (whatever you choose from the contents)  CR
(to stop printing) control o
(to exit) q[uit]  CR
(to show statement numbers) v[:Type Viewspecs:]mG  CR
```

2g

For printing NEWS:

2h

```
nls  CR

l[oad] f[ile] <nic>arpanewscover  CR CR  (for cover,
masthead)
o[utput] d[evice] t[eletype]  CR
```

2i

```
      or
l[oad] f[ile] <nic>arpanews  CR CR  (for NEWS content)
o[utput] d[evice] t[eletype]  CR
```

2j

```
      or
l[oad] f[ile] <nic>arpanewsup  CR CR (for UPDATES only)
o[utput d[evice t[eletype]  CR
```

2k

One hardcopy of the monthly issue will be sent to each Liaison, Principal Investigator, and Station Agent at Network Sites, and to Network Associates. Local reproduction of multiple copies is encouraged.

2l

Contributions to the NEWS may be forwarded to JI at NIC through the Journal, to ISELI@USC-ISI, or to Jean Iseli, The MITRE Corporation, National Systems Design Dept., Westgate Research

Park, McLean, Va. 22101. News may also be forwarded to JBN through the NIC Journal, or mailed to Jeanne North at SRI.

2m

To return to contents outline type s[how]n1 CR

2n

(n3) CALENDAR Events of Network Interest

3

Type s[how] (parenthetical name)

3a

(condensed)

3b

Type s[how] (parenthetical name)
Items listed here without parenthesis were listed in earlier NEWS, and their text has been moved to the file <NIC>CALENDAR, which can be seen by the command b[ring]<NIC>CALENDAR

3b1

10/1-3	ACM-PROGLANG	ACM Symp on Programming Languages
10/9-11	(educom)	EDUCOM 9th Annual Conf., Princeton
10/15-17	IEEE	
10/21-25	ASIS	ASIS-73 Annual Meeting
11/5-7	IEEE-SYS	Conference on Systems, Man & Cybernetics
11/7-8	ARCH	Symp on High Level Language Computer Arch
11/12-13	TEXAS	2nd Texas Conf on Computing Systems
11/13-15	DATA-SYMP	
1/8-10 74	HAWAII-CON	
5/6-10 74	NCC	1974 National Computer Conference

3b2

A meeting listed here is sponsored by the Group named. Many meetings are open to other interested people. NIC document references are given where available.

3b3

Meetings sponsored by Groups in the Network are indicated by *.

3b4

(educom) EDUCOM Ninth Annual Conference, Oct. 9-11, Princeton

3c

EDUCOM Ninth Annual Fall Council Meeting and Conference will be

held, October 9-11, 1973, in Princeton, New Jersey.

3c1

Advance registration may be accomplished by sending: Name, Telephone, Title, Affiliation, and Address to: EDUCOM, P.O. Box 364, Rosedale Road, Princeton, New Jersey 08540 along with the appropriate conference fee.

3c2

Conference fees for the full conference are:

Member Institution	$50.00
Nonmember Institution	$70.00
Student Registration	$14.00

3c3

The following "MESSAGE FROM THE CONFERENCE CHAIRMAN" was condensed and extracted by JI from the EDUCOM Announcement as was the above.

What's happening now in computing for colleges and universities? How are resources in computing for administration, instruction, and research in higher education likely to change? These questions and related topics will be addressed at the Fall 1973 EDUCOM Conference. The program has been designed as a presentation of the facts on current use of computers on individual campuses for local use and in various resource-sharing arrangemments. Although many case studies illustrate techniques for the management and use of resources, including networking, examples have been selected for the program on the basis of current activities which are felt to be the prologue for future development.

3c4

The conference program is divided into four tracks.....

...The Administration of Computing Resources..
...Computers in Instruction.....
...Management Information Systems...
...Computers in Research...

3c5

I think you will find the program stimulating and pertinent to your needs as an educator, administrator or faculty member interested in the application of computing in the university. I urge you to make every effort to attend the EDUCOM Conference. It promises to be a most interesting and important meeting.

.....Joe B. Wyatt, Conferance Chairman

3c6

To return to contents outline type s[how]n1 CR

3d

(n4) ARTICLE Online Interview with Dr. Larry Roberts

4

The following is an edited typescript of an online interview at USC-ISI, with Dr. Larry Roberts, presently of ARPA/IPT, by Jean Iseli, on 6 September 1973.

4a

(ji) Dr. Roberts, I would like to prevail on you for some questions for the ARPANET Newsletter readership, if it is not too

**great an inconvenience? We understand you may be leaving ARPA/IPT shortly, is there anything that can be released about your plans, etc. at this time?

4b

(LGR) I WILL BE THE PRESIDENT OF TELENET AS OF OCTOBER 1.

4c

(ji) Is that the BBN subsidiary set up to commercially utilize the technology you were so instrumental in developing while at ARPA?

4d

(LGR) THE NETWORK TECHNOLOGY, YES. TELENET WILL BE A VALUE-ADDED CARRIER, GIVEN FCC APPROVAL.

4e

(ji) Your departure will be a great loss to the ARPANET, sir, but we would like to express our sincere best wishes for your future position. Do you expect to file with the FCC in the near future, or has that already been accomplished?

4f

(LGR) THE 214 IS ABOUT TO BE FILED.

4g

(ji) One last question, if the filing is approved, (1) how long would you estimate before TELENET is able to provide services to the public, and (2) will it be a heterogeneous network and if not, what types of computers will be utilized?

4h

(LGR) AFTER APPROVAL, IT SHOULD ONLY TAKE 9-12 MONTHS TO PROVIDE SERVICE IN AN INITIAL WAY. THE COMPUTER QUESTION IS MUCH AS IT IS

IN THE ARPANET, ANY COMPUTERS THAT USERS WANT TO ADD CAN BE ADDED. CERTAINLY, IT SHOULD NOT BE HOMOGENEOUS.

4i

(ji) Dr. Roberts, thank you very much for according us the opportunity to chat with you.

4j

(LGR) THAT'S FINE.

4k

(ji) Thanks...and I wish you the very best of success in your new venture..will miss your leadership.

4l

To return to contents outline type s[how]n1 CR

4m

(n5) FEATURED SITE University of Illinois

5

(sher-paper) Description of the Work of the Site

---- By Dr. Michael S. Sher.

5a

The Center for Advanced Computation is an interdisciplinary research center in the Graduate College of the University of Illinois at Urbana-Champaign. The Center's applied research and problem solving activities have been supported by the Department of Defense's Advanced Research Projects Agency (ARPA), the Ford Foundation, the National Science Foundation (NSF), and several other federal and state agencies. These activities include research and development in environmental information systems, economic modeling, energy studies, atmospheric modeling, image interpretation, transportation system modeling, statistical systems, graphics systems, computer network access systems, and numerical analysis. Since August 1972, over 90% of the computational resources required by Center staff has been obtained via the ARPANET.

5a1

As a complement to the ARPANET Terminal Interface Message Processor (TIP), the University of Illinois has developed a "mini-HOST" computer system based on the configuration of a small mini-computer (Digital Equipment Corporation PDP-11) acting as a full capacity HOST (from the protocol standpoint) and attached to a standard IMP or TIP. The PDP-11 based system

is called the ARPA Network Terminal System (ANTS). ANTS provides facilities for attaching a wide variety of local input/output peripherals to any remote ARPANET HOST. Such peripherals include a variety of interactive terminals, card readers, line printers, plotters, magnetic tapes, disk storage, COM systems, graphics displays, etc. In addition, ANTS supports the attachment of integrated remote-job-entry systems whose components can be independently accessed from remote sites. ANTS may also serve as an intelligent network interface for

**larger computer systems.

5a2

In the summer of 1972, the Center discontinued the lease and operation of its B6700, which was costing about $40,000 per month, and expanded its use to a variety of systems on the ARPANET. Service site costs have been about $20,000 per month (half of which has been at UCSD), with an additional $6,000 per month in communications and network access costs. It is projected that the Center's computational usage will continue to increase during the coming year. The ability to access and use different computer systems on the ARPANET, in our experience, has shown possible cost savings in programming labor and computer costs of 50 to 80 percent. Overall, it is estimated that to upgrade local University of Illinois research facilities to compete with currently used ARPANET service HOSTS (or establishing conventional, but comparable, remote links directly to unique service HOSTS) could only be accomplished at a cost exceeding 300% of the cost of services now obtained by the Center over the ARPANET.

5a3

Aside from the technical and economic aspects of choosing the proper set of computational facilities for solving particular problems, another aspect of networking is becoming quite important to the Center's research. The ARPANET has broadened the communications opportunities between the Center's staff members and geographically remote colleagues with ARPANET access. The ARPANET permits a broader community of collaborative and interactive research in those applications areas involving large scale computations. Researchers studying similar phenomena often use different machines, different numerical techniques, and different data bases with varying degrees of accuracy and documentation. It is often very difficult to distinguish computational and methodological differences between investigations into similar phenomena. The ability to jointly develop a common data base and to use common numerical techniques with the same machine(s) permits investigators to concentrate on the merits of differing

methodologies without worrying about other side effects.

5a4

The Center's experience as a user of ARPANET resources has lead to the following opinions relative to the future of networking:

5a5

(1) Networking should provide a variety of specialized services operated independently and in competition using a healthy free market to provide the best services at the lowest cost.

5a6

(2) Networks should be operated in a manner which inhibits the formation of service monopolies (except for special resources like the ILLIAC IV) and encourages, whenever possible, the duplication of services.

5a7

(3) Development of service sites which support different philosophies for providing very similar services should be encouraged.

5a8

(4) Managing "complete" general purpose computing facilities generally combines the roles of the "wholesaler", who provides raw computational resources, and the "retailer", who molds these resources to meet the consumers needs. Universities are free to treat networks as wholesale outlets for computational resources while local staff play the retailer's role of molding the remote services and retaining local facilities required to best meet the demands of their students, professors, and administrators. We believe that the economics of this approach will encourage solutions of the political and administrative problems involved in making the transition from local dedicated computational facilities to networking.

5a9

(day-interview) Online Interview With John Day, ILL-ANTS

5b

The following is a brief online interview with John Day of the University of Illinois, Center for Advanced Computation, staff, conducted on Monday, 3 September 1973, concerning the current status of the ANTS Project. Readers are referred to the July issue of the ARPANET Newsletter for more information relative to the Army Material Command (AMC) ANTS work and to the referenced Development Corporation which is being set up to

provide a technology transfer mechanism for the Center.

5b1

(ji) John, could you maybe tell us a little about your work on ANTS?

5b2

(Day) We expect to start debugging this week. We have been plagued with hardware problems a lot this summer. Seems just about everything between Urbana and San Diego that could go wrong did.

5b3

(ji) Are you involved with the Belvoir ANTS?

5b4

(Day) Indirectly. Bob Husby is the one primarily concerned with it. My prime responsibility is the file system, FTP, RJE, etc. And have been implementing related parts of the bowels of the system.

5b5

(ji) Are you concerned with the forthcoming "development corporation"?

5b6

(Day) Yes. The Corporation should be set up by October.

5b7

(ji) Would you mind giving us a very brief, quick rundown on the basic concepts of the ANTS, and the "why" of an ANTS? Some of our readers are not completely familiar with the project and would be very interested.

5b8

(Day) Basically, ANTS is an operating system that runs on any PDP-11. Originally, we were developing it because the TIP doesn't provide easy interfacing to devices such as graphics, RJE's, and the like ... not to mention the command language is a bit restricted. The present version which is running now was developed in a hurry in order to get Illinois on the Net and therefore is very minimal, but does allow us to RJE to CCN and fake such stuff to UCSD and ISI, with a little help from local programs. In fact we bring ANTS code files from UCSD to here via the Net, either to a 9-track tape, or directly to the disk. MARK II has been designed as a layered system that is incredibly modular, to allow just about any sort of device to be hooked on with a minimal amount of fuss. One of the major advantages seems to be in the line of providing front ends and

thereby avoiding for the larger machines the pain of writing an NCP. But it also provides pretty good RJE and FTP for whatever devices you have on it.

5b9

(ji) How difficult is it to hang special peripherals onto ANTS?

5b10

(Day) Should not be too difficult at all. Device handlers in ANTS all have a very characteristic structure and it is just a case of deciding what action to take for certain cases. To interface the RJE's for AMC takes about two man months of time to write and debug, I think. Of course, the more complex the device, the longer, so a new line printer doesn't take as long as an RJE, which doesn't take as long as a CDC-6600.

5b11

(ji) Sounds very interesting. What facilities for microfilm storage and automated retrieval are there, if any? And what could be done to interface COM to it for document production?

5b12

(Day) Well, presently we haven't been asked to think about it. But I doubt if it would be difficult at all, in fact might be a lot of fun to do.

5b13

(ji) Is the development corporation going to be able to handle all the interest in ANTS?

5b14

(Day) Hopefully. We have been hiring several new people and bringing in some we had on other projects. Really, most everything is in the interest state now. We are more flooded with people interested in finding out what ANTS is ...

5b15

(ji) Sounds very GOOD indeed. Most of the contracts cycles can take anywhere from six to twelve months, which leaves you a little room to breathe.

5b16

(Day) Yes. Which is good. There are a lot of things we want to do.

5b17

(ji) Get the impression that few firm plans can be talked

about right now. True, John?

5b18

(Day) Yes. For the time being ... I would say that things will be much clearer in about a month or two with respect to both ANTS and the corporation.

5b19

(ji) Fine. Incidentally, I like your Newsletter - very informative.

5b20

(Day) Thanks. Will pass on the compliment. Will see you later.

5b21

(ji) Thank you, John. It has been a real pleasure talking with you.

5b22

(n6) PROTOCOLS

6

To return to contents outline type s[how]n1 CR

6a

(TELNET) New Network Specifications

6b

Revised TELNET Protocol and TELNET Option Specifications have been issued, which officially modify the existing specification and prepare for switchover to the new TELNET on 1 January 1974.

6b1

The purpose of the Protocol is to provide a fairly general, bi-directional, eight-byte oriented communications facility. Its primary goal is to allow a standard method of interfacing terminal devices and terminal-oriented processes to each other. It is envisioned that the protocol may also be used for terminal-terminal communication ("linking") and process-process communication (distributed computation).

6b2

TELNET Options Specifications are issued as part of the protocol to permit sites to obtain more elegant solutions to the problems of communication between dissimilar devices than is possible within the framework of the Network Virtual Terminal (NVT). It is desirable that sites be able to invent, test, or discard options at will, even though the negotiation method permits the direct use of only 256 option codes. It is

envisioned that options which prove generally useful will eventually be supported by many sites, and therefore it is desirable that they should be carefully documented and well publicized. A method of option code assignment, and standards for documentation of options are given. Option codes are to be assigned by Jon Postel.

6b3

....excerpted by JBN from NIC 18639 and NIC 18640 issued August 1973 under the authority of Alex McKenzie BBN-NET.

6b4

(RJE-FTP) Request from AEC for comments on their plans

6c

Several AEC installations are planning to enter the Network soon and are requesting comments on their proposal to implement local conventions for RJE to facilitate job entry without implementing RJE protocol at least at this time. (See NIC 17797 RFC 551 by Feinroth and Fink.)

6c1

(n7) RESOURCE NEWS New Programs and Publications

7

Type s[how] (parenthetical name)

7a

(abstracts) Abstracts of Network Documents
---- Prepared by Mil Jernigan

7b

Stuart E. Madnick (Sloan School of Management, Massachusetts Institute of Technology). The Future of Computers. In: Technology Review, p.35-45, July-August 1973. NIC 18586.

Highlighted are many of the advances, developments, and more recent changes in computer technology. Discussed are technological cost/performance breakthroughs in computer manufacturing; the evolution of computer system architecture for both hardware and software; and major steps toward meeting the requirements and capabilities of the user.

7b1

Eric M. Aupperle (MERIT Computer Network, University of Michigan). The MERIT Network Re-Examined, MCN-0273-TP13, NIC 18585. 11p. February 1973. (Report form of paper given at COMPCON '73 Conference, San Francisco, 27 February - 1 March

1973.)

There is considerable world-wide interest in planning and development of computer networks, and several technically different kinds of networks have been implemented. Little information indicating the influence of their designs on actual operational experience is available to guide other planning efforts. This paper reports on the heterogeneous, distributed MERIT Computer Network, and discusses some of the original MERIT design decisions.

7b2

Bertram Herzog (MERIT Computer Network, University of Michigan). Organizational Issues and the Computer Network Market, MCN-0273-TP12, NIC 18584. 7p. February 1973.

An exploration of problems and decisions involved in the establishment of the MERIT Computer Network which crosses organizational boundaries, is composed of heterogeneous equipment, and operates within a varied cost and economic structure. Some of the problems involved in starting a computer network and the constraints of inter-organizational issues are discussed.

7b3

Harry Erik (Michigan State University), Seymour J. Wolfson (Wayne State University), and Karl L. Zinn (University of Michigan), MERIT Computer Network, University of Michigan. Facilities and Resources Available Via the MERIT Host Computing Centers, MCN-0573-GE-14, NIC 18583. 43p. March 1973.

A review of the facilities, capabilities, available services and programs on the MERIT Computer Network. Broad categories of services available to the network as a whole are described as well as features unique at the three hosts. The synergistic effect of combining the individual host resources into a unified network-wide operation are pointed out.

7b4

Philip H. Enslow, Jr. (Senior Staff Assistant, Office of Telecommunications Policy, Executive Office of the President). Non Technical Issues in Network Design - Economic, Legal, Social, and Other Consideratiions. In: Computer, Vol. 6, No. 8,

August 1973, p.21-30. NIC 18561.

A discussion of the managerial, operational, legal, social, economic, and other aspects of computer-communications networks. Multiple overlapping and interconnected networks can raise many managerial and administrative problems that must be solved in order that full and satisfactory use may be developed in a fast maturing technology. Standards of use and function should be set in what is now a wilderness of different equipment, methods, languages, and techniques. Five important points for management consideration of fundamental policy issues are given.

7b5

Einar Stefferud (Einar Stefferud and Associates);David L. Grobstein (Picatinny Arsenal);and Ronald P. Uhlig (U. S. Army Materiel Command). Wholesale/Retail Specifications in Resource Sharing Networks. In: Computer, Vol. 6, No. 8, August 1973, p.31-37. NIC 18560.

Technical interest notwithstanding, the primary avowed reason for building general purpose computer networks has been to derive the benefits of sharing general purpose computer facilities among a large number of users. Advantages are both operational and managerial. A new functional structure of the resource-sharing in computer networks is suggested, comparable to the wholesale-manufacturing and distribution and the retailing of goods to consumer, in that the network resources are spread through many channels and relayers before reaching their end users. Consumer concept differentiation is required in order that resources may be oriented toward consumer needs.

7b6

Thomas N. Pyke, Jr., R. P. Blanc (National Bureau of Standards, Institute for Computer Sciences and Technology). Computer Networking Technology - A State of the Art Review. In: Computer, Vol. 6, No. 8, August 1973, p.13-19. NIC 18558.

Highlights of computer networking technology as represented in existing and planned networks are reviewed. This paper first identifies how they are configured and controlled, and concludes by summarizing several major challenges that now face network planners and designers. Of particular interest for future work are network design, routing strategies,

better understanding of network flow control, new types of higher level protocols, channel allocation in large networks, mixed traffic studies, efficient use of multiaccess satellite channels, network interfacing, and network measurements and their techniques.

7b7

David J. Farber (University of California at Irvine). Guest Editorial: The Three Faces of Computer Networks. In: Computer, Vol. 6, No. 8, August 1973, p.10-11. NIC 18557.

The long term impact of resource sharing networks in our society is yet to be determined. One of the potential outcomes of large scale resource sharing across major organizational boundaries could be a restructuring of the computer industry. Computer networks will have profound impacts on the nation's utility regulations, on corporate management, on the privacy of individuals, and on the organization of the industry itself. These impacts are considered in this special issue of Computer, dedicated to computer networking.

7b8

M. V. Zelkowitz and A. K. Agrawala (University of Maryland). KWIC Index for Computer Networks. In: Networks, Vol. 3, No. 2, 1973, p.135-171. NIC 18554.

A comprehensive bibliographic KWIC list of most available references published through the end of 1972. Emphasis is on the design of store and forward computer networks, e.g., the ARPANET, but included are many related papers in the areas of data communications, timesharing systems, computer management and information systems. A KWIC Index, Author Index, and a Bibliography are given.

7b9

James J. Andover. Futurism: For Fun and Profit. In: IEEE Spectrum, Vol. 10, No. 7, July 1973, p.37-38. NIC 18538.

Most educated men have begun to understand the imperatives of change. The future has become the subject of serious and respected study in recent years among a growing number of scientists, philosophers, social researchers, planners, and administrators. Forecasting is expected to be applied with increasing regularity in technology assessment, particularly since the U.S. Congress has created the Office of Technology

Assessment to anticipate the impact of new technology. One of the chief tools to be used in this forcasting will be the various capabilties of the computer industry and computer networks.

7b10

David L. Retz (University of California at Santa Barbara, Computer Systems Laboratory). Programming the PDP-11 Very Distant Host for Use on ARPA-Style Networks. 5p. 8 August 1973. NIC 18242.

A description of the PDP-11 Very Distant Host interface device design and use. Details of the Control and Status Register (CSR), for both input and output are given.

7b11

(ccn) Availability of 1970 Census Data

7c

The 31 July 1973 issue of the CCN Newsletter, obtainable by phoning requests to: (213) 825-7548, is devoted to a description of the availability on the UCLA 91 of 1970 Census Data and assorted programs for retrieval.

.....Jean Iseli

7c1

(rsexec) New Release by BBN

7d

A new version of the Resource Sharing Executive (RSEXEC) system has been distributed to ARPANET TENEX sites by BBN. The new version supports a number of new features. Chief among them is its ability to provide a distributed file system environment within which users may define and maintain file directories that span several network (TENEX) Hosts. In effect, RSEXEC extends the range of many of the standard TENEX EXEC file system commands beyond the boundaries of the user's local TENEX to encompass all TENEX systems on the network.

7d1

Users who have been using the standard TENEX FTP user program to maintain files and directories on several TENEXs should find RSEXEC an attractive alternative. Those who regularly access TENEX remotely from TIPs and use TIPCOPY to obtain listings of their files at their TIPs should find that the BIND, LIST and COPY (to LPT:) commands of RSEXEC provide an alternative means

to obtain such listings.

7d2

Users desiring more information on RSEXEC are encouraged to login to their favorite TENEX, invoke RSEXEC and type the command "HELP <CR>" which briefly explains how to obtain detailed information about RSEXEC features. [TIP users may access RSEXEC directly via the TIP "@n" command). Those interested in the design and implementation philosophy of RSEXEC are referred to the paper "A Resource Sharing Executive for the ARPANET" presented at the 1973 National Computer Conference (also NIC 14689). Comments, suggestions and complaints should be directed to Bob Thomas (BTHOMAS@BBN) or Paul Johnson (JOHNSON@BBN).

7d3

RSEXEC is by design an evolutionary system. the next major addition planned for the system is to make the distributed file system features, now available at the command language level, available at the executing program level.

7d4

..... Bob Thomas (BBN-TENEX)

7d5

To return to contents outline type s[how]n1 CR

7e

(n8) PLANS

8

(netchanges) IMP and TIP Additions and Changes

8a

The following changes were announced by Alex A. McKenzie [(AAM) : BBN-NET : (617) 491-1850 ext 441] in NIC 18618, 22 August 1973.

8a1

(1) UTAH will be changed to a TIP on September 6-7. The TIP address will be 132.
(2) The current Aberdeen 316 IMP will be replaced by a 516 IMP on September 13-14.
(3) The address of the MULTICS machine will be changed from 6 to 44 sometime after September 20, at the discretion of site personnel.
(4) A TIP will be installed at Wright-Patterson AFB on October 11. The Network address will be 175.
(5) The University of Michigan will be added as a Very Distant Host on the Case IMP on or after October 4; their address will

be 77.
(6) A Very Distant Host interface (address 95) will be added to CCA on December 6.
(7) A Very Distant Host interface (address 130) will be added to SRI on December 6.
(8) Belvoir will gain a second Host interface whose address will be 91.

All above addresses have been given as decimal numbers.

8a2

(AEC) Plans to Enter the Network

8b

Several Atomic Energy Commission installations are planning to enter the Network in the near future. These sites include Argonne National Laboratory (360/195), Lawrence Berkeley Labs (CDC 7600), and New York University (CDC 6600).

8b1

They are presently working to implement some local conventions to allow use of FTP to transfer a file, have it queued for execution, and return output and status information, and to avoid RJE protocol at this time. (see NIC 17797, RFC 551 by Yeshiah Feinroth and Robert Fink).

8b2

To return to contents outline type s[how]n1 CR

8c

(n9) OTHER NEWS

9

No insert this month.

9a

To return to contents outline type s[how]n1 CR

9b

(n10) FORUM

10

No insert this month.

10a

To return to contents outline type s[how]n1 CR

10b

ARPANET News, Issue 7, September 1973

(u1) Update 12 September

11

(ants) ANTS Users Group Newsletter Extracts

11a

....Extracted from ANTS Users Group NEWSLETTER by JI

11a1

(status) Current status of MARK II development

11a2

Testing is beginning in the first week in September on the MARK II system.....

11a2a

Recently, new staff has been added to the ANTS development effort. New customization group members include Steve Holmgren, Bill Dolson, and Judy Kravitz. In the language area, Martin Ozga has joined Dave Grothe and expanded the effort in PEESPOL development.

11a2b

Development of Mark II ants is proceeding with the following projected milestones:

11a2c

October 15: MARK II.0 release (Initial TELNET only..)

11a2d

December 1: MARK II.1 (includes: files, FTP, NETRJE)

11a2e

January 1: MARK II.2 (includes: accounting, login)

11a2f

September 15: Preliminary PEESPOL reference manual release.

11a2g

January 1: Final PEEPOL reference manual release. 11a2h

MARK II reference manual release.

11a2i

(amc) AMC Remote Job Entry Access System Progress

11a3

The experimental remote job entry access system to the MERDC CDC 6600 system is nearing operational testing...hardware

delivered....being checked out....IMP Interfaces and initial system checkout will be done during September....MARK II software checkout beginning in early October.

11a3a

Final system integration will take place at Ft. Belvoir with both PDP-11 systems hosted on a single IMP...will be followed with the transfer of the Ballistics Research Lab system to Aberdeen Proving Grounds in the final checkout with the network involved. Plans are being made for expansion of the BRL system to include up to three more remote job entry terminals and up to sixteen more direct-connectd terminals.

11a3b

(plato) Connecting PLATO to the ARPANET

11a4

A cooperative effort is currently underway between the University of California at Santa Barbara, the Network Terminal Systems Group, and the PLATO IV system at the University of Illinois to provide an experimental linkup,...of a PLATO IV terminal at UCSB....through the network...into the PLATO IV system. The testing ....scheduled for latter part of October...

11a4a

Involving various links accross the network, including the UCSB OLS system, the University of Illinois ANTS,.....several hardware boxes developed by UCSB, the "link" will provide a transparent data path from the PLATO system to the PLATO terminal over the ARPA network.....

11a4b

(news-schedule)

11b

The following schedule for the ARPANET Newsletter is announced:

(1) News must be received by the twenty fifth (25th) of the month to appear in the following months on-line and hard-copy issues. News received after that date will be included in the updates to the following months issue and appear as part of the succeeding months on-line and hard copy issues.

(2) The on-line version of the ARPANET Newsletter will be available by the fifth (5th) of each month that it is published.

(3) The hard-copy issue will be mailed from the NIC by the seventeenth of each month it is published.

Your ongoing support and contribution to the ARPANET Newsletter is appreciated and solicited.....The Editors

11b1

ARPANET News, Issue 7, September 1973

(J18748) 19-DEC-73 12:16; Title: Author(s): Jean Iseli/JI; Keywords:
ARPANET News; Sub-Collections: NIC; Clerk: MEJ;
Origin: <NIC-WORK>ARPANEWSSEPTEMBER.NLS;6, 19-SEP-73 08:40 JBN ;

AAM 31-AUG-73 08:58 18778

Possible Improvements to NIC 5150

Dear Jeanne.
I have just received the 17 August update to the "Current Directory of Network Participants" and have a few suggestions which I think would make it better and/or easier to use.
1) The "Brief Directory of Network Individuals" should not be in the reduced-size typeface. but should be the same typeface size used for the "Comprehensive Listing of Network Idents".
2) The "Organizations" section should start with an index, for two reasons: its now harder to find a particular organizatio's listing (just by a bit) and. I think, for example of "Aberdeen" rather than "BRL". Thus, if I'm looking for the name of the Liaison at that site it would help me to have a list of the English-language names of the listed sites along with the idents used to alphabetize the listing.
3) In the "Directory of Network Organizations", now that there are several organizations to a page, how about a solid (or dashed, I'm not fussy) line all the way across the page to seperate the listings for different organizations. I think this would help one to locate boundaries more easily
Regards.
Alex

1

18778 Distribution
Jeanne B. North, Nancy J. Neigus,

AAM 31-AUG-73 08:58 18778

Possible Improvements to NIC 5150

(J18778) 31-AUG-73 08:58; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /JBN NJN; Sub-Collections: NIC; Clerk: AAM;

comments on tickler file system

These are comments i have on the tickler file . 1

the date of the last update on the file should appear as the 1st statement. the date would be changed as a first step in the sop for entering or changing items by a replace statement? 1a

an (*) or some other identifier would note the changes made. this (*) would appear at the beginning of each item i.e. statement. the (*) would be deleted as part of the sop after the date is entered by a delete character (*) everytime it appears. 1b

the printout period covered should be at least two weeks. vacations and travel are the primary reasons. also, large scale reqmts take at least that much time to prepare . some, such as tpo, form 30, etc. take longer so even a longer period or provisions for these type items should be considered. 1c

another file should be created which is historical and points to actions taken on past tickler items. this could be a first cut at implementing the dialogue support journal capability that jim bair spoke of. 1d

i have read joe's and bobbie's comments and can only say that our group has to keep plugging and show nonbelievers that our system is better than what we have now. as with all things associated with this system. it will cause pain and frustration for us believers. 1e

18780 Distribution
Frank J. Tomaini. John L. McNamara. John L. McNamara. Duane L. Stone, Joe P. Cavano. Edmund J. Kennedy.

RBP 31-AUG-73 11:27 18780

comments on tickler file system

(J18780) 31-AUG-73 11:27: Title: Author(s): Roger B. Panara/RBP;
Distribution: /FJT JLM JLM DLS JPC EJK; Sub-Collections: RADC; Clerk:
RBP:
Origin: <PANARA>TICKCOM.NLS;1, 31-AUG-73 11:23 RBP ;

NJN 31-AUG-73 11:31 18781

Directory of Participants Update

Jeanne--
In flipping through the latest update to the Directory of Network Participants, I found that the organizations section was impossible to read. I realize it is a great saving of paper to have several organizations on one page, but they are so tightly meshed that you can't tell where one ends and the other begins. In addition, there are rarely site names at the top of the page so thumbing through an alphabetical listing is very difficult. if you must have more than one site on a page (and I agree that it is a good idea for sites with less than a couple of personnel) please start with a site heading at the top of the page.
--Nancy

1

18781 Distribution
Jeanne B. North, Marcia Lynn Keeney,

NJN 31-AUG-73 11:31 18781

Directory of Participants Update

(J18781) 31-AUG-73 11:31; Title: Author(s): Nancy J. Neigus/NJN;
Distribution: /JBN MLK; Sub-Collections: NIC; Clerk: NJN;

RBP 31-AUG-73 11:45 18782

5550 task engineer

john, you have to assign a task leader for project 5550 task 04 to relace sliwa. this person will have to revise the write-up in the program management plan (preferably using the system) which will be due about 10ct and will also have to pick up the contracts frank was handling and take car of reporting on them (e.g. JOCAS, MASIS, Management Reports). You may or may not want the same man to be lead engineer on the d&f for modelling and to act as the JTSA contact. Please inform me of who you assign this responsibility so that I can get together with him and discuss the work involved.

1

18782 Distribution
John L. McNamara.

5550 task engineer

(J18782) 31-AUG-73 11:45; Title: Author(s): Roger B. Panara/RBP;
Distribution: /JLM; Sub-Collections: RADC; Clerk: RBP;
Origin: <PANARA>REPLACEMENT.NLS;1. 31-AUG-73 11:43 RBP ;

AHI TRAINING

TNLS TRAINING SYLABUS: 1

This will be a brief outline based on 4-5 hr. classes, 1 per day. The important feature is not the organization by day, but the order of topics, ie. the commands to be learned. 1a

EXECUTIVE'S COURSE: SHORT BASIC 1b

THE EXECUPORT TERMINAL AND USE 1b1

NETWORK Login protocals 1b2

TENEX Executive Login procedure 1b3

Send Message & Linking 1b4

NLS for teletypes 1b5

Initials file and uses 1b5a

JOURNAL SYSTEM: messages & files 1b5b

EDITING (intrafile) 1b5c

Insert, print, delete 1b5c1

BASIC COURSE 1: *** SESSION 1 ********** 1c

INTRODUCTION 1c1

Purpose of system 1c1a

Use in this environment 1c1b

Overview of system by functional structure (show relationship of sub-systems) 1c1c

THE EXECUPORT TERMINAL AND USE 1c2

NETWORK 1c3

Relationship 1c3a

Login protocals 1c3b

TENEX Executive 1c4

Login procedure 1c4a

AHI TRAINING

Editing, printing, partial copies, viewspecs 2e1

OUTLINE of TNLS course in Wash. DC May, 73 (3p) 2f

JOURNAL =DVN 2f1

"TNLS" in the title word index, incl. reactions to courses. 2g

"MFA" = Plan for making primers 2g1

also see the titleword "Mayer" DVN 2g2

Novice interface group--see hardcopy given by DVN 2h

See most recent proposal for stuff on NIC= titleword pre-Jul72 2i

OBJECTIVE: 3

The objectives of this task are to introduce AHI to ISI personnel to demonstrate its utility to engineers and management, and to facilitate the analysis/evaluation of AHI technology's application to Air Force knowledge workshop problems. 3a

DESCRIPTION: 4

The immediate goal of this task is to give IS management a capability to communicate through AHI: an Executive capability. 4a

A number of activities must precede the use of NLS for program-call. 4a1

The terminal configuration at RADC must be specified. 4a1a

The terminal specs must be forwarded to BBN so that provision for their interfacing to the TIP can be made by BBN. 4a1b

An agreement (deccom.:m) must be reached with SRI on the amount of support RADC can expect from them and what it will cost, i.e. , manpower, modifications to NLS for new terminals, modification to the SRI/NCP to allow RADC access to full NLS capability, purchase and modification of terminals for RADC use, computer time, disc space, etc. 4a1c

Subsequently, training of ISI people must be completed. The above must be accomplished between June and 1 November to have all components of the system ready for the utility service. The critical activities appear to be the specification and procurement of terminals and subsequent training on them. 4b

AHI TRAINING

RELATIONSHIP TO OTHER MIS ACTIVITIES: This task has a goal similar to the WPS task, namely, to show local engineers and management how proper application of advanced tools can make people more effective in their work. 5

It is dependent upon the ARPA Net task to provide the TIP, communication lines, and terminal interfaces necessary for economic connection of multiple terminals to SRI's ARC facilities. 6

It is indirectly related to all other tasks in the section, since task write-ups must be entered and maintained up-to-date prior to the program-call exercise by the responsible task leader. 7

RESOURCES REQUIRED: 8

Item1 - Terminals: 8a

a. Manpower - 20% D. Stone
- 10% t. Lawrence
- 5% J Bair 8a1

b. Money - 50 - 75K for 4-5 Crt plus mouse, one high quality printer 8a2

Item 2 - Terminal/TIP Interfaces 8b

a. Manpower - 10% D. Stone
20% T. Lawrence 8b1

b. Money - 5K for modems 8b2

Item 3 - SRI Support 8c

a. Manpower - 10% D. Stone 8c1

b. Money - 50-75K for mods to SRI7s Ncp and Nls, computer time and space, general support 8c2

Item - Training 8d

a. Manpower - 20% D. Stone
30% J. Bair
10% T. Lawrence
10% all other ISI 8d1

Recommendation for Resident Architect 8e

Bringing up an additional organizational unit would be greatly facilitated by phisically relocating an expeerienced and

knowlegdeable AKW in the same area with the neew users after their initial training period. 8e1

18783 Distribution
Edmund J. Kennedy, Roger B. Panara.

AHI TRAINING

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