NIC 7104, the Protocol Notebook

Dear Jeanne and Marcia,
I just received the July 13 update to NIC 7104, and it reminds me
that RFCs #381 and #394 no longer belong in the "IMP-HOST PROTOCOL"
section.   therefore, the next time the notebook is updated, please
tell people to throw those two entries away. On the other hand,
until BBN Report No. 1822 is next updated, that section SHOULD
contain RFC # 533
Regards,
Alex McKenzie   1

NIC 7104, the Protocol Notebook

(J17977)   23-JUL-73 12:45;   Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /JBN MLK; Sub-Collections: NIC; Clerk: AAM;

the ids data base has been expanded to handle the data related
to travel in the division or branch. this expansion was accomplished
as of six july. all that is needed is data to load and an interested
user......signed dave daughtry.   1

(J17980)   23-JUL-73 13:30;   Title: Author(s): David L. Daughtry,
David L. Daughtry/DLD2 DLD2; Distribution: /FJT; Sub-Collections: NIC;
Clerk: WPB;

info on ejk group

personnel		1
ejk	1.0	1a
elf	0.6	1b
rbp	0.7	1c
dls	1.0	1d
jpc	1.0	1e
maw	0.3	1f
		1g
TOTAL	4.6	1h

job	ejk	elf	rbp	dls	jpc	maw	TOTAL	
AKW eval.				.1			.1	2a
line printer						.1	.1	2b
NLS service				.1			.1	2c
Terminals		.1		.1		.2	.4	2d
NLS/IDS	.3		.3		.5		1.1	2e
Training	.2						.2	2f
Adv Manag Tech			.3	.1	.4		.8	2g
AKW Eval	.3	.4		.4			1.1	2h
*******************								2i
NIC/ARC 0927	.1	.1	.1	.1	.1		.5	2j
Data sup A/S 9339	.1			.1			.2	2k
								2l
TOTALS	1.0	.6	.7	1.0	1.0	.3	4.6	2m

info on ejk group

(J17981) 23-JUL-73 13:38;   Title: Author(s): Edmund J. Kennedy/EJK;
Distribution: /EJK JLM FJT(for bucciero); Sub-Collections: RADC; Clerk:
EJK;
Origin: <KENNEDY>GROUP.NLS;1, 23-JUL-73 13:36 EJK ;

a meeting has been set up during the period one thru three
august with mrrs caral giammo of the joint technical support agency
and several contractors doing work related to pertinent jtsa
efforts...the contractors are sdc, prc, and sai...project monitors
are iourno, daughtry, and wingfield respectively..purpose of the
meeting is to brief synopsis of jtsa efforts to giammo and introduce
giammo to daughtry........signed .. dave daughtry.   1

(J17982)   23-JUL-73 13:38;   Title: Author(s): David L. Daughtry/DLD2;
Distribution: /JLM; Sub-Collections: NIC; Clerk: WPB;

Invalid Username

While looking through the identfile I found that you have an
invalid username. This is because you have specified your delivery
as online, while you do not yet have your own or someone elses
directory in which to receive online journal mail. I suggest you
talk to the Liaison at CASE-10, Patrick Foulk about getting a
directory or using the groups directory, or however they work such
things at your site. In the meantime I have changed your delivery to
"hardcopy" so that you'll be sure to receive mail sent to you till
you have your user. Marcia keeney, Station Agent, Network
Information Center.   1

Invalid Username

(J17983)   23-JUL-73 14:48;   Title: Author(s): Marcia Lynn Keeney/MLK;
Distribution: /TLB; Sub-Collections: SRI-ARC; Clerk: MLK;

Why your Ident File entry was changed

Dave-- Marcia gave you NETWORK Journal delivery at my request. On
18-JUN you responded via SNDMSG to my RFC soliciting requests for
NETWORK delivery.   You specified host and mailbox information; your
ident file entry was unpdated accordingly. Did I misread your SNDMSG?
--Jim   1

Why your Ident File entry was changed

(J17984)   23-JUL-73 15:51;   Title: Author(s): James E. (Jim)
White/JEW; Distribution: /DHC; Sub-Collections: SRI-ARC; Clerk: JEW;

re: IMNLS for SDAC

Ken: here's the branch, plus associated definition of "sdac":   1

　　sdac=13; %SDAC-Tip Imlac%   1a

　　ELSE IF OPTION site=sdac THEN CONSTANT   1b

　　　intco=1, intkbd=1, inttmr=1,   1b1

　　　armwd=72B, iogear=0, tablet=0, lvh=1,   1b2

　　　serint=0, parchk=0, dpage=1B4,   1b3

　　　lcht=1240B, keybd=stdkbd, loader=17640B,   1b4

　　　ldfmt=4   1b5

Thanks...Buz   2

re: IMNLS for SDAC

(J17985) 23-JUL-73 15:52; Title: Author(s): A. D. (Buz) Owen/ADO;
Distribution: /KEV; Sub-Collections: NIC; Clerk: ADO;

Question about DEC's weekly PM

Our processor problems at the end of last week raises an important
question about the thoroughness of DEC's weekly PM. We experienced
consistant difficulty starting Wednesday evening at 6:00 PM through
Thursday and Friday until the trouble was diagnosed. Unless this was
one of those wierd ones that went away by restarting the machine,
DEC's diagnostics should have detected the problem during one of
their two PM periods.   1

Question about DEC's weekly PM

(J17986) 23-JUL-73 16:07; Title: Author(s): J. D. Hopper/JDH;
Distribution: /JCN WRF MEH; Sub-Collections: SRI-ARC; Clerk: JDH;

NIC-query

Could you add me to the NIC-QUERY interest group?   1

NIC-query

(J17987)   23-JUL-73 19:43;   Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /JAKE; Sub-Collections: SRI-ARC; Clerk: KIRK;

17988 Distribution
  Marcia Lynn Keeney,

network mailbox

please useO'SULLIVAN at isi for my netmail ,thanks.   1

network mailbox

(J17988)   24-JUL-73 07:58;   Title: Author(s): Thomas O'Sullivan/TO;
Distribution: /MLK; Sub-Collections: NIC; Clerk: TO;

Recent NGG meeting minutes are available

I have prepared minutes for the NGG meeting. They are in
<DMCG-MIT>NGGMIN   Please edit them as you see fit.   I plan to submit
the minutes as an RFC on Friday Aug 3 if I don't hear howls from you.
Since that is a week and a half from now, you should get this in
time. You may know I can be reached at JCM@DMCG when the system is
up. phone 617-253-1430.   1

17989 Distribution
   Ira W. Cotton, Elaine L. Thomas,

Recent NGG meeting minutes are available

(J17989)   24-JUL-73 08:44;   Title: Author(s): James C. Michener/JCM;
Distribution: /IWC ELT; Sub-Collections: NIC; Obsoletes Document(s): ;
Clerk: JCM;

Three week Preview

(jfourth)   1

  (jm4)   1a

  (jt4)   1b

  (jw4)   1c

    Nelson/McNamara dry runs 1300 for Col T - Program call   1c1

    Laboratory Activity Reports are due tomorrow.   1c2

  (jth4)   1d

    Nelson/McNamara center program review - all morning   1d1

    Laboratory Activity Reports due today: Bucciero must have them
by 1000, ISM must have them by 1100, and DOT must have them by
1600.   1d2

  (jf4)   1e

    For TB and Bobbie only - Submit travel figures to ISM/Aggie by
1200 hrs.   1e1

(jfifth)   2

  (jm5)   2a

  (jt5)   2b

    form 2's (jemployee time expenditures) are due today.   2b1

    form 6's (jprojected nampower) are due today.   2b2

(afirst)   3

  (aw1)   3a

    For TB only - Financial Forecasting - FY-74 and Prior Years
Balances is due today.   3a1

    Accomplishment Report is due today.   3a2

    Laboratory Activity Reports are due tomorrow.   3a3

  (ath1)   3b

    Laboratory Activity Reports due today: Bucciero must have them

by 1000, ISM must have them by 1100, and DOT must have them by 1600.   3b1

(af1)   3c

For TB and Bobbie only - Travel figures due at 1200 hrs to ISM.   3c1

Timecards are due today   3c2

17990 Distribution
    John L. McNamara, Edmund J. Kennedy, Frank J. Tomaini, Joe P. Cavano,
    Duane L. Stone, Rocco F. Iuorno,

Three week Preview

(J17990) 24-JUL-73 11:44;   Title: Author(s): Frank J. Tomaini/FJT;
Distribution: /JLM EJK FJT(Please comment) JPC DLS RFI;
Sub-Collections: RADC; Clerk: FJT;

Network Journal Delivery Problems

Chuck -- To retrieve the entire text of a file whose citation is
delivered to you via FTP mail, present the pathname given in the
'Location:' field of the citation to SRI-ARC's server FTP process in
a RETR command. See the documentation (NDM RFC 543 --
17777,5a3b:gy).

We send deliveries out from here in upper- and lower-case. If you
see it as all upper-case, could be your system is doing you favors
you aren't aware of. If that's not the case, let me know. --Jim   1

17991 Distribution
  Chuck S. Kline,

Network Journal Delivery Problems

(J17991)   24-JUL-73 12:58;   Title: Author(s): James E. (Jim)
White/JEW; Distribution: /CSK; Sub-Collections: SRI-ARC; Clerk: JEW;

mr enen townes of esd (sco for wwmccs contract) has informed me
that he is now amending the wwnccs contract to call for subsequent
wwmccs software releases to be sent to radc...mr townes will send a
copy of the amendment to radc/is attn capt daughtry....he says
further that the amendment probably won't be effective until end of
august....signed dave daughtry.   1

17992 Distribution
   Frank J. Tomaini,

(J17992)   24-JUL-73 14:07;   Title: Author(s): David L. Daughtry/DLD2;
Distribution: /FJT; Sub-Collections: NIC; Clerk: WPB;

RFC # 555   James E. White (JEW)
NIC # 17993   SRI-ARC
                                                           27 July 73

            Response to Critiques of the Proposed Mail Protocol

                                                                        1

A number of people have responded to my proposal for a Mail
Protocol (JEW RFC 524 -- 17140,2:y). In the current RFC, I've
attempted to collect and respond to the questions, complaints,
and suggestions that various individuals in the Network
community have offered. I intend to critique myself in a
forthcoming RFC.   2

I hope that dialog on the protocol proposal will continue, and
that others will join in the discussion. I will respond via RFC
to any additional critiques I receive (I hope there'll be many).   3

I. QUESTIONS   4

    HOW DOES THE SERVER VERIFY AN ID?   4a

        References: 4a1

            (DHC JBP RFC 539 -- 17644,3g:gy)   4a1a

        Discussion: 4a2

            One postulates the existence of AT LEAST ONE host whose
            Mail server process implements the User Verification
            Function (JEW RFC 524 -- 17140,5f7:gy). Any process
            can contact that server, give him the name of any
            Individual in the Net and a test Id, and the server
            will determine whether or not the Individual and Id
            agree.   4a2a

                The NIC, for one, will without question provide this
                service.   4a2a1

            With such support available to it, ANY FTP server
            process can then require (of any or all user processes
            that contact it) an ID command wherever it wishes
            within the user-server interchange (within the
            constraints of the Protocol). The server simply
            prompts for the Id, gets it, opens a connection to the
            User Verification Agent, presents to it the
            Individual's name and purported Id, receives a positive
            or negative response, and deals with the original user
            process accordingly.   4a2b

        Example: 4a2c

            Suppose a user process opens a connection to
            UCLA-NMC's server process, invokes the Delivery
            function, and in the course of the interchange
            identifies the Author as Roberts at USC-ISI.   4a2c1

            The implementors of UCLA-NMC's server process chose
            to require proof, in all Delivery transactions, that
            the Author is who he claims he is. It therefore
            prompts for an Id in response to the AUTHOR command
            from the user process, and receives in return the
            command 'ID arpawheel <CA>'.   4a2c2

            UCLA-NMC's server then connects to the NIC's server,
            invokes the User Verification function there,
            specifying 'REQUESTOR roberts @ usc-isi <CA>' and

'ID arpawheel <CA>'. The NIC informs UCLA-NMC that
the Id is incorrect.   4a2c3

UCLA-NMC then rejects the original ID command.   4a2c4

Of course, the Protocol does not require that a server
demand Ids from users that contact it. Servers who
choose not to require proof of identity simply never
prompt for ID commands, and treat any they receive as
NOPs. For such implementations (which represent the
current, FTP mail protocol situation), no third-part
interchanges are ever required.   4a2d

Each user in the Net has a single Id that he uses
throughout the Net for puroses of sending and receiving
mail. That Id need not (but may, either coincidentally
or by design) have any other use. In particular, a
user's Id is independent of the passwords by which he
gains access to accounts that he might possess on hosts
around the Net.   4a2e

Of course, a user could and might see to it that his
passwords and Id are the same. The NIC, for
example, might require that a user log in to its
system with NIC ident and Id, rather than with host
name and password, as it does currently.   4a2e1

I emphasize again that Ids have nothing whatsoever to
do with accounting. UCLA-NMC doesn't force the Author
to prove his identity so UCLA has someone to whom it
can bill the resources consumed in processing the
Delivery transaction. It does so to prevent Jim White
from authoring a piece of mail and claiming that Larry
Roberts wrote it.   4a2f

UCLA-NMC does have the option of requiring that a
user process log in before it delivers mail so that
it can be billed for the resources it uses. The
approprate commands to require of the user process
are USER, PASS, and ACCT. But, the billing process
is separable from that of identifying Author, Clerk,
etc.   4a2f1

The NIC, for example, in its role as a Distribution
Agent, might establish an account at UCLA-NMC to use
whenever it delivers mail there. UCLA-NMC will bill
ALL of the NIC's activity at UCLA to that account.
But when the NIC delivers a piece of mail it claims

was authored by Larry Roberts, UCLA-NMC may still
wish to verify that claim.   Hence the ID command.   4a2f2

ACK, PROGRESS REPORT, OR REPLY WITH NO REFERENCE SERIAL
NUMBER   4b

References: 4b1

(DHC JBP RFC 539 -- 17644,3h:gy)   4b1a

Discussion: 4b2

A Delivery of type POSITIVE or NEGATIVE ACKNOWLEDGMENT,
PROGRESS REPORT, or REPLY requires a Reference Serial
Number of the user process.   Should the server
determine that one is lacking when the final EXIT
command is given, he should reject the EXIT command
with an appropriate error response.   4b2a

The same applies in the Distribution function: a
Reference Serial Number MUST be specified if the
Delivery Type is REPLY.   4b2a1

The Protocol document is deficient in that it doesn't
state the above.   4b2b

II.   COMPLAINTS   5

   TERMINATING BOTH THE SUBSYSTEM AND FUNCTIONS WITH EXIT   5a

      References: 5a1

         (AAM -- 17404,)   5a1a

      Discussion: 5a2

         I have no objection to defining two terminating
         commands, one to exit a function, the other to exit the
         subsystem. I guess I'd suggest defining a command 'GO
         <CA>' to be used to terminate a function.   5a2a

         I don't believe, however, that's it's necessary to
         distinguish the two cases to avoid confusion by human
         users.   5a2b

         Even though the command language is ASCII, rather than
         binary, and even though I've adopted Mike Padlipsky's
         concept of a Unified USER Level Protocol', I don't
         consider that MP is a protocol for direct use by humans
         (although nothing can STOP a human user from speaking
         MP if he has access to a TELNET user program and is
         determined to do so).   5a2c

         The concept I mean to extract from the UULP and exploit
         is its model of a single process with many subsystems,
         not its philosophy of a Network-standard command
         language for use by human users (the latter may be a
         good idea, too, but it's not the one I'm concerned with
         at the moment).   5a2d

         I don't think that designing a protocol to govern an
         exchange between processes is the same task as
         designing a protocol to mediate a conversation between
         a process and a human user. Using ASCII commands
         suggests (as it did for FTP, RJE, etc.) that the latter
         problem is the one being addressed; it's not.   5a2e

   USING TELNET GO AHEAD TO TERMINATE CERTAIN COMMANDS   5b

      References: 5b1

         (AAM -- 17404,)   5b1a

         (RCC -- 17822,1a:gy)   5b1b

(DHC JBP RFC 539 -- 17644,3b:gy)   5b1c

Discussion: 5b2

    Agreed. My mistake.   5b2a

    I simply have a strong distaste for the current FTP
    convention of terminating commands whose argument may
    itself contain CR LF with 'CR LF . CR LF'. That seems
    a little extravagent to me. Personally, I'd prefer a
    single NVT character as a delimiter.   5b2b

    <CA2> only terminates two MP commands (COMMENTS and
    TEXT). Sone NVT character (ESC? ETX? ...) can easily
    be chosen that need not appear (and can therefore be
    prohibited from appearing by the Protocol) in the
    argument to either of those commands.   5b2c

SUBSYSTEM OR SEPARATE, RJE-LIKE SERVER PROCESS   5c

    References: 5c1

        (DHC JBP RFC 539 -- 17644,4a:gy)   5c1a

        (AAM -- 17404,)   5c1b

        (ADO RFC 552 -- 17809,3:y)   5c1c

    Discussion: 5c2

        There are two separable issues here: 5c2a

            (1) Server Process Proliferation or Not?   5c2a1

                If the concensus of the Network community is that
                Padlipsky's UULP approach to protocol design and
                implementation is in fact superior to the current
                scheme, which calls for the implementation of
                each new Network protocol as a distinct server
                process with its own contact socket, then we
                should begin to embrace that concept and begin
                reshuffling existing protocol implementations
                accordingly. Even more surely, NEW protocols
                (like MP), should be designed in accordance with
                the new standards, not the old.   5c2a1a

                I think Buz Owen's suggestion (ADO RFC 552 --
                17809,3:y) -- that a skeletal UULP be defined, a
                socket assigned to server processes which

implement it, and MP defined as a subsystem under
it -- is excellent.   I retract my suggestion (JEW
RFC 524 -- 17140,3a2:gy) in favor of Owen's.   5c2a1b

I further suggest that the latest revision of FTP
(NJN RFC 542 -- 17759,) be similarly implemented
(i.e., as a UULP subsystem), rather then
implemented temporaily under a new socket and
later moved over to socket 3 as suggested in RFC
542.   5c2a1c

(2)   RJE's Model for FTP Use or Not?   5c2a2

If both MP (as currently defined) and RJE were
instated as UULP subsystems, they would still
embrace different philosophies regarding their
use of FTP.   As the person who proposed and
fought for the current RJE model (i.e., to its
use of FTP),   I (still) believe it to be an
elegant one, more elegant by far then the one
I've proposed for MP.   5c2a2a

An alternative I considered and discarded SOLELY
for reasons of efficiency (neglecting, perhaps,
the issue of cleanness of implementation), is
that the command currently defined as 'FILE <CA>'
(JEW RFC 524 -- 17140,4q2a:gy), both in
specifying Content and in the Citation Retrieval
function, be 'FILE <fileaddr> <CA>' instead.   5c2a2b

   The server is then obliged to retrieve the
   Content of the Mail from the designated server
   process via a third-party exchange.   5c2a2b1

The redefined FILE command would be similar to
the LOCATION command, except that the former
would specify JUST Content (and none of the other
Static Attributes), and that the Server must
retrieve the file (which may be a temporary file
created by the user process) in real time, i.e.
BEFORE it sends its response to the FILE command. 5c2a2c

This alternative eliminates the need to borrow
the BYTE, SOCK, PASV, TYPE, STRU, MODE, REST, and
SITE commands from FTP (JEW RFC 524 --
17140,7c1:gy).   It also allows the user process
the flexibility of specifying a file at a host
other than his own.   5c2a2d

> After some thought, I think I agree with Crocker
> and Postel that theirs is the better
> implementation.   5c2a2e

>> As they point out, however, this
>> implementation introduces the problem of
>> somehow reconciling the desire to permit (in
>> general) the transfer of mail files without
>> requiring a login, with a server's inability
>> to distinguish that case from the general case
>> of file retrieval (for which many hosts will
>> require a login).   5c2a2e1

USE OF THE DATE FORM 1/2/73 (JAN 2 OR FEB 1?)   5d

    References: 5d1
        (RCC -- 17822,1b)   5d1a
    Discussion: 5d2
        Agreed.   5d2a

ORDER OF PARAMETER SPECIFICATION   5e

    References: 5e1

        (DHC JBP RFC 539 -- 17644,3l:gy)   5e1a

    Discussion: 5e2

    The Protocol does not, as Crocker and Postel state,
    impose an order upon command specification within a
    function (see for example, JEW RFC 524 --
    17140,5f1b:gy).   5e2a

    Having considered their suggestion only briefly, it
    does seem to me appropriate to impose some constraints
    on the order of parameter specification by the user.
    Off hand, the order suggested -- Dynamic, Optional,
    Static -- seems good.   5e2b

III.   SUGGESTED ADDITIONS   6

    FORWARDING AT DELIVERY TIME   6a

        References: 6a1

            (DHC JBP RFC 539 -- 17644,4b:g)   6a1a

        Discussion: 6a2

            Including provision for the forwarding of mail at
            Delivery Time, in contrast to sometime after Delivery
            in response to a specific Forward request (i.e.,
            function), seems to me a useful addition to the
            Protocol.   6a2a

            As Crocker and Postel note, only one of the three
            mechanisms for such forwarding bears upon the Protocol
            (although the Protocol might mention the other two and
            either encourage or discourage their use).   6a2b

            I suggest the following reply format, however, rather
            than the one suggested by Crocker and Postel (DHC JBP
            RFC 539 -- 17644,4b3c2:gy):   6a2c

                476 <localname> -- is his location.   6a2c1

    DEFAULT SIGNAURE SHOULD BE THE AUTHOR   6b

        References: 6b1
            (DHC JBP RFC 539 -- 17644,3c:gy)   6b1a
        Discussion: 6b2
            Agreed.   6b2a

    LEVELS OF INTERRUPT   6c

        References: 6c1

            (DHC JBP RFC 539 -- 17644,3d:gy)   6c1a

        Discussion: 6c2

            I see no value to defining numeric shades of urgency,
            unless the Protocol suggests some particular action the
            server might take in response to each one.   6c2a

            The whole notion of flagging some pieces of mail as
            urgent seems to me useless unless the MP server process
            (not the human recipient) takes some kind of special

action for urgent mail, BEFORE the human recipient
would otherwise be apt to read the mail. If one
accepts that argument, there's clearly no point to
defining shades of urgency if they have meaning only to
the human recipient. True, any pair of human users
could privately agree on meanings, but it seems to me
preferable to define those meanings formally or not at
all.   6c2b

WARNING THE SERVER OF THE SIZE OF MAIL   6d

    References: 6d1
      (DHC JBP RFC 539 -- 17644,3f:gy)   6d1a
    Discussion: 6d2
      Agreed. Further suggestions as to the implementation?   6d2a

DISCOURAGING SERVERS FROM REQUIRING LOGINS   6e

    References: 6e1
      (DHC JBP RFC 539 -- 17644,3j:gy)   6e1a
    Discussion: 6e2
      Agreed. This is not a new issue.   6e2a

IV.   META-COMMENTS   7

   SIZE OF THE PROTOCOL DOCUMENT   7a

      References: 7a1

         (RCC -- 17822,1e:gy)   7a1a

      Discussion: 7a2

         I offer an apology for the format of the the Protocol
         document. It differs radically from that of previous
         protocol documents (e.g., FTP, RJE), and is certainly
         not tutorial in its orientation. The glossary is a
         device I found useful in designing the Protocol. If
         the substance of the Protocol were agreed upon, then
         friendlier documentation would have to be written. The
         choice of approach was greatly affected by my own time
         constraints.   7a2a

         As I find time, I would like to define the minimum
         implementation subsets that Clements requests. For the
         moment, consider the command breakdown below. It
         represents the case where the server permits only the
         function by which mail is delivered to users in his
         host. It has the following attributes: 7a2b

            (1) It supports all of the functions of the current
            FTP mail protocol. In addition,   7a2b1

            (2) It makes specification of author and title
            explicit, avoiding the current problem of multiple
            headers (one supplied by the server, the other
            embedded by the user in the text of the message), 7a2b2

            (3) It allows the text of the message to reside at a
            third host, and   7a2b3

            (4) It permits multiple recipients.   7a2b4

         The breakdown is the following: 7a2c

            COMMANDS THAT MUST BE IMPLEMENTED
            (Author and Title could be treated as NOPs)   7a2c1

               To enter the Mail subsystem: 7a2c1a
               MAIL <CA>   7a2c1a1
               To invoke the Delivery function: 7a2c1b
               DELIVER <CA>   7a2c1b1

```
To specify the text of the message:                    7a2c1c
    FILE <CA>                                           7a2c1c1
    LOCATION <fileaddr> <CA>                            7a2c1c2
    TEXT <string> <CA2>                                 7a2c1c3
To identify author(s), recipient(s), and title:        7a2c1d
    AUTHOR <individual> <CA>                            7a2c1d1
    RECIPIENT <individual> <CA>                         7a2c1d2
    TITLE <title> <CA>                                  7a2c1d3
To exit the function or subsystem:                      7a2c1e
    ABORT <CA>                                          7a2c1e1
    EXIT <CA>                                           7a2c1e2
```

COMMANDS THAT CAN BE TREATED AS NOPS
(they can legally appear in the Delivery function)   7a2c2

```
    ACCESS <individual> <CA>                            7a2c2a
    ACCESSTYPES <accesstypes> <CA>                      7a2c2b
    CATALOG <catalog> <CA>                              7a2c2c
    CLERK <individual> <CA>                             7a2c2d
    COMMENTS <comments> <CA2>                           7a2c2e
    CREATIONDATE <datetime> <CA>                        7a2c2f
    DELIVERYTYPE <deliverytype> <CA>                    7a2c2g
    DISPOSITION <disposition> <CA>                      7a2c2h
    GENERALDELIVERY <CA>                                7a2c2i
    GREETING <greeting> <CA>                            7a2c2j
    ID <id> <CA>                                        7a2c2k
    REFERENCESERIAL <serialnumber> <CA>                 7a2c2l
    SERIAL <serialnumber> <CA>                          7a2c2m
    SIGNATURE <signature> <CA>                          7a2c2n
```

COMMANDS THAT NEEDN'T BE RECOGNIZED
(they cannot legally appear in the Delivery
function)   7a2c3

Commands that invoke unsupported functions: 7a2c3a

```
    DISTRIBUTE <CA>                                     7a2c3a1
    FORWARD <CA>                                        7a2c3a2
    RECORD <CA>                                         7a2c3a3
    RETRIEVE <CA>                                       7a2c3a4
    UPDATE <CA>                                         7a2c3a5
    VERIFY <CA>                                         7a2c3a6
```

Miscellaneous parameter specification commands: 7a2c3b

```
    ACKCONDITION <ackcondition> <CA>                    7a2c3b1
    ACKTYPE <acktype> <CA>                              7a2c3b2
    CITATIONTEMPLATE <citationtemp> <CA>                7a2c3b3
    CUTOFF <interval> <CA>                              7a2c3b4
```

```
                        FORWARDEE <individual> <CA>              7a2c3b5
                        MONITOR <individual> <CA>                7a2c3b6
                        PATHNAME <pathname> <CA>                 7a2c3b7
                        REPORTINTERVAL <interval> <CA>           7a2c3b8
                        REQUESTOR <individual> <CA>              7a2c3b9
                        UPDATETYPE <updatetype> <CA>             7a2c3b10
```

CA AND CA2 NOT EXPLAINED SOON ENOUGH   7b

    References: 7b1
       (DHC JBP RFC 539 -- 17644,3a:gy)   7b1a
    Discussion: 7b2
       Agreed.   7b2a

CHANGE 'INTERRUPT' TO 'URGENT' OR 'PRIORITY'   7c

    References: 7c1
       (DHC JBP RFC 539 -- 17644,3e:gy)   7c1a
    Discussion: 7c2
       Agreed.   7c2a
       How about 'URGENT'.   7c2b

CARRY STATIC/DYNAMIC ATTRIBUTE DISTINCTION INTO FORMAL SYNTAX   7d

    References: 7d1
       (DHC JBP RFC 539 -- 17644,3i:gy)   7d1a
    Discussion: 7d2
       Agreed.   7d2a

CRYPTIC DEFAULT DESCRIPTIONS   7e

    References: 7e1
       (DHC JBP RFC 539 -- 17644,3k:gy)   7e1a
    Discussion: 7e2
       Agreed.   7e2a

(J17993) 30-JUL-73 12:12;   Title: Author(s): James E. (Jim)
White/JEW; Distribution: /NLG NAG NSAG JDDT FTPIG; Sub-Collections: NIC
NWG SRI-ARC NLG NAG NSAG JDDT FTPIG; RFC# 555; Clerk: JEW;
Origin: <WHITE>MAILRESP.NLS;15, 27-JUL-73 14:34 JEW ;

17993 Distribution
A. Wayne Hathaway, Robert C. Clements, Marc S. Seriff, Thomas F.
(Tom) Knight, Abhay K. Bhushan, Robert T. Braden, Arvolo Chan, Steve
D. Crocker, Eric F. Harslem, John F. Heafner, Jerry Fitzsimmons, John
T. Melvin, Robert M. (Bob) Metcalfe, Jonathan B. Postel, Ray S.
Tomlinson,
Steve G. Chipman, John P. Barden, Martha A. Ginsberg, Shirley W.
Watkins, Janet W. Troxel, Connie D. Rosewall, Linda M. Webster, Anita
L. Coley, Carol J. Mostrom, James E. (Jim) White, Richard W. Watson,
J. D. Hopper, Diane S. Kaye, Walt Bass, L. Peter Deutsch, Paul R.
Johnson, Milton H. Reese, Nancy J. Neigus, Ric Werme, Alex A.
McKenzie, Peter Kirstein, Bradley A. Reussow, Michael A. Padlipsky,
Robert H. Thomas, Robert G. Merryman, James M. Pepin, L. Peter
Deutsch, Michael D. Kudlick, John D. Day, Robert D. (Bob) Bressler,
Neal D. Ryan, Richard A. Winter, Richard W. Watson, Gregory P. Hicks,
James E. (Jim) White, Stephen M. Wolfe, Kenneth T. Pogran
Paul M. Rubin, Paula L. Cotter, O. A. Hansen, H. A. Thompson, Dan
Dechatelets, Nancy C. Thies, Travis L. Greening, Robert Silberski,
Marcia Lynn Keeney, Margaret A. (Maggie) Bassett, J. A. Smith, Leina
M. Boone, Diana L. Jones, Nancy J. Neigus, Terry Sack, Frances A.
(Toni) McHale, Lucille C. (Lucy) Gilliard, Ed J. Collins, Gary
Blunck, John F. Heafner, Kathy Beaman, David J. King, C. Jane Moody,
Sue Pitkin, Jerry Fitzsimmons, Gregory P. Hicks, Gloria Jean Maxey,
Roberta J. Peeler, Craig Fields, Ermalee R. McCauley, Margaret
Iwamoto, Dee Larson, Robert E. Doane, Brenda Monroe, Jeanne B. North,
Pam J. Klotz Cutler, Barbara Barnett, Stan Golding
Paul Baran, Henry Chauncey, J. T. Sartain, Robert N. Lieberman, Ralph
Alter, Nils Maras, Philip H. Enslow, Robert M. Dunn, Joseph B. Reid,
William T. Misencik, Toshiyuki Sakai, Louis Pouzin, Yngvar Lundh,
Robert H. Hinckley, Marvin Zelkowitz, Don D. Cowan, Louis F. Dixon,
Michael O'Malley, Peter Kirstein, David J. Farber, Dave Twyver, Art
J. Bernstein, Dave E. Liddle, A. Kenneth Showalter, D. D. Aufenkamp,
Derek Leslie Arthur Barber, Tjaart Schipper, Richard M. Van Slyke, E.
M. Aupperle, Hubert Lipinski, Robert F. Hargraves, C. D. (Terry)
Shephard, Maurice P. Brown, Robert L. Ashenhurst, Pitts Jarvis,
Barbara A. Nicholas, Jacquie A. Priest, Terence E. Devine
Thomas O'Sullivan, Sol F. Seroussi, Scott Bradner, Robert H. Thomas,
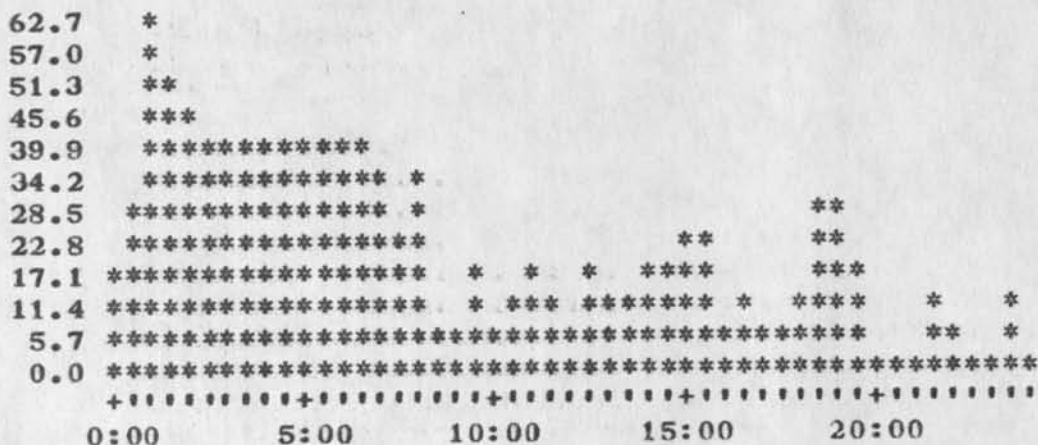John C. Thomas, Michael J. Romanelli, Ronald M. Stoughton, A. D.
(Buz) Owen, Robert L. Fink, Jeanne B. North, Steve D. Crocker, Thomas
F. Lawrence, John W. McConnell, James E. (Jim) White, A. Wayne
Hathaway, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren,
Alex A. McKenzie, Abhay K. Bhushan, B. Michael Wilber, Edward A.
Feigenbaum, Robert T. Braden, James M. Pepin, John T. Melvin, Harold
F. Arthur, Peter R. Radford, Wayne R. Robey, Joshua Lederberg, Connie
Hoog, Leonard B. Fall, James A. Blumke, David Hsiao, Michael L.
Marrah, Vinton G. Cerf, Richard G. Powell, Gerald L. Kinnison
Carl M. Ellison, Robert P. Blanc, Jay R. Walton, Steven F. Holmgren,
Terence E. Devine, David J. King, William L. Andrews, Milton H.
Reese, Kenneth M. Brandon, Lou C. Nelson, Jeffrey P. Golden, Richard
B. Neely, Dan Odom, Ralph E. Gorin, Robert G. Merryman, P. Tveitane,
Adrian V. Stokes, David L. Retz, Reg E. Martin, Gene Leichner, Jean
Iseli, James E. (JED) Donnelley, William Kantrowitz, Michael S.
Wolfberg, Yeshiah S. Feinroth, James Hurt, Anthony C. Hearn, Eric F.

1

Harslem, Robert M. (Bob) Metcalfe, Bradley A. Reussow, Daniel L.
Kadunce, George N. Petregal, Michael B. Young, Michael A. Padlipsky,
Schuyler Stevenson, L. Peter Deutsch, John Davidson

PDP-10   IMP72 COMPILER ABSTRACT

IMP is a simple higher-level language intended primarily for system
programming. It has been implemented on the PDP-10 and CDC 1604 and
6600 computers. It is meant to provide language facilities roughly
at the level of FORTRAN II yet allow the programmer the flexibility
of machine language programming including use of all the machine's
registers and instructions and arbitrary control of the program and
data areas while the program is running. IMP72 is a version of IMP
for the PDP-10 which provides the user with the following facilities: 1

1.   Extensibility. The user may specify extensions to the syntax
and semantics of the language in forms ranging from simple
"macros" to productions which generate calls to compiler
code-generating routines. More efficient object code may easily
be specified for special cases.   1a

2.   Floating point capabilities. A REAL data type and floating
point arithmetic are provided.   1b

3.   Byte manipulation capability.   1c

4.   No reserved words in the syntax.   1d

5.   Syntactic error correction, admissibility of ambigous syntax,
and improved diagnostics.   1e

PDP-10   IMP72 COMPILER ABSTRACT

(J17994) 24-JUL-73 18:38;   Title: Author(s): Walter Bilofsky/WB ;
Distribution: /NLG ; Sub-Collections: NIC NLG; Clerk: KIRK   ;

17994 Distribution

Robert H. Thomas, John C. Thomas, Michael J. Romanelli, Ronald M.
Stoughton, A. D. (Buz) Owen, Robert L. Fink, Jeanne B. North, Steve
D. Crocker, Thomas F. Lawrence, John W. McConnell, James E. (Jim)
White, A. Wayne Hathaway, Patrick W. Foulk, Richard A. Winter, Harold
R. Van Zoeren, Alex A. McKenzie, Joel M. Winett, Abhay K. Bhushan,
Thomas N. Pyke, B. Michael Wilber, Edward A. Feigenbaum, Robert T.
Braden, James M. Pepin, Barry D. Wessler, John T. Melvin,
Steven F. Holmgren, Terence E. Devine, David J. King, William L.
Andrews, Milton H. Reese, Kenneth M. Brandon, Lou C. Nelson, Jeffrey
P. Golden, Richard B. Neely, Dan Odom, Ralph E. Gorin, Robert G.
Merryman, P. Tveitane, Adrian V. Stokes, David L. Retz, Reg E.
Martin, Gene Leichner, Jean Iseli, James E. (JED) Donnelley, William
Kantrowitz, Michael S. Wolfberg, Yeshiah S. Feinroth, James Hurt,
Anthony C. Hearn, Eric F. Harslem, Robert M. (Bob) Metcalfe, Bradley
A. Reussow, Daniel L. Kadunce, George N. Petregal, Michael B. Young,
Michael A. Padlipsky, Schuyler Stevenson, L. Peter Deutsch, John
Davidson, Thomas O'Sullivan, Sol F. Seroussi, Scott Bradner

Superwatch Average Graphs for Week of 7/16/73

TIME PLOT OF AVERAGE IDLE TIME FOR WEEK OF 7/16/73
x axis labeled in units of hr:min, xunit = 30 minutes   1

```
    62.7   *
    57.0   *
    51.3   **
    45.6   ***
    39.9   ************
    34.2   ************** *
    28.5   ************** *                     **
    22.8   ****************              **      **
    17.1  ****************** *  *  *   ****      ***
    11.4  ******************  * *** ******* *   ****      *      *
     5.7  ***********************************************     **   *
     0.0  ***************************************************************
          +.........+.........+.........+.........+.........
          0:00      5:00     10:00     15:00     20:00
```
                                                                        1a

TIME PLOT OF AVERAGE NUMBER OF GO JOBS FOR WEEK OF 7/16/73
x axis labeled in units of hr:min, xunit = 30 minutes   2

```
     6.0
     5.4                           *
     4.8               *       *
     4.2               ** ** ***        *
     3.6               ** ******       * *
     3.0               ** *********   ****
     2.4               ******************** **    ***
     1.8              ******************** *** *
     1.2             *****************************************
     0.6   ** *****************************************************
     0.0  ***************************************************************
          +.........+.........+.........+.........+.........
          0:00      5:00     10:00     15:00     20:00
```
                                                                        2a
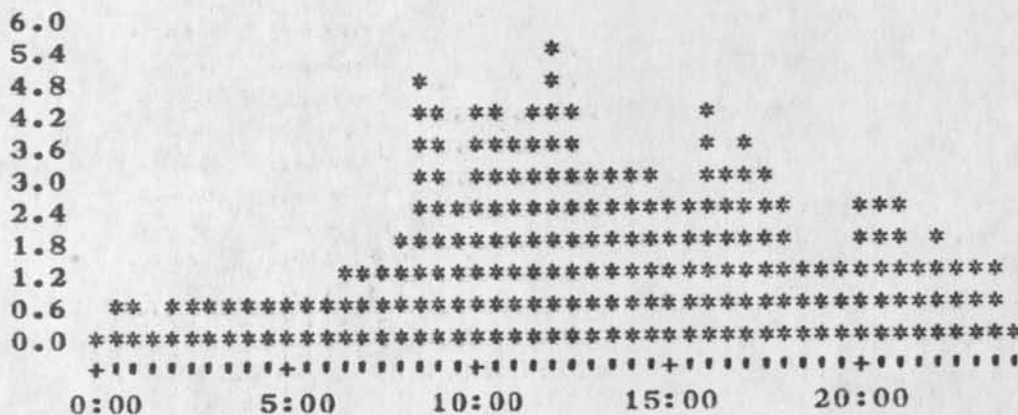
TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS FOR WEEK OF 7/16/73
x axis labeled in units of hr:min,   xunit = 30 minutes   3
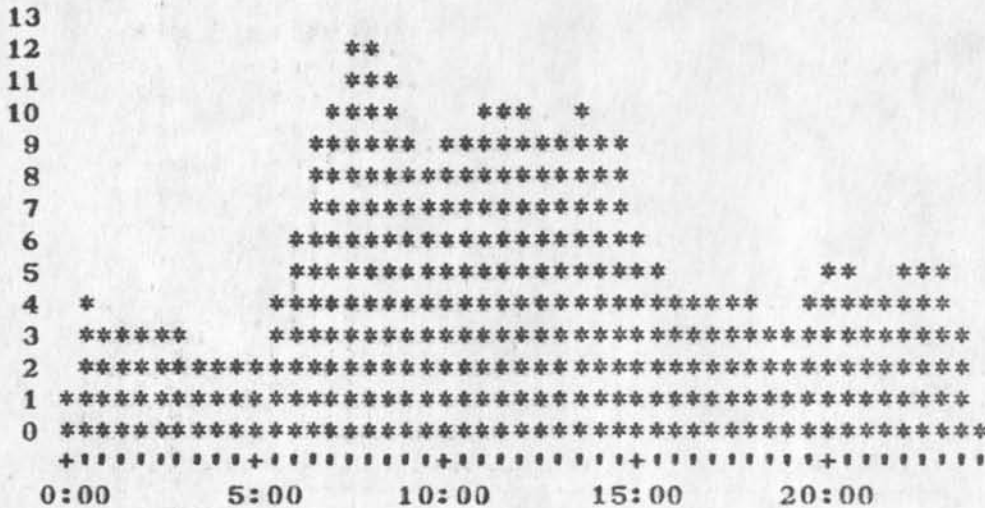
```
   13
   12                  **
   11                  ***
   10                 ****      *** *
    9                ******  **********
    8                *****************
    7                *****************
    6               *******************
    5               *******************        **  ***
    4   *           *************************   ********
    3   ******      ********************************************
    2   **** ***********************************************************
    1   ************************************************************
    0   ********************************************************************
        +••••••••••+••••••••••+••••••••••+••••••••••+•••••••••
       0:00      5:00      10:00     15:00     20:00                      3a
```

TIME PLOT OF AVERAGE PER CENT OF SYSTEM USED IN DNLS FOR WEEK OF
7/16/73
x axis labeled in units of hr:min,   xunit = 30 minutes   4
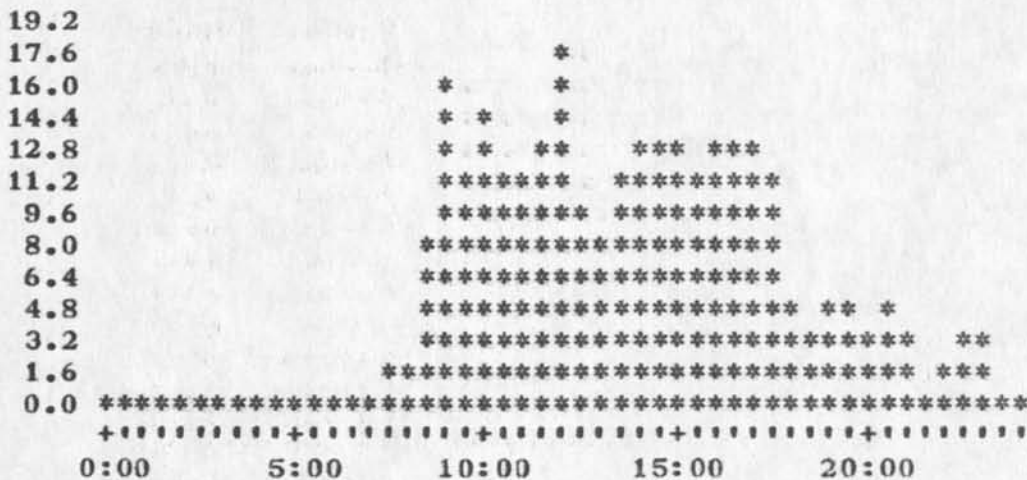
```
  19.2
  17.6                        *
  16.0               *        *
  14.4               * *      *
  12.8               * *  **    *** ***
  11.2               *******  *********
   9.6               ********  *********
   8.0               ********************
   6.4               ********************
   4.8               ******************** ** *
   3.2               ************************** **
   1.6               ************************** ***
   0.0 *****************************************************************
       +••••••••••+••••••••••+••••••••••+••••••••••+•••••••••
      0:00      5:00      10:00     15:00     20:00                       4a
```

Superwatch Average Graphs for Week of 7/16/73

TIME PLOT OF AVERAGE PER CENT OF CPU TIME CHARGED TO USER ACCOUNTS
FOR WEEK OF 7/16/73
x axis labeled in units of hr:min, xunit = 30 minutes   5
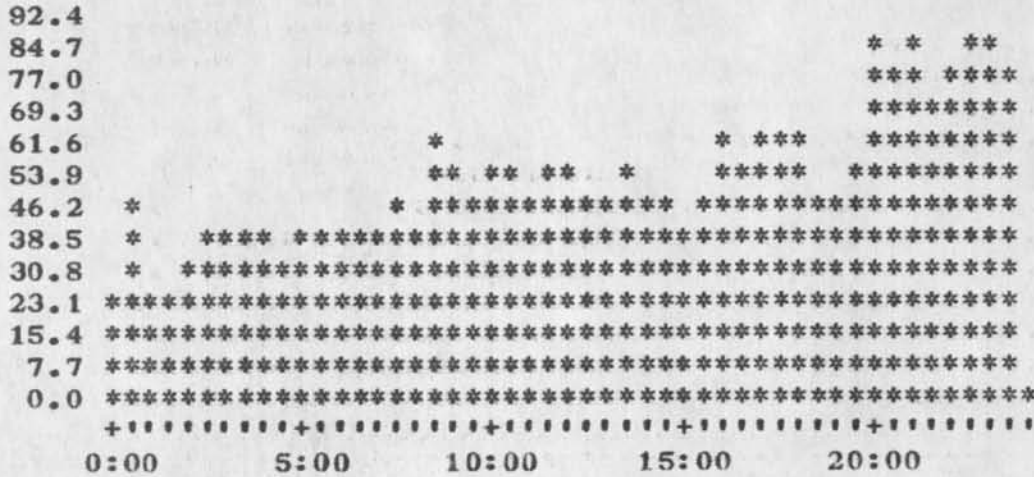
```
    92.4
    84.7                                              *  *   **
    77.0                                              *** ****
    69.3                                              ********
    61.6                    *                 *  ***  ********
    53.9                   ** ** **.  *         *****  *********
    46.2  *                *  ************** *****************
    38.5  *        ****  ***********************************
    30.8  *        **********************************************
    23.1 *****************************************************
    15.4 *****************************************************
     7.7 ****************************************************
     0.0 ******************************************************
         +...........+............+..........+..........+........
        0:00      5:00     10:00     15:00     20:00              5a
```

TIME PLOT OF AVERAGE NUMBER OF USERS FOR WEEK OF 7/16/73
x axis labeled in units of hr:min, xunit = 30 minutes   6
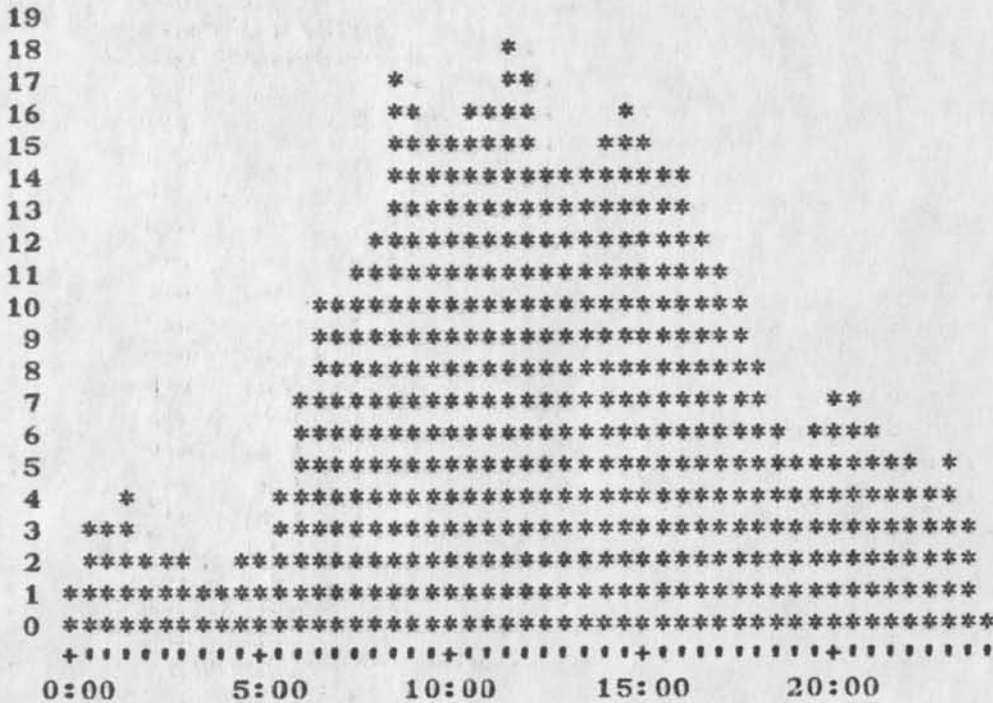
```
    19
    18                          *
    17                     *        **
    16                    **  ****      *
    15                    *******    ***
    14                    ******************
    13                    ****************
    12                   *******************
    11                  ********************
    10                 *********************
     9                 **********************
     8                 ***********************
     7                ************************     **
     6                ***************************** ****
     5                ******************************** *
     4     *          **********************************
     3   ***          *************************************
     2  ******  ***************************************
     1 *************************************************
     0 ****************************************************
         +...........+............+..........+..........+........
        0:00      5:00     10:00     15:00     20:00              6a
```

17995 Distribution

James C. Norton, Richard W. Watson, Douglas C. Engelbart, Paul Rech,
Donald C. (Smokey) Wallace, Jeffrey C. Peters, Dirk H. Van Nouhuys,
Elizabeth J. (Jake) Feinler, Charles F. Dornbush, Kirk E. Kelley,
Duane L. Stone, Beauregard A. Hardeman,

Superwatch Average Graphs for Week of 7/16/73

(J17995) 24-JUL-73 14:46; Title: Author(s): Susan R. Lee/SRL;
Distribution: /JCN RWW DCE PR DCW JCP DVN JAKE CFD KIRK DLS BAH;
Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>WEEK7/16GRAPHS.NLS;1, 24-JUL-73 14:44 SRL ;

RESULTS AND RECOMMENDATIONS: CONSULTATION WITH DR. CONRATH

CRITERIA for Performance of Organization established by Col.
Thayer and Mr. Tomaini in meetings with Dr. Conrath and Capt.
Bair.

If AHI is to be evaluated on the basis of improved performance
of organizational units then what are the current standards of
performance established by those managers responsible for the
Division and the Branch?

Performance criteria for individuals:

1. Performance memos

2. National recogniton for technical work (papers, chairing
symposia, etc.)

3. Original work

4. Knowledge of field

5. Ability to identify resources to accomplish mission

6. Peer acceptance

Criteria for the organizational units, which includes the
following in addition to the above:

1. Production:

REPORTS -- timely, and numerous (publish) Includes
progress reports which constitute feedback to the
manager.

PEOPLE -- knowledgable and prolific, breadth of contacts,
ability to indentify original work, awareness of
literature (references), etc.

2. Flexibility:

To restructure paperwork quickly and responsively, and
then present it

3. Credibility:

ACCEPTANCE of the results, ability to sell to higher
levels (using agencies) and to the research community.

1

4. Performance in general:

RESPONSIVENESS, the lack of which is indicated by
deadlines not met, particularly overdue progress reports

PARTY LINE ADHERANCE -- behavior consistant with the
goals, policies and procedures of the organization
(staying within the chain of command)

QUALITY of reports (subjective judgement by supervisors
and reviewers)

MANPOWER: relative manpower to complete jobs

MEASURES that are feasible:

1. Report rating form for managers

Instrument: a 9 scale semantic differential, 7 position,
which will load 3 scales on each of 3 factors:

I   Presentation

II   Content

III Impact

2. Feedback checklist form:

a. Weekly deadlines missed per section

b. Overdue progress reports

c. Messages, memos and requests not responded to within the
specified time or 1 week where no date is set

d. Rating of criticality/importance of item

important --- --- --- --- --- --- --- unimportant

3. Uses of system (changes in methods of doing business)

a.   Communication tally

A form to tabulate the number of communicative
transactions per individual in traditional modes and
through the system. The modes are: telephone, face to

face interactions, meetings, general and specific
corresponce, and AHI. (see attachment)

This will show how the system is used for communication
as compared to usual means of conveying information. The
pattern of communication is an indicator of the
performance of the organization.

b. A record of some sort about the kind of specific uses of
AHI, i.e. what connect time is used for. This must be done
automatically, and thus may not be possible in the near
future. Important differentiations are: editing, perusing
files, Journal, sndasg, linking, searching, and output
processing.

CONCLUSION

The foregoing measures with the exception of 3b should be
implemented as soon as possible.

17997 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, Frank J. Tomaini, Richard H.
Thayer, Edmund J. Kennedy, John L. McNamara, Rocco F. Iuorno,

1

Criteria for the Performance of the Oganization, RADC Established by
the Management

(J17997) 24-JUL-73 18:31;   Title: Author(s): James H. Bair/JHB;
Distribution: /RADC(For your your informatiion only) FJT RHT2 EJK JLM
RFI; Sub-Collections: RADC; Clerk: JHB;
Origin: <BAIR>CONRATHR.NLS;1, 24-JUL-73 18:16 JHB ;

The PDP-10 IMP72 COMPILER exists.

This is to publicize the existence of a compiler which may be of
interest to PDP-10 installations on the ARPA net. A brief
description of the language from the manual is online in NIC 17994
(17994,).   The compiler is in directory <BILOFSKY> on the BBN-TENEX-A
PDP-10, and is accessible to net users.   The manual is file IMP.RNO
(in RUNOFF format), and there are also source and REL files, a SAV
file, and a run-time library.   The SAV file will run under both TENEX
and DEC system-10 operating systems.   1

17998 Distribution

Robert H. Thomas, John C. Thomas, Michael J. Romanelli, Ronald M. Stoughton, A. D. (Buz) Owen, Robert L. Fink, Jeanne B. North, Steve D. Crocker, Thomas F. Lawrence, John W. McConnell, James E. (Jim) White, A. Wayne Hathaway, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Joel M. Winett, Abhay K. Bhushan, Thomas N. Pyke, B. Michael Wilber, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, Barry D. Wessler, John T. Melvin, Steven F. Holmgren, Terence E. Devine, David J. King, William L. Andrews, Milton H. Reese, Kenneth M. Brandon, Lou C. Nelson, Jeffrey P. Golden, Richard B. Neely, Dan Odom, Ralph E. Gorin, Robert G. Merryman, P. Tveitane, Adrian V. Stokes, David L. Retz, Reg E. Martin, Gene Leichner, Jean Iseli, James E. (JED) Donnelley, William Kantrowitz, Michael S. Wolfberg, Yeshiah S. Feinroth, James Hurt, Anthony C. Hearn, Eric F. Harslem, Robert M. (Bob) Metcalfe, Bradley A. Reussow, Daniel L. Kadunce, George N. Petregal, Michael B. Young, Michael A. Padlipsky, Schuyler Stevenson, L. Peter Deutsch, John Davidson, Thomas O'Sullivan, Sol F. Seroussi, Scott Bradner

The PDP-10 IMP72 COMPILER exists.

(J17998)   24-JUL-73 18:40;   Title: Author(s): Walter Bilofsky/WB ;
Distribution: /NLG ; Sub-Collections: NIC NLG; Clerk: KIRK ;

Features desired in typewriter-like keyboard hardware for optimal
user control.

Double Characters

Currently on a lot of keyboards, signals are sent on the downstroke
except when two keys are down at the same time in which case the
signal sent is determined by the order of the upstroke (release of
the key). Using the upstroke to control the signal is backwards and
causes a lot of frustrating double characters. If a second key is
pressed and released before the first one is released, the second key
should be input and not a double signal from the first key.
Upstrokes should not be significant, they should be ignored. A lot
of missing character problems might also be solved by this change.
There are some keyboards (IBM) that do the right thing.   1

DEX (NLS Deferred EXexution) Needs

DEX requires a <EOL> or some special character approximateley every
line so that it wont have to stop at every word, and it wont choke on
long statements. A line seems to be about right.   2

    The best solution to this problem would be having the T-I
    automatically send out an <EOL> when it automatically returns at
    the end of a line. This would allow maximum similarity with TNLS
    but would not affect TNLS when using the same T-I because the TNLS
    automatic return point is before the T-I's.   2a

    Currently the typist enters a <CR> <LF> at the end of each line
    and DEX software changes it into a <SP> in the NLS file. Besides
    being a significant drag on typing speed, this also requires a
    modification in the T-I so that a warning bell would ring close to
    the end of the line. (A standard feature on most typewriters but
    not on T-I's) This is important because if a <CR> <LF> is entered
    in the middle of a word, DEX changes it into a <SP>.   2b

Use DVORAK key positions instead of the current cludge if there must
be only one standard keyboard configuration. At least make it easily
available.   3

Save that expensive T-I Thermal Paper: 4

    Move the roller bar out of the line of printing text as is done in
    Execu-port models.   4a

    Lower the window frame so the bottom line of text can be seen.   4b

17999 Distribution
   Nps Np, Richard W. Watson, Charles H. Irby, Michael D. Kudlick, James
   C. Norton, Martin E. Hardy,

Features desired in typewriter-like keyboard hardware for optimal
user control.

I would like to be part of the Network working group to work on the
activities, not just follow them. I am particularly interested in
making available Network Program documentation through NIC Query
language.   1

18000 Distribution
   David H. Crocker,

(J18000)   24-JUL-73 21:19;   Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /DHC; Sub-Collections: SRI-ARC; Clerk: KIRK;

Request for Inclusion of Execute Edit Control Charactes in TNLS
Documentation

Bernie Cosell suggests that the next revision of TNLS instructions
include the control characters for Execute Edit -- Jeanne N   1

Request for Inclusion of Execute Edit Control Charactes in TNLS
Documentation

(J18002)   25-JUL-73 08:36;   Title: Author(s): Jeanne B. North/JBN;
Distribution: /NDM DVN JMB; Sub-Collections: SRIARC NIC ; Clerk: JBN;

Distribution Info for Members of BBN-NET

Marcia,
I have just gone over the entire list of members of BBN-NET and tried
to determine if the satus for each is correct. It is, in most cases,
and I have listed the desired corrections below. In case this is
confusing, hardcopy follows by Air Mail.
Regards,
Alex McKenzie   1

    AMC is not in group BBN-NET, and should be deleted from the list.   1a

    For BPC
    Delete "online" and "hardcopy" delivery modes   1b

    For WRC
    Delete "online" delivery mode
    Add "network" delivery mode to
        CROWTHER@BBN-TENEX   1c

    For PH
    Add "online" delivery mode   1d

    For RLM
    Add "hardcopy" delivery mode   1e

    For AAM
    Delete "network" delivery mode   1f

    For NWM
    Add "network" delivery mode to
        MIMNO@BBN-TENEX   1g

Distribution Info for Members of BBN-NET

(J18003) 25-JUL-73 09:00; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /MLK; Sub-Collections: NIC; Clerk: AAM;

Question about your letter

Carol, I received your letter today. I'm unclear on a couple of
things. First of all where am I to send Network Mail to (What host
and username) so that it wil get to you? Also, you mentioned that
you wanted the Liaison not to receive mailings anymore; I assume you
mean the RFC mailings that come approximately weekly. What about
functional document updates -- shall we stop sending him those also?
I added Walton to the ident file and made him the new Liaison per
your request, checked phone numbers, etc. Let me know on those
questions. Marcia.   1

Question about your letter

(J18004)   25-JUL-73 10:02;   Title: Author(s): Marcia Lynn Keeney/MLK;
Distribution: /CJM; Sub-Collections: SRI-ARC; Clerk: MLK;

Reply to RLL@NSRDC Concerning DDT and NLS-DDT

Jim Norton gave me a copy of your inquiry concerning DDT and the
NLS-DDT system recently implemented within NLS. DDT is a TENEX
timesharing system subsystem which is based on the earlier versions
available on other computers and in particular the version supplied
by DEC for all PDP-10 computers. As such it may be used with
languages other than L10.   1

A description of the (somewhat cryptic) TENEX DDT commands may be
found in the PDP-10 Reference Handbook published by DEC; the TENEX
version differs in a few minor respects.   2

In using DDT to debug NLS programs written in L10, we very often
made use of standard techniques to examine the call-return stack
which is part of the L10/NLS run-time environment, and to compile
small sections of code and replace existing code in the system
with them to test out new features. The NLS-DDT system has
commands which are more related to English language constructions
than the TENEX DDT commands, but its major benefits for NLS system
programmers come from its knowledge of the L10/NLS runtime
environment.   2a

It is possible in NLS-DDT to examine the call-return stack much
more easily than in TENEX DDT; there are, of course, other
differing and, we hope, improved features, but the assumption is
that NLS-DDT is used while one is running NLS. While running a
FORTRAN (or other language) program one neither (currently) runs
NLS nor has a similar run-time environment. NLS-DDT would offer
little in the way of assistance.   2b

TENEX DDT in general is very powerful, assuming the user knows
about the run time environment of the language and system being
debugged and about the machine language code dropped out by the
compiler or assembler being used. It provides the user with the
opportunity to "set breakpoints where DDT will suspend execution
of his program and await further commands. This allows the user
to check out his program section by section. Either before
starting execution or during breakpoint stops, the user may
examine and modify the contents of any location.... DDT also
performs searches, gives conditional dumps, and calls user-code
debugging subrotines at breakpoints." (DEC PDP-10 Reference
Handbook, p.539)   2c

There has been some discussion at ARC about providing access
within NLS to other compilers, assemblers, and interpreters. I
assume such developments imply access to improved debugging
systems. There are, however, no firm plans to provide these
interfaces in the near future because of competing features which
we feel have higher priorities. Even without such interfaces,
the use of the system for organizing and editing code is

worthwhile. With such an evolution evolution, it will be even
more valuable.

2d

I highly recommend looking at the DEC DDT document. If you wish to
see a description of that or of the NLS-DDT version (13716,), I can
arrange to send you copies.

3

Reply to RLL@NSRDC Concerning DDT and NLS-DDT

(J18005) 25-JUL-73 10:09;   Title: Author(s): Harvey G. Lehtman/HGL;
Distribution: /RWW RLL JON CHI DCE CFD; Sub-Collections: SRI-ARC; Clerk:
HGL;

tnls documentation--execute edit command

answer to your journal message of 25-July-73, 18002
The current on-line version of the chapter of TNLS User
Guide--Section 5-Text Editing--includes a description of the Execute
Edit command. see-(userguides, tnls-editing,12). Is it a
satisfactory and complete description? Jeanne, do you think I should
tell this directly to Bernie Cosell?   1

tnls documentation--execute edit command

(J18006)   25-JUL-73 10:40;   Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /JBN; Sub-Collections: SRI-ARC; Clerk: JMB;

ms caral giammo will arrive radc at approximately 1130 hrs on
wednesday 1 aug. she will be briefed by sai the same afternoon and by
prc the following morniing. she will talk to isi personnel in a mtg
the aternoon of 2 aug...attendees will be...daughtry, iuorno,
mcnamara, tomaini, sliwa, etc.

1

(J18007)   25-JUL-73 11:39;   Title: Author(s): William P. Bethke/WPB;
Distribution: /JLM; Sub-Collections: RADC; Clerk: WPB;

TEST OF JOUNRAL SUBMISSION

THIS IS A TEST OF THE NETWORK JOURNAL SUBMISSION
STUFF.

    THIS IS BEING SENT TO PRJ AND RCC FROM SNDMSG ON BBN-TENEX.

THANK YOU FOR RECEIVING THIS,

---PAUL

TEST OF JOUNRAL SUBMISSION
- - - -

(J18008) 25-JUL-73 11:54;   Title: Author(s): Paul R. Johnson/PRJ ;
Distribution: /PRJ RCC ; Sub-Collections: NIC; Clerk: PRJ;
.SNF=HIRM;

How About 'RFC-524' Instead of '17140'?

● I would like, for the record, to propose the following syntax change for Journal numbers. I have a feeling that this KIND of suggestion may have been made before, discussed, and rejected. I may unwittingly be entering an arena where many have already perished. My apologies if this suggestion is redundant.   1

The reader will notice (as I did as I proofed this memo) that there are really two (probably separable) proposals being made here: 2

(1) that, as mentioned above, the Journal filename syntax be changed, and   2a

(2) that the RFC concept be generalized.   2b

I propose that Journal files, rather than having numeric filenames, have names of the form: 3

<prefix> '- <integer>   3a

where <integer>, like the current numeric Journal filenames, are assigned sequentially by the system; and where <prefix> identifies a broad dialogue category (I have in mind values for <prefix> such as 'RFC', 'SUR', etc.).   3b

The proposal is motivated by belief in the following: 4

● The new Journal filenames would be more meaningful to the user. Knowing the name of the file tells him something about it's content. It probably even tells him whether or not he cares to read it.   4a

The new Journal filenames would be easier to remember.   4b

With the new filenames, it would be a straightforward task for an on-line user, unaided by catalog, to get at and read any items with a particular prefix he suspects might have been written since he last looked.   4c

It's of psychological help to the user to have a smaller name space to have even to be aware of (<integer> is guaranteed to grow more slowly than the current numeric filenames).   4d

I have long heard arguments that a NIC number is an adequate document handle for a user, and that the very concept of an alternate naming scheme (like RFCs) is ill-conceived. I for one have never felt the weight of that argument; neither did the NWG when ARC once-upon-a-time proposed doing away with RFCs altogether. The SUR and ASS series, and others of it's type

which have sprung up demonstrate, I think, that many other
users feel the concept an important one.   4d1

It's unnecessary to provide two different names (e.g., 'RFC 524'
and '17140') for the same file.   4e

RFCs, unlike SUR notes or similar series, are special-cased by the
software. The value of that will dwindle in time, as an ever
smaller portion of the user community is served by it.   4f

As research interests broaden and even as the development of
Network-related protocols (the area which RFCs were/are
intended to serve) becomes, as it already has, not a single
discipline but one of many, more specialized ones; the simple
RFC/non-RFC distinction the software currently supports will
become less and less meaningful.   4f1

Implementation might go like the following: 5

Defining new <prefix>'s   5a

This might be a function performed upon request by the NIC. It
probably ought to be considered an act that's on a par with the
creation of a new group ident, in terms of the thought given to
it beforehand, and in terms of the level of built-in difficulty
a user faces in bringing it about.   5a1

Preassigning <integer>'s   5b

The user would specify the <prefix> for which he desired an
<integer> and the system would assign it, preserving if it saw
fit the user to whom it was assigned and the date.   5b1

I can think of no reason for querying the user for expected
title, distribution list, etc.   5b1a

Submitting Journal Articles   5c

In the Journal submission process, the user would be prompted
for or otherwise given an opportunity to supply a <prefix>.
The system would attempt to locate <prefix> in a list of
defined prefixes.   5c1

If <prefix> didn't appear in the list, it would reject it.   5c1a

Otherwise, it would: 5c1b

allow the user to supply a preassigned value for
<integer> if he had one, or   5c1b1

assign to the article the next ⟨integer⟩ in the sequence,
either on the fly or, if number selection was deferred,
in background mode.   5c1b2

Locating Journal Files   5d

If the user typed '⟨JJOURNAL⟩RFC-524', the TENEX gtjfn
mechanism would locate the file without difficulty (as it does
now for '⟨JJOURNAL⟩17140').   5d1

If the user typed just 'RFC-524', the gtjfn would fail. NLS
would then look for a dash in the filename.   5d2

If it found none, it would recognize the file as nonexistent
or archived (as it does now if the filename is non-numeric).   5d2a

If the dash was present, it would search the Journal catalog
for the file (as it does now if the filename is numeric).   5d2b

Eliminating the current RFC special cases in NLS   5e

It's my understanding that RFCs are the only set of notes that
are known to the software. All of the special-case software
which supports RFCs would be eliminated from the system in
favor of the above.   5e1

How About 'RFC-524' Instead of '17140'?

(J18011) 25-JUL-73 16:50;   Title: Author(s): James E. (Jim)
White/JEW; Distribution: /SRI-ARC NP; Sub-Collections: SRI-ARC NP;
Clerk: JEW;
Origin: <WHITE>ARCMSG.NLS;3, 25-JUL-73 16:48 JEW ;

Further re Putting Execute Edit Control Characters on QRG

Bernie Cosell and Jeannie Beck -- On reading BPC's message in
hardcopy I can tell he was referring to the Quick Reference Guide
Card. Opinion is that because Execute Edit is an alternative way, and
not usually a preferred way to accomplish the text changes, that it
would take up a large space on the QRG without a compensatory
contribution. Anyway, JMB has the idea dropped in the hopper, and BPC
has JMB's message re the online version. -- Jeanne   1

Further re Putting Execute Edit Control Characters on QRG

(J18012)   25-JUL-73 17:51;   Title: Author(s): Jeanne B. North/JBN;
Distribution: /BPC JMB NDM DVN; Sub-Collections: SRIARC NIC ; Clerk:
JBN;

Discussion Log: 19 Jul 73, Pat Henry of SRI with DCE, PR, RWW, on
SRI Energy Program

This meeting, between Doug Engelbart, Dick Watson, Paul Rech, and
Pat Henry, is a follow up on a conversation that Paul had yesterday
with Pat (who is Manager of the Energy Technology Department, and
Chairman of the SRI Energy Committee -- to which Paul belongs).
These notes were taken in DCE's office (mostly online during the
discussion) with some summary notes added after the meeting. They
are working notes and should not be construed as representing
anyone's final position on these subjects. We invite and welcome
comments, suggestions and criticisms.   1

    Paul Rech had been discussing with Pat the activities of the SRI
    Energy Committee; Pat had mentioned the needs for information
    services. This led Paul to describe to him a general approach for
    helping communities that want centralized information services.
    (PR and MDK have been preparing a paper on that subject; note also
    ARC's general statement about this topic -- 12445,)   1a

A) A first question that Pat raises is what can be done with an SRI
Skills Inventory data bank that could make it more useful, especially
for the needs he has in the energy field.   2

    ARC could do something to help -- but our most direct manner of
    helping (using our system) wouldn't be particularly sensible
    unless there were a fairly good probability that the Energy
    activity at SRI would subsequently be following through with more
    extensive use of this system.   2a

    In any event, we'd want to have some of our people take a
    preliminary look, to ascertain the need, possibilities, potential
    value and cost in using our system, alternative possibilities and
    costs in using other available computerized systems, etc. We
    might be able to offer short term help in adapting to another
    system, but most interest would be in the case where/if it proved
    sensible to go ahead in an NLS-based system.   2b

    Fundamental part of the "system" would be the means for acquiring
    the data, and keeping up with changes. Also, part of the problem
    would be means for flexibly collecting and editing biographies for
    a given proposal.   2c

    We all agree that ARC will do approximately one man-week study,
    leading to an informal proposal bearing upon the skills inventory,
    and perhaps upon the biograhical assembly and tailoring process
    when putting together a proposal. Charge to a number from Pat's
    group. We'll try to get this proposal to him within a month.   2d

        DCE Note: I have certain conditions for our going ahead with

providing Workshop Support on a short-term basis -- i.e. not on
our regular Workshop Utility basis: 2d1

　　1)   For this particular project, it must be coordinated
with SRI's general approach to managing and using these
skill-inventory data.   2d1a

　　2)   We would do it for a group only if we judge there to be
a significant probability that they may evolve on into more
extensive application of the AKW system, our Utility,
participation in our bootstrapping communities, etc.   2d1b

　　3)   We would want a contingent plan for being able to move
its data base and operations onto some other available
computer system in the event that the group did not proceed
with the AKW approach.   2d1c

　　4)   If the group does carry on with our approach, the
operational staff that runs its information system (gathers
the data, updates the files, generates the output) are to be
staff within its organization -- and we would evolve a
relation with them that is basically the same as for any
organization that is a client to our KW Utility.   2d1d

B) A larger issue we discussed is an SRI proposal (under
development) to establish a World-Wide Energy Data Base for a large
group of international organizations. We indicated our interest in
certain supportive aspects of the information handling part of this
proposal.   3

　We gave Pat an indication of the type of information handling
technology that is already available for supporting the
information needs of communities. Besides supporting
collaborative dialogue and special documentation aids, our
approach contains an explicit aim in this context -- to provide a
coherent type of "workshop interface" to many specialized computer
resources available through a computer network; and this includes
interfacing through different data-base-management systems to a
variety of data bases.   3a

　Our forthcoming "Workshop Utility" is set up to provide, on an
operational basis. computer services for relatively extensive
access to system such as this. For discussion of costs, now and
in the future, see   (14724,5:gebtzb).   3b

C) A related issue is the means of coordinating any large-scale SRI
program that would heavily involve some of the different divisions.   4

Discussion Log: 19 Jul 73, Pat Henry of SRI with DCE, PR, RWW, on
SRI Energy Program

We described last year's discussions with Bart Cox and Don
Scheuch, much of which dealt with SRI's need to move into
effective handling of very large, long-range, multi-disciplinary
programs.   4a

The explicit example upon which these discussions were based was
just such a case as this --   4b

where our planned "business" (our Utility, our "bootstrapping
communities" plan, etc.) for providing augmented
knowledge-workshop support to discipline- and mission-oriented
collaborative communities   4b1

could support special-interest groups within SRI in their
nucleating and facilitating the development of collaboraive
communities around their special interest.   4b2

D) Gave Pat a copy of both 12445 and 17427   5

D. C. Engelbart, COORDINATED INFORMATION SERVICES for a
DISCIPLINE- OR MISSION-ORIENTED COMMUNITY, paper presented at the
Second Annual Computer Communications Conference, San Jose,
California, 24 January 1973. (Journal -- 12445.)   5a

D. C. Engelbart, R. W. Watson, J. C. Norton, THE AUGMENTED
KNOWLEDGE WORKSHOP, paper presented at the National Computer
Conference, New York City, June 1973. (Journal -- 14724.)   5b

E) Action Items: (Note that developing and serving special
communities is coordinated within ARC by Dick Watson, and this would
be so with Paul's actions below.)   6

1) Conduct a quick analysis (of the order of one man week) of the
"Skills Inventory" problem of SRI's Energy groups and make
recommendations about what could be done about it.   6a

In particular, find out: 6a1

- the real needs,
- expected response time and tolerable response times,
- expected usage,
- real value of retrieved information (cost-benefit
  analysis),
- the need for tailoring information into specific
  format to answer specific needs,-   6a1a

See whether or not SRI's "Skills Inventory System" could be

utilized, and, if not, propose an alternate solution approach
with cost estimates.   6a2

2) At Pat Henry's suggestion, PR is going to contact Stan Field,
Manager of the Energy Economics Department to get better
acquainted with him and possibly explore with him some potential
areas of common interest.   6b

3) Within the framework of SRI's Energy Committee, PR will follow
up the question of our possible involment in the establishment of
energy community information centers.   6c

In particular, it appears that a large scale, multidisciplinary
development proposal for the creation of an integrated energy
information center which would take advantage of the existing
computer communication technology should be considered by SRI.
We believe that it is technically feasible and in conformity
with SRI's mission.   6c1

4) Collaborate on this with Dave Brown.   6d

5) Engelbart to keep Bart Cox informed.   6e

Discussion Log: 19 Jul 73, Pat Henry of SRI with DCE, PR, RWW, on
SRI Energy Program

(J18013) 25-JUL-73 18:33;   Title: Author(s): Douglas C. Engelbart,
Paul Rech/DCE PR ; Distribution: /rww jcn pr mdk bc drb dnb ;
Sub-Collections: SRI-ARC; Clerk: DCE ;

Comments on Strategies to Support an Integrated SPF.

The enclosed package of material is in response to Steve Warshall's
request of July 11, 1973 for comments on strategies to support an
integrated SPF.   1

The Augmentation Research Center at SRI has had an interest in
participating in a community of people desiring to create an SPF for
many years. We have been calling such a facility a Software
Engineering Augmentation System (SEAS) and have been pursuing various
aspects as described by Weissman toward the development of such a
system.   2

We feel that NLS offers a framework for Warshall's strategies 1 and 2
and a possible starting point for strategy 3. At the next meeting we
hope to demonstrate some of the present NLS SPF capabilities.   3

The Papers enclosed were chosen to show the following: 4

   17409 22-JUN-73 DCE Responding to Bob Balzer (17118,), nominating
   Dick Watson to represent me/ARC in IPT's Automatic Programming
   Study Group, and briefly describing the SEAS Community plan   4a

       This note of Engelbart's to Balzer indicates ARC's long time
       intent to try to help set up a SEAS community.   4a1

   14724 1-MAR-73 DCE RWW JCN The Augmented Knowledge Workshop   4b

       This paper describes ARC's overall framework for creating an
       integrated workshop such as an SPF and has a brief section on
       our present SPF capabilities.   4b1

   13537 11-JAN-73 DCE SRI-ARC Summary for IPT Contractor-Meeting   4c

       This summary of our R&D program indicates our plans to provide
       workshop services through a Tymshare run machine to groups such
       as one interested in an SPF.   4c1

    7409 16-JUN-72 SRI-ARC CHI WHP APPENDIX E (Proposal ISU 71-94):
   Software -Engineering Augmentation System   4d

       This description was an appendix to our last ARPA proposal
       outlining some directions we hoped to pursue in SPF directions. 4d1

   15249 22-MAR-73 NMDT A Look at the MPS Conversion   4e

       This document was written at ARC management request to present
       arguments for reimplementation of NLS in a new programming
       system MPS which has had joint development by ARC and Xerox.   4e1

   pages 196-199 of 13041 16-MAR-73 &SRI-ARC Online Team Environment

Comments on Strategies to Support an Integrated SPF.

/ Network Information Center and Computer Augmented Team
Interaction   4f

   This excerpt from our last ARPA report described thoughts and
   capabilities which existed at that point.   4f1

Comments on Strategies to Support an Integrated SPF.

(J18014) 25-JUL-73 21:04;   Title: Author(s): Richard W. Watson/RWW;
Sub-Collections: SRI-ARC; Clerk: KIRK;
Origin: <WATSON>COVER-LETTER.NLS;2, 25-JUL-73 18:33 KIRK ;

Arpanews

Jean--
I noticed that the June issue of the Arpanet News was not sent out in
hardcopy. I also noticed that no one around here has bothered to
read it online. Some people have asked me whether it even came out.
I would like to suggest that you continue to release it in hardcopy
at least to station agents (and maybe liaisons as well), or else no
one will read it. That seems like wasted effort. In addition we
will never reach the user population that we would like to contact
for USING if the paper only exists online.
If you return to hardcopy I'd like a copy of the JUne issue as well
please. Thanks, Nancy   1

18015 Distribution
    Jean Iseli,

Arpanews

(J18015)   26-JUL-73 07:46;   Title: Author(s): Nancy J. Neigus/NJN;
Distribution: /JI; Sub-Collections: NIC; Clerk: NJN;

Distribution List addition

Jeanne--
Peter Radford from Logica Limited in LOndon has been staying with our
imp group at bbn for several months. They have an arrangement with
us to market imps in Europe. While he was here I have been supplying
him with RFC's and other information that comes in from you about the
net. He is returning to London next week, and in order to continue
to receive info on the net, I think he should be put on some
distribution list. I thought that the Network Associates Group would
be the most appropriate place, but I may have the wrong idea of who
is supposed to be in that group. In any case I leave it up to you to
place him smewhere. He needs to receive all protocol documents,
possibly RFC's, and things like therpanet News. His address is as
follows:

       Peter Radford
       Logica Limited
       31-36 Foley Street
       London W1P 7LB
       England
Phone = 01-637 1511
I gave him your name and address so he can contact you if he doesn't
hear anything further. I hope you can get this straightened out.
Thanks very much. --Nancy
(therpanet News = the Arpanet News)

18016 Distribution
   Jeanne B. North,

1

Distribution List addition

(J18016)   26-JUL-73 08:05;   Title: Author(s): Nancy J. Neigus/NJN;
Distribution: /JBN; Sub-Collections: NIC; Clerk: NJN;

Indicating Interest in Working Out More Satisfactory Numbering Policy

JEW -- As you say, in proposing a change in the number conventions,
you are entering an arena of previous encounters, some of them before
my time and wrapped in myth. Some protagonists have been silenced but
unconvinced, which indicates the issue is not satisfactorily
resolved, and I too would like to look again at the issue and at
alternative ways of meeting it. Freshly inspired by your exposition,
I am working on what is as yet a plonking-sounding essay (perhaps the
influence of Watergate hearin's). When I have it fu'ther thought-out
and better stated, I'll put it in the dialogue. This is to respond to
you that I share your concern about the dissatisfaction with the
present number system, and want to work to find more satisfactory
practices -- JBN   1

18017 Distribution
    James E. (Jim) White, Richard W. Watson, Michael D. Kudlick,

Indicating Interest in Working Out More Satisfactory Numbering Policy

(J18017)   26-JUL-73 09:07;   Title: Author(s): Jeanne B. North/JBN;
Distribution: /JEW RWW MDK; Sub-Collections: SRIARC NIC ; Clerk: JBN;

Comment on Measurements in General and on the Measurement of CA
Patterns (17880,) in Particular

In JBN's study of times for various content analyzer patterns, there
appears to be some discrepancy. In Example 3 (/"Protocol"/ OR
/"Postel"/) the time for execution is listed as being 20.2 seconds.
In Example 4 (/"Protocol"/ / /"Postel"/) the time for execution is
39.0 seconds.

1

The results (size of output file) in both cases is the same,
implying some great inefficiency in the compiler. I checked the code
dropped out in both cases and discovered it to be identical. This
implies to me that the measurement procedure is suspect.

2

Such measurements and analyses are extremely valuable and will be
carried out with increasing frequency on all parts of our system. It
behooves us to be extremely careful and exact in the mode of
measurement in order not to bias the results; publication of the
results sould indicate the method used in greater detail so that the
procedures could be checked for accuracy and/or correctness.

3

Care must be taken with respect to the dispersal of inaccurate
measurements and comparisons; any "scientific" study should include
a statistical error analysis based on a suitably large sampling. I
have not noted this to be the case in any of our measurements to
date.

4

18018 Distribution
    Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews,
    Rodney A. Bondurant, Jeanne M. Beck, Mark Alexander Beach, Judy D.
    Cooke, Marcia Lynn Keeney, Carol B. Guilbault, Susan R. Lee,
    Elizabeth K. Michael, Charles F. Dornbush, Elizabeth J. (Jake)
    Feinler, Kirk E. Kelley, N. Dean Meyer, Kay F. Byrd, James E. (Jim)
    White, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Ferg R.
    Ferguson, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Douglas C.
    Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper,
    Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North,
    James C. Norton, William H. Paxton, Jeffrey C. Peters, Jake Ratliff,
    Edwin K. Van De Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

Comment on Measurements in General and on the Measurement of CA
Patterns (17880,) in Particular

(J18018) 26-JUL-73 09:18; Title: Author(s): Harvey G. Lehtman/HGL;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: HGL;

Network Users Group (USERS)

Please notify people at your site who might be interested that there
is now a network group known as the Network Users Group (USERS).
This group is an offshoot of the Network Users Working Group (USING)
that was formed in June of this year with Dave Crocker and Nancy
Neigus as coordinators. Members of USERS should be willing to make
comments and contributions as a Network user, and will be on
distribution for Network dialog concerning user needs. To become a
member of USERS send name and Network mailing address to: Jake
Feinler (JAKE or FEINLER@NIC)   1

18020 Distribution
    Jean Iseli, David H. Crocker, Nancy J. Neigus, Stephen M. Wolfe,
    Ronald M. Stoughton, Jim O. Calvin,
    Sol F. Seroussi, Scott Bradner, Robert H. Thomas, John C. Thomas,
    Michael J. Romanelli, Ronald M. Stoughton, A. D. (Buz) Owen, Robert
    L. Fink, Jeanne B. North, Steve D. Crocker, Thomas F. Lawrence, John
    W. McConnell, James E. (Jim) White, A. Wayne Hathaway, Patrick W.
    Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie,
    Abhay K. Bhushan, Thomas N. Pyke, B. Michael Wilber, Edward A.
    Feigenbaum, Robert T. Braden, James M. Pepin, Barry D. Wessler, John
    T. Melvin, Leroy (Lee) C. Richardson, Frank G. Brignoli, Elizabeth J.
    (Jake) Feinler, Michael D. Kudlick, James E. (Jim) White, Michael A.
    Padlipsky, Kenneth L. Bowles, A. Wayne Hathaway
    Jeanne B. North, Jay R. Walton, Steven F. Holmgren, Terence E.
    Devine, David J. King, William L. Andrews, Milton H. Reese, Kenneth
    M. Brandon, Lou C. Nelson, Jeffrey P. Golden, Richard B. Neely, Dan
    Odom, Ralph E. Gorin, Robert G. Merryman, P. Tveitane, Adrian V.
    Stokes, David L. Retz, Reg E. Martin, Gene Leichner, Jean Iseli,
    James E. (JED) Donnelley, William Kantrowitz, Michael S. Wolfberg,
    Yeshiah S. Feinroth, James Hurt, Anthony C. Hearn, Eric F. Harslem,
    Robert M. (Bob) Metcalfe, Bradley A. Reussow, Daniel L. Kadunce,
    George N. Petregal, Michael B. Young, Michael A. Padlipsky, Schuyler
    Stevenson, L. Peter Deutsch, John Davidson, Thomas O'Sullivan

Network Users Group (USERS)

(J18020)   26-JUL-73 11:41;   Title: Author(s): Elizabeth J. (Jake)
Feinler/JAKE; Distribution: /NICSTA NLG USING(for your information);
Sub-Collections: SRI-ARC NICSTA NLG USING; Clerk: JAKE;

Ident Information and FAIL Documentation

Jed-- Marcia Keeney passed your memo (17940,) along to me.   1

First, the meanings of some of the fields in your (and everyone
else's) ident file entry: 2

   IDENT: This field is your NIC ident, the name by which the NIC
   knows you.   2a

   IMP: This field is now obsolete, is not used by any software here
   at the NIC, and will diappear entirely at some point.   2b

   HOST: This field represents the host at which you will receive
   delivery of your Journal mail via the FTP mail protocol.   2c

      The host name ('BBN-TENEX') you provided (17448,4b3:gy) in
      response to my RFC query for Network mailbox addresses (JEW RFC
      510 -- 16400,2:y) is what got stuffed in here.   2c1

      You get NETWORK Journal delivery if and only if the 'Delivery:'
      field contains the value NETWORK (it may also contain either
      ONLINE or HARDCOPY or both in addition).   2c2

   LOCAL NETWORK MAILBOX ADDRESS: This field represents the user
   name (at the host in the 'Host:' field) to which your Journal mail
   will be delivered via the FTP mail protocol.   2d

      The mailbox name ('JED') you provided (17448,4b3:gy) in
      response to my RFC query for Network mailbox addresses (JEW RFC
      510 -- 16400,2:y) is what got stuffed in here.   2d1

The 'Ident:' and 'Local Network Mailbox Address:' fields are not, in
general, the same. They're only the same in your case because you
happen (apparently) to have a directory at BBN-TENEX whose name is
the same as your NIC ident.   3

If you wanted Journal delivery to RISOS@ISI, rather than to JED@BBN,
you would change (or ask us to change) HOST to 'ISI' and LOCAL
NETWORK MAILBOX ADDRESS to 'RISOS'.   4

Some hardcopy documentation on FAIL is coming to you by mail (I know
of no on-line stuff around, though it may exist somewhere). --Jim
White   5

18021 Distribution
    James E. (JED) Donnelley,

Ident Information and FAIL Documentation

(J18021) 26-JUL-73 12:00;   Title: Author(s): James E. (Jim)
White/JEW; Distribution: /JED; Sub-Collections: SRI-ARC; Clerk: JEW;
Origin: <WHITE>JEDMSG.NLS;2, 24-JUL-73 12:41 JEW ;

Hardware Costs

It seems extremely obvious we do not care much about saving hardware
costs.

Most of us still do not turn off our displays (top red button) when
done.   1

1

18022 Distribution
    Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews,
    Rodney A. Bondurant, Jeanne M. Beck, Mark Alexander Beach, Judy D.
    Cooke, Marcia Lynn Keeney, Carol B. Guilbault, Susan R. Lee,
    Elizabeth K. Michael, Charles F. Dornbush, Elizabeth J. (Jake)
    Feinler, Kirk E. Kelley, N. Dean Meyer, Kay F. Byrd, James E. (Jim)
    White, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Ferg R.
    Ferguson, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Douglas C.
    Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper,
    Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North,
    James C. Norton, William H. Paxton, Jeffrey C. Peters, Jake Ratliff,
    Edwin K. Van De Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

Hardware Costs

(J18022)   26-JUL-73 12:03;   Title: Author(s): Martin E. Hardy/MEH;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: KFB;