Ambiguities about Form System Phases

We received and read Duane Stone's comments (JOURNAL 30053,) on the form system. We are unclear as to which version of our paper you read.   There were significant changes made in the last version which was journalized today. Please note, in particular, changes to Phase 0 and Phase 1 and let us know what you mean by 'Phase 0' in terms of the journalized version.   1

Ambiguities about Form System Phases

(J21809)   6-FEB-74 09:14;   Title: Author(s): Elizabeth K.
Michael/EKM; Distribution: /DLS RBP JLM FJT EJK RWW JCN JHB HGL;
Sub-Collections: SRI-ARC RADC; Clerk: EKM;

MAP   6-FEB-74 10:01   21811

netedification2

Will respond to Wayne's nits in detail soon,
but wanted to say how much I appreciate getting
them right away, to encourage the others. Therefore:
I APPRECIATE THEM A LOT (that was in all caps, for
those of you who don't see this in mixed case).
cheers, map
p.s., speaking of nits, I'm afraid I'm one:
the bloody existing "eds" ALREADY handles the
bloody leading blank problem in l, i, and r
I just hadn't tried it--nor looked closely
at the bloody code until this morning.
Great green globs of greasy grimy gopher merde,
gang, I do apologize for creating a false
problem and am now 100% behind my suggested
rephrasing of yesterday. Sigh.
(Wayne has spotted the new thing I'd hidden in
the revision, but hasn't claimed the prize because
he found it too soon. Pity.)   1

MAP   6-FEB-74 10:01   21811

netedification2

(J21811)   6-FEB-74 10:01;   Title: Author(s): Michael A. Padlipsky/MAP
; Distribution: /NETED ; Sub-Collections: NIC NETED; Clerk: MAP;

BEAR WITH ME PLEASE

FILE hosts % L10 <kaye>hosts %

1

% PROGRAM TO GENERATE NLS FILE TO BE RUN THROUGH OUTPUT ASSEMBLER FOR
ASCII HOSTNAMES FILE   %

2

DECLARE STRING outfile = "HOSTS.NLS";   3

DECLARE STRING outdir = "<NIC>";   4

5

5a

(hosts) PROCEDURE;   6

  LOCAL   6a

      stid, % input file top plex, current host statement %   6a1

      outstid;   % output file current tail stid %   6a2

  LOCAL TEXT POINTER tp1, tp2, fn1, fn2, substid;   6b

  LOCAL STRING statement[150];   % used for formatting output line %

6c

  %input file = <feinler>hostaddr-master, output file = <nic>hosts% 6d

      stid ← outstid ← origin;   6d1

      FIND SF(*outfile*) ↑fn1 SE(*outfile*) ↑fn2;   6d2

      FIND SF(*outdir*) ↑tp1 SE(*outdir*) ↑tp2;   6d3

      xlit ← "<KAYE>outf.nls;";   6d4

      IF NOT (outstid.stfile ← opwk(0, $xlit)) THEN   6d5

          err($"Unable to open output file. Terminating host program
          execution.");   6d5a

      %outstid ← ccrefil($tp1, $tp2, $fn1, $fn2);%   6d6

      xlit ←"<KUDLICK>HOSTADDR-MASTER.NLS";   6d7

      IF NOT (stid.stfile ← open(0,$xlit)) THEN err($" Unable to open
      input file. Terminating run. ");   6d8

```
        IF (stid ← getsub(stid)) = endfil THEN err($"Empty input file.
        Terminating run.");                                            6d9

     % loop to process input %                                         6e

        LOOP                                                           6e1

          BEGIN                                                       6e1a

          % get host name %                                          6e1b

            CCPOS SF(stid);                                          6e1b1

            *statement* ← NULL;                                      6e1b2

            xtrnam($statement, $swork, -1);                          6e1b3

          % get host address %                                       6e1c

            substid ← stid; %starting point of search%              6e1c1

            lookup($substid, $"HOST-ADDR", seqname);                6e1c2

            IF substid = endfil THEN                                6e1c3

               err($"Host program failed to find label: HOST-ADDR in
               substructure to a top level statement.  Terminating
               abnormally.");                                       6e1c3a

            substid ← getsub(substid); %data is one level down%     6e1c4

            FIND SF(substid) > $NP ↑tp1 $D ↑tp2;                    6e1c5

          % build first line of entry %                             6e1d

            *statement* ← *statement*, ', , tp1 tp2;                6e1d1

          % output first line of entry %                            6e1e

            outstid ← cis(outstid, $statement, sucdir);             6e1e1

          %  get status attribute %                                 6e1f

            substid ← stid; %starting point of search%              6e1f1

            lookup($substid, $"SITE-STATUS", seqname);              6e1f2

            IF substid = endfil THEN GOTO nosite;                   6e1f3
```

```
        substid ← getsub(substid); %data is one level down%        6e1f4

% build second (last ) line of entry %                            6e1g

    *statement* ← "STATUS = ";                                    6e1g1

    IF NOT FIND SF(substid) > $NP ↑tp1
    ([ "SERVER"]/[ "USER"]/[ "TIP"]) ↑tp2 THEN                    6e1g2

        (nosite):   *statement* ← *statement*, "UNKNOWN", CR,
        LF                                                        6e1g2a

    ELSE *statement* ← *statement*, tp1 tp2, CR, LF;              6e1g3

% output second line of entry %                                   6e1h

    outstid ← cis(outstid, $statement, sucdir);                   6e1h1

IF (stid ← getsuc(stid)) = endfil THEN EXIT LOOP; %get next
top level site-name %                                             6e1i

END; % of main loop %                                             6e1j

% close files %                                                   6e1k

    freflnt( );                                                   6e1k1

RETURN END.
                                                                  6e1l

                                                                  6e1m

    FINISH                                                        6e2
```

BEAR WITH ME PLEASE

(J21812) 6-FEB-74 10:20;   Title: Author(s): Diane S. Kaye, Diane S. Kaye/DSK DSK; Sub-Collections: SRI-ARC; Clerk: DSK; Origin: <KAYE>HOSTS.NLS;4, 6-FEB-74 08:43 DSK ;

BEAR WITH ME PLEASE

```
FILE hosts % L10 <kaye>hosts %
                                                                          1

% PROGRAM TO GENERATE NLS FILE TO BE RUN THROUGH OUTPUT ASSEMBLER FOR
ASCII HOSTNAMES FILE   %
                                                                          2

DECLARE STRING outfile = "HOSTS.NLS";                                     3

DECLARE STRING outdir = "<NIC>";                                          4

                                                                          5

                                                                          5a

(hosts) PROCEDURE;                                                        6

   LOCAL                                                                  6a

      stid, % input file top plex, current host statement %             6a1

      outstid;   % output file current tail stid %                      6a2

   LOCAL TEXT POINTER tp1, tp2, fn1, fn2, substid;                       6b

   LOCAL STRING statement[150];   % used for formatting output line %
                                                                          6c

   %input file = <feinler>hostaddr-master, output file = <nic>hosts%     6d

      stid ← outstid ← origin;                                          6d1

      FIND SF(*outfile*) !fn1 SE(*outfile*) !fn2;                       6d2

      FIND SF(*outdir*) !tp1 SE(*outdir*) !tp2;                         6d3

      *xlit* ← "<KAYE>outf.nls;";                                       6d4

      IF NOT (outstid.stfile ← opwk(0, $xlit)) THEN                     6d5

         err($"Unable to open output file.  Terminating host program
         execution.");                                                  6d5a

      %outstid ← ccrefil($tp1, $tp2, $fn1, $fn2);%                      6d6

      *xlit* ←"<KUDLICK>HOSTADDR-MASTER.NLS";                           6d7

      IF NOT (stid.stfile ← open(0,$xlit)) THEN err($" Unable to open
      input file.  Terminating run. ");                                 6d8
```

BEAR WITH ME PLEASE

```
    IF (stid + getsub(stid)) = endfil THEN err($"Empty input file.
    Terminating run.");                                              6d9

% loop to process input %                                            6e

  LOOP                                                               6e1

    BEGIN                                                            6e1a

    % get host name %                                                6e1b

      CCPOS SF(stid);                                                6e1b1

      *statement* + NULL;                                            6e1b2

      xtrnam($statement, $swork, -1);                                6e1b3

    % get host address %                                             6e1c

      substid + stid; %starting point of search%                     6e1c1

      lookup($substid, $"HOST-ADDR", seqname);                       6e1c2

      IF substid = endfil THEN                                       6e1c3

        err($"Host program failed to find label: HOST-ADDR in
        substructure to a top level statement.  Terminating
        abnormally.");                                               6e1c3a

      substid + getsub(substid); %data is one level down%             6e1c4

      FIND SF(substid) > $NP +tp1 $D +tp2;                           6e1c5

    % build first line of entry %                                    6e1d

      *statement* + *statement*, ', , tp1 tp2;                       6e1d1

    % output first line of entry %                                   6e1e

      outstid + cis(outstid, $statement, sucdir);                    6e1e1

    %  get status attribute %                                        6e1f

      substid + stid; %starting point of search%                     6e1f1

      lookup($substid, $"SITE-STATUS", seqname);                     6e1f2

      IF substid = endfil THEN GOTO nosite;                          6e1f3
```

```
        substid ← getsub(substid); %data is one level down%         6e1f4

% build second ( last ) line of entry %                            6e1g

    *statement* ← "STATUS = ";                                     6e1g1

    IF NOT FIND SF(substid) > $NP ↑tp1
    ([ "SERVER" ]/[ "USER" ]/[ "TIP" ]) ↑tp2 THEN                  6e1g2

        (nosite):  *statement* ← *statement*, "UNKNOWN", CR,
        LF                                                         6e1g2a

    ELSE *statement* ← *statement*, tp1 tp2, CR, LF;               6e1g3

% output second line of entry %                                    6e1h

    outstid ← cis(outstid, $statement, sucdir);                   6e1h1

IF (stid ← getsuc(stid)) = endfil THEN EXIT LOOP; %get next
top level site-name %                                              6e1i

END; % of main loop %                                              6e1j

% close files %                                                    6e1k

    freflnt( );                                                    6e1k1

RETURN END.
                                                                   6e1l

                                                                   6e1m

    FINISH                                                         6e2
```

. .. .

DSK 6-FEB-74 10:26   21813

BEAR WITH ME PLEASE

(J21813) 6-FEB-74 10:26;   Title: Author(s): Diane S. Kaye/DSK;
Distribution: /JBN; Sub-Collections: SRI-ARC; Clerk: DSK;
Origin: <TEJOURNAL>D61020DSK.NLP;1, 6-FEB-74 10:20 DSK ; F (J1234)
6-FEB-74 10:20; Title: Author(s): /DSK; Sub-Collections: SRI-ARC;
Clerk: DSK;
Origin: <KAYE>HOSTS.NLS;4, 6-FEB-74 08:43 DSK ;

Are they still there?

Tom,
I got some mail we sent back from Duncan Lawrie and Jurg Nievergelt
of Illinois. Are they no longer with you? Please let me know so
that I can modify the identfile as such.
Regards,
Marcia

1

Are they still there?

(J21814)   6-FEB-74 11:26;   Title: Author(s): Marcia Lynn Keeney/MLK;
Distribution: /TPM; Sub-Collections: SRI-ARC; Clerk: MLK;

MAP   6-FEB-74 11:44   21815

NETED biggy

here we go--
First, an ad hoc convention: to make commenting easier,
i'll number the points, and put a * on ones I think need
a "vote" (i.e., that others should be sure to address).
*1. I get an implication that Wayne thinks we're prompting
in Input mode. I think we're only prompting in Edit mode.
(see no reason to slow the user down when he's inputting).
2. the "working dir" ref. is necessary for those who have the concept
and the quotation marks should make it undisturbing to those who
don't. (trying to avoid the hobgoblin of naming
conflicts)
*3. the implied "h" IS new, meant to be a solution to problem Grothe
observed. definitely assume it will terminate in repeated request
for file name, but didn't think it necessary to spell out in Usage.
ok?
4. the ambiguity on "n" will be fixed by changing the ";" to ",and"
(i.e., the offending phrase only applies to EOF considerations). 5. I
take "message of the form" to imply that this is not intended to be
cast in concrete. don't think small variances in such
messages will bother anyone (or anything, as "automata" better not be
getting error msgs). I fear we'll be at this forever if we try to
get too close a match, down to exact formats of things which will
only be seen by human users. (my implementation actually puts many
offending lines on a second output line, but I don't think it's a
problem) (can, of course, alter if others think it is) *6. re
printing <top> msg, I thought it was Wayne's idea (because it could
take a while). Shall we drop it? (aside: I'm sure the final "." was
mentioned at the meeting).
7. re "Input" vs. "Input.", we can certainly fix it (I like the final
period), but again I can't get over concerned as any self- respecting
automaton would just be looking for the stuff
it knows is there ("Input" whehter or not there's a ".").
*8. re "d" printing, this might well be my own memory at fault, but I
thought there was some particular reason adduced at the mtg for
having   1

it print (like to make sure the user knew what had happend or
something). am willing to change if that's the consensus. will
certainly clarify its suppressability if we keep it.
9. Don't like the idea of an arg for "save" as I think it would be
awfully confusing to the novice. Have already made a big fuss over
the w/quit sequence and would like to leave save straightforward.
*10. re merge I think squirting out the last line of the new stuff is
a win. someone had suggested having it say "edit" when done (again
because it might take a long time (Wayne?)), but this feels much
cleaner, as it clues the user in on what he's gotten. again, this
isn't hard to change, but needs a consensus.
*11. addressed the leading blanks problem earlier. apologize again.
pls confirm that what I suggested yesteday is ok.   2

MAP   6-FEB-74 11:44   21815

NETED biggy

12-n. all other points Wayne made I agreed with and have acted on
without comment (unless I missed something by accident).   3

suggested next steps: a) get your "votes" in on these points; b) let
me know if there're any other problems with the writeup/spec c) run
the examples against your own implementation just for
fun d) I'll finalize the writeup/spec A.S.A.P.; e) we'll spring it on
the world   4

Final interesting item: Burchfiel (at BBN) has asked for copy of pl/1
version so as to convert to BCPL and use as part of new 10x
sndmsg/readmail package. Sounds hopeful to me. (They prefer BCPL to
SAIL is why they're not picking up Jim's) (Will try to get them both
Chris's and mine to choose from)
cheers, map   5

MAP   6-FEB-74 11:44   21815

NETED biggy

(J21815) 6-FEB-74 11:44;   Title: Author(s): Michael A. Padlipsky/MAP
; Distribution: /NETED ; Sub-Collections: NIC NETED; Clerk: MAP;

JBP 6-FEB-74 11:53 21816

more games ?

jake:
there have been some questions about "life" programs available in the
network. it seems that these should appear some where in the n"nic"
command resources notebook info. i know that the was one on tenex
systems, and that mit-ai had the most elaborate graphics disply
version anyone ever dreamed of. also other "game" programs like
chess, checkers , nim, doctor, and parry. mabe that it is hard to
tell if thes are games or ai programs. --jon.   1

more games ?

(J21816)   6-FEB-74 11:53;   Title: Author(s): Jonathan B. Postel/JBP;
Distribution: /JAKE; Sub-Collections: NIC; Clerk: JBP;

What NLS Has That MST Will Undoubtedly Want: i.e., Immediately
Sellable Features

This brief note --- hastily put together for possible use in the
meeting with Perry and Fields on Feb. 11-12 --- states what I think
our thing is ... the main things we've got that others don't match,
i.e., what we can (in my opinion) sell to the world, and especially
to the MST program.   1

(The word "sell" is used generically, to mean give, or proudly
advertise, or solicit further research funds for, or make
available to others in any way we can think of --- within or
outside the MST context.)   1a

OBVIOUS THINGS   2

To me, the most obvious thing we've got that's better than anyone
else's system is a two-dimensional user interface for manipulating
information. This includes   2a

- the mouse-keyset combination and detached keyboard;   2a1

- the design and implementation of "bugging" concepts (with
backspace, or "back-up", of selections an essential aspect);   2a2

- machine-readable, person-readable, buggable links;   2a3

- split-screen display with cross-window editing;   2a4

- viewspecs for condensing and zooming in on the displayed
information;   2a5

- scrolling through the hierarchical file structure.   2a6

- line-processor for making all this available on other
alphanumeric display systems   2a7

The second most obvious thing is the tree-structured,
variable-length text records. This includes   2b

- statement hierarchy;   2b1

- structure editing;   2b2

- statement naming (wth user-settable name delimiters)   2b3

Not least in this list of obvious things is the Journal and Ident
systems. Despite many remaining design and implementation
problems, oversights, bugs, human engineering problems, etc.,
these are still damned good, advanced systems, especially in these
areas: 2c

What NLS Has That MST Will Undoubtedly Want: i.e., Immediately
Sellable Features

      - selective delivery;   2c1

      - automatic addressEE location-finding;   2c2

      - citations used in delivery;   2c3

      - indexed and retrievable documents;   2c4

      - links to other documents.   2c5

NOT SO OBVIOUS THINGS (at least until one gets into it)   3

   (These are not in any particular order. Bugs and other problems
   are assumed to be fixable if we want to and commit ourselves to do
   so.)   3a

   - word editing;   3b

   - bugging instead of typing literal strings;   3c

   - return stack with viewspecs remembered;   3d

   - link stack with return stack remembered;   3e

   - jump to content and jump to name;   3f

   - output quickprint, obeying viewspecs;   3g

   - richness of command language;   3h

   - command language abbreviations (expert mode);   3i

   - online indexes to Journal;   3j

   - archive system, and ESYS in general.   3k

   - partial copy concept;   3l

What NLS Has That MST Will Undoubtedly Want: i.e., Immediately
Sellable Features

(J21817) 6-FEB-74 13:03;   Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /RWW JCN CHI PR; Sub-Collections: SRI-ARC; Clerk: MDK;
Origin: <KUDLICK>THOUGHTS.NLS;2, 6-FEB-74 12:57 MDK ;

Office-1 Trouble Shooting and Status Items

Response to inquiries by DLS,

Office-1 Trouble Shooting and Status Items

Duane,
The following are being done and should be finished soon.   1

1) We are sending you a mouse that has been rebuilt to improved
design specifications. It was mailed this week and represents
some effort on our part as you might well imagine. Please PLEASE
send us one of yours back immediately because we have runout   In
other words, until we get yours we are short one.   I really hope
that the new one solves your problems, you certainly have put up
with them for a long time. If it does we will coontinue the
procedure of trading you rebuilt mice for yours one at a time
Cross your fingers.   1a

2) Cafarelli should be able to log in ...system dir was mispelled   1b

3) Original spelling of Bucciero given us is being changed to this
one.   1c

4) Deconde has been entered into the ident system here should be
transferred there automatically by Fri.   1d

5) RADC-TIP group ident being updated   1e

6) (userguides,arclocator,1:xm) should work. The Userguides were
brought over without the journal <catalog> dir. That is now at
Office-1.   1f

7) No Office-1 users will have write priviliges at ARC.   1g

8) Journal delivery at Office-1 has been set to automatic. This
is placing heavy loads on the system due to the increased
dependency on disc swapping because of a smaller drum. We may
therefore change it to once a day automatic.   1h

9) Archive is not running yet but should be sometime next week.   1i

I am sending this to KWAC becuase it contains some items of interest
to architects. Additional elaboration will follow in subsequent
Journal items. Jim   2

A New Weekly Bulletin to Announce Publications Received at ARC

We are ready to launch a new service to announce selected new
publications received.   1

Two former efforts to announce external publications received at ARC,
an announcement bulletin with abstracts, and an ARC catalog, have
long since been suspended, and at present not only periodicals but
external reports received here are unannounced. The cataloging
activity is so far behind that such reports go into a limbo which
even MEJ cannot access satisfactorily.   2

To give ARC people the chance to look at new documents, MEJ will
prepare citations in bibliographic format for selected publications
received, and will issue a new list each week. You can look at the
list in the Journal, and if you find a publication you would like to
see, ask MEJ for it.   3

A New Weekly Bulletin to Announce Publications Received at ARC

Note a change in the convention for links from the function branch
for a command, to the syntax for that command. Instead of saying
##<syntax copy STRING>##, say ##<*copy STRING>## to speed up
searching time. Likewise, the example link could be changed from
##<example copy STRING>## to ##<*copy *copy STRING>##, but I don't
think it is worth changing the example links at this time.   1

(J21820) 6-FEB-74 15:54; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /DVN JBN; Sub-Collections: SRI-ARC; Clerk: KIRK;

XNLS   Documentation, What Little There is Now

Charles Irby asked me to supply you with any documentation we have
for XNLS. I' afraid the only thing that is in anything near a
readable state is: 1

    DVN 8-JAN-74 15:54   18374
    Qucik Reference New DNLS for Old DNLS Users
    Location: (GJOURNAL, 18374, 1:w)   1a

As Charles may have mentioned, we are working on an online file
<documentation,help,> which will be widely informative about NLS
through a query lanuage and from that will write a user guide, but
that guide is months away.   2

I intend to update the Qucik Reference from time to time, and put out
a TNLS version when there are a significant number of TNLS users. If
you wish I will distribute them to you.   3

XNLS Documentation, What Little There is Now

(J21821) 6-FEB-74 19:53;   Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /SSP CHI(fyi) JMB(fyi) KIRK(fyi); Sub-Collections: DPCS
NIC; Clerk: DVN;

What Can We Give Non-Net People to Read About MST?

I spoke yesterday with Bob Spencer of DDSI. He asked me if we had
any paper about the MST project that he could study.   1

It was not clear to me that documents such as your sendmessage
calling the Meeting of last week in Boston are proper for
circulation. Should I send him a copy? If not, is there anything I
can send him?   2

What Can We Give Non-Net People to Read About MST?

(J21822) 6-FEB-74 21:16;   Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /CF SDC2 RWW(fyi) JCN(fyi) NDM(fyi) EKM(fyi);
Sub-Collections: DPCS COM SRI-ARC NIC; Clerk: DVN;

MEMO1

THIS IS A MSG FOR MIKE KUDLICK FROM FRANK OWENS   1

AT US ARMY WAR COLLEGE. MIKE, WE NOW HAVE A TERMINAL FOR USE OF   2

THE NET MORE FREQUENTLY.COULD YOU FIX IT SO WE CAN HAVE A PASSWORD
ETC   3

ETC SO I WON'T HAVE TO USE GUEST. ONLY MINIMUM FILE SPACE REQUIRED   4

I AM GOING TO TRY TO SEND THIS TO YOU AS A JOURNAL.   5

THANKS SO MUCH ,TELL MARILYN AUERBACH HELLO FOR ME.   6

MEMO1

(J21824) 7-FEB-74 05:57;   Title: Author(s): Guest O. ARC/ARCG;
Distribution: /MDK MFA; Sub-Collections: SRI-ARC; Clerk: ARCG;
Origin: <GUEST>MEMO1.NLS;1, 7-FEB-74 05:48 ARCG ;

Applicants

These three systems programming applicants are currently scheduled
for interviews: 1

                                                                         1a

  Wed Feb 13 9:00 AM --- John Crowley (U of Penn and B of A)   1b

  Thurs-Fri Feb 13-14 --- Jim Calvin (Case)   1c

  Wed Feb 20 11:00 AM --- Bill Yeager (AMES)   1d

                                                                         1e

  I have resumes, and will distribute them to you .   Please arrange
  schedules with Charles or me.   1f

Applicants

(J21825) 7-FEB-74 08:21;   Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /RWW CHI KEV HGL JEW EKM DCW JDH; Sub-Collections:
SRI-ARC; Clerk: MDK;

Correction Applicant Visit Schedule

The dates in this note correct my previous note.   Calvin is visiting
Thurs and Fri, Feb 14 and 15,   not Feb 13 and 14 as I had said.
Sorry.

Correction Applicant Visit Schedule

These three systems programming applicants are currently scheduled
for interviews: 1

1a

Wed   Feb 13 9:00 AM --- John Crowley (U of Penn and B of A)   1b

Thurs-Fri Feb 14-15 --- Jim Calvin (Case)   1c

Wed Feb 20 11:00 AM --- Bill Yeager (AMES)   1d

1e

I have resumes, and will distribute them to you .   Please arrange
schedules with Charles or me.   1f

1

Correction Applicant Visit Schedule

(J21826) 7-FEB-74 09:49; Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /RWW CHI KEV HGL JEW EKM DCW JDH; Sub-Collections:
SRI-ARC; Clerk: MDK;

User Program Scenario

Under the current (old) system, here's what you do to run user
programs.   1

    To compile an L10 source file (with FILE statement in statement
    1):   1a

        Load File (source)   1a1

        Jump to Item 1   1a2

        Output Compiler (bug "L10") to file: (bug the REL filename in
        stmt 1) CA   1a3

        --this creates a "sav" file the size of the program itself.   1a4

    To load a REL file: 1b

        If the default buffer size is too small--   1b1

            Go to Programs   1b1a

                Bufer <size set to> (some number)   1b1a1

        Then: 1b2

            Go to Programs   1b2a

                Get <rel-file> (type or bug the REL file name, "REL"
                extension is assumed).   1b2a1

    To execute a loaded REL file: 1c

        Execute <program> 1   (or give name of program's first
        procedure)   1c1

If you have two separate tasks to do and are done with the execution
of one, (or screwed it up somehow), you can erase the old and replace
it by the new program by doing: 2

Go to Programs   2a

    Reset <program stack> CA   2a1

And then proceed to load the second program   2b

User Program Scenario

(J21827) 7-FEB-74 09:59; Title: Author(s): Diane S. Kaye/DSK;
Distribution: /MDK MLK; Sub-Collections: SRI-ARC; Clerk: DSK;
Origin: <KAYE>PROGRAMS.NLS;3, 7-FEB-74 09:57 DSK ;

Note from Dale Stern Concerning Hal Murray's Visit

Net mail from site CCA-TENEX rcvd at   7-FEB-74 07:48:10

-------   1

   Date: 7-FEB-74 1043-EDT   1a

   From: DALE at CCA   1b

   Re: HAL'S VISIT   1c

   cc: MICHAEL at NIC, HGM   1d

- - - -   2

YOU SHOULD HAVE ALREADY RECEIVED HAL'S MESSAGE. I WILL SEND THE
DOCUMENTS THAT I PROMISED YOU WITH HIM. AS SOON AS THE TWO OF US
STOP ARGUING ABOUT WHICH VERSION OF THE DATACOMPUTER YOU SHOULD PLAY
WITH, I'LL FTP THE PROGRAMS THAT I PROMISED.   3

IT SEEMS THAT SOMEONE LOGGED IN AT THE NIC AS CCA HAS TRIED TO TELNET
TO HERE. SINCE NOBODY HERE KNEW ABOUT THAT DIRECTORY UNTIL I WAS OUT
THERE, IT COULDN'T HAVE BEEN ANYBODY HERE. IS THERE ANY WAY OF
FINDING OUT WHO IT WAS AND/OR PREVENTING IT IN THE FUTURE?   4

HAL IS AN EXCELLENT PROGRAMMER WHO KNOWS THE DATACOMPUTER INSIDE OUT.
HE IS DIRECTING THE IMPLEMENTATION GROUP. PICK HIS BRAIN WHILE HE IS
OUT THERE. HE'LL BE ABLE TO GIVE YOU MORE INTELLIGENT ANSWERS THAN I
CAN TO QUESTIONS LIKE WHETHER YOU SHOULD USE A MULTIPLE FORK
STRUCTURE, ETC.   5

REGARDS, DALE   6

Note from Dale Stern Concerning Hal Murray's Visit

(J21828)   7-FEB-74 12:34;   Title: Author(s): Dale H. Stern/DHS;
Distribution: /EKM HGL RWW CHI DCE JEW; Sub-Collections: NIC; Clerk:
HGL;

Possible Virtual Pathname Syntax proposal

Greetings. I have the first draft of an rfc online at the NIC
(wherever that may be) in <ucla-nmc>lynnrfc.nls (ucla-nmc,lynnrfc,1)
which I would appreciate comments on. The rfc proposes a standardized
syntax for specifying pathnames. Please send comments to me at the
NIC Journal (DHC) or to ISI (DCROCKER) assuming they come up one of
these days. Thanks. Dave.   1

Possible Virtual Pathname Syntax proposal

(J21831)   7-FEB-74 17:25;   Title: Author(s): David H. Crocker/DHC;
Distribution: /AAM JBP DAY SDC2 NJN JEW KTP MAP VGC; Sub-Collections:
NIC; Clerk: DHC;

Mail sent to DHC Through Telnet Through Ames-tip

This message was addressed to DHC and typed in through Telnet NIC FTP
while coming in through the Ames TIP   1

Mail sent to DHC Through Telnet Through Ames-tip

(J21833)   7-FEB-74 17:52;   Title: Author(s): Jeanne B. North/JBN ;
Distribution: /DHC ; Sub-Collections: SRI-ARC; Clerk: JBN;

Idents to have Host names changed to OFFICE-1

Following is a list of idents (together with their org and host
names) which fit the criteria we agreed on. Let me know if this
isn't what you expected.   1

   (LCG) SDAC-TIP SRI-ARC   1a

   (WJC) PURDUE SRI-ARC   1b

   (SGG) NSA SRI-ARC   1c

   (SS2) NORSAR-TIP SRI-ARC   1d

   (RR3) NORSAR-TIP SRI-ARC   1e

   (DRM) NORSAR-TIP SRI-ARC   1f

   (JIMB) TYMSHARE-TIP SRI-ARC   1g

   (DRR2) RADC-TIP SRI-ARC   1h

   (FGB) NSRDC SRI-ARC   1i

   (EBMC) SDAC-TIP SRI-ARC   1j

   (WWW3) SDAC-TIP SRI-ARC   1k

   (PT) NORSAR-TIP SRI-ARC   1l

   (NM) NORSAR-TIP SRI-ARC   1m

   (WPB) RADC-TIP SRI-ARC   1n

   (RRB) SDAC-TIP SRI-ARC   1o

   (VRB) SDAC-TIP SRI-ARC   1p

   (IWC) NBS-ICST SRI-ARC   1q

   (WCD) SDAC-TIP SRI-ARC   1r

   (RED2) RADC-TIP SRI-ARC   1s

   (TF) SDAC-TIP SRI-ARC   1t

   (DMG) ILL-CAC SRI-ARC   1u

   (OAH) NORSAR-TIP SRI-ARC   1v

   (JNH) NSA SRI-ARC   1w

Idents to have Host names changed to OFFICE-1

(JL) MITRE-TIP NIC   1x

(JWJ) RADC-TIP SRI-ARC   1y

(AUK) SDAC-TIP SRI-ARC   1z

(CFK) SDAC-TIP SRI-ARC   1a@

(DAL) RADC-TIP SRI-ARC   1aa

(JBP) MITRE-TIP NIC   1ab

(FPS) RADC-TIP SRI-ARC   1ac

(JAS) JPL SRI-ARC   1ad

(JRS) RADC-TIP SRI-ARC   1ae

(WRS) IND SRI-ARC   1af

(STW) NSA SRI-ARC   1ag

(RKW) RADC-TIP SRI-ARC   1ah

(DAW) SDAC-TIP SRI-ARC   1ai

(PW) SDAC-TIP SRI-ARC   1aj

Idents to have Host names changed to OFFICE-1

(J21834) 7-FEB-74 17:58;   Title: Author(s): J. D. Hopper/JDH;
Distribution: /MDK; Sub-Collections: SRI-ARC; Clerk: JDH;
Origin: <IDENTFILE>SRIHOSTIDENTS.NLS;1, 7-FEB-74 17:17 JDH ;

MESSAGE SENT BY QUO MAIL , TIP, BBN

THIS IS A MESSAGE SENT TO JEW THROUGH THE AMES-TIP, LOGGED IN AS KEV
AT BBN AND CONNECTED TO NIC   1

MESSAGE SENT BY QUO MAIL , TIP, BBN

(J21835)   7-FEB-74 18:04;   Title: Author(s): Jeanne B. North/JBN   ;
Distribution: /JEW ; Sub-Collections: SRI-ARC; Clerk: JBN;

meeting notes for your commnets

for dirk others for info

meeting notes for your commnets

DEIS MEETING DISCUSSION
7 Feb 74 EPAC MENLO   1

ARC SUPPORT - van Nouhuys   2

   Summary: Discussion of levels of security available. Also, in an
effort to provide adequate assistance consider the following   2a

     hard copy: ARC catalogue capability   2a1

     on line working files: read, on line uncatalogued, and
catalogued   2a2

     publications: memos, reports, proposals, etc   2a3

       set up report schedule-tree upon which authors can build   2a3a

       growing in place: send outlines, get comments, and the
proceed   2a3b

       do we have facilities for final mats?   2a3c

   Action: Dirk will check on bridging gap between drafts and final
nats. he will also begin to set up the formats for project
publications   2b

     Brown will give nils some documentation for ARC catalogue   2c

PROJECT DUE DATES - Brown   3

   Summary: tentative due date are as follows   3a

     8 Feb-revised 1Feb74 proposal to Russell   3a1

     15 Feb - submit plan for R&D support   3a2

     28 Feb - meeting in WDC regarding R&D (to include demo)   3a3

     15 Mar - submit proposal for FY 75   3a4

     28 Mar - project meetin   3a5

     25 Apr - project meeting   3a6

     30 May - project meeting   3a7

     15 June -draft final report   3a8

meeting notes for your commnets

Action: Groupwill direct further discussions toward R&D Support
Plan   3b

        Pam will get the schedule dates into the on line calendar   3c

        Dave will work on the revised proposal   3d

R&D SUPPORT PLAN - Group Discussion   4

    Summary: Items to be included in the R&D plan pertinent questions
    were identified as follows   4a

        Items to be included in R&D plan   4a1

            identification of user community(note,we must "grow" this
            community)   4a1a

                DDR&E committee: Black, Chris, Army, AF, Navy, etc   4a1a1

                11 representative organizations(see Brown viewgraph) 4a1a2

                eventual growth - aprox 50 to 100 organizations   4a1a3

            Definition of energy R&D   4a1b

            Services that can be provided(see Brown viewgraph)   4a1c

            Schedule for introducing services   4a1d

            Community acceptance and training(introduce decision-makers) 4a1e

            Staffing of R&D Info center (also sequence of implementing)   4a1f

                initially a coordinator, 2 typists,architect,librarian,
                and then build   4a1f1

                consider DDC trained personnel?   4a1f2

            Paper shuffling, handling, etc.   4a1g

            Hardware development   4a1h

            User level - from just telephones to those with
            sophisticated equipment   4a1i

            Other info systems - provisions for accessing other data
            bases (DoD and non-DoD)   4a1j

                DDC   4a1j1

meeting notes for your commnets

AEC	4a1j2
NASA	4a1j3
Other	4a1j4
Use of ARPANET	4a1k
Role of EPAC — should R&D info center be SRI or Gov't or other	4a1l
provide sense of community	4a1l1
keep services simple	4a1l2
provide services that the community wants and can use	4a1l3
Questions	4a2
What is the community?	4a2a
How is Energy R&D to be defined?	4a2b
What does the community expect the system will help them do?	4a2c
Project status (what is needed? does info have to be provided?	4a2d
How will classified data be handled?	4a2e
How will info that is for "Gov't Only" be handled?	4a2f
How can summary data be obtained?	4a2g
	4a2h
Action: Individuals to proceed on the following outline	4b
I Introduction,ras	4b1
II Background,ras	4b2
A. community	4b2a
B. energy R&D	4b2b
III Objectives/scope,ow/ras	4b3
A. assumptions	4b3a

3

B. constraints   4b3b

IV   Method of approach,ow/ras   4b4

V   Plan-Stages,ow/db/rw   4b5

VI   Schedule,ow/db/rw   4b6

                                                         4c

Attendees   4d

   AM: Brown,Kruzic, Schmidt,vanNouhuys,Whitby   4d1

   PM: Black,Brown,Kruzic,Schmidt,Watson,Whitby   4d2

4

meeting notes for your commnets

(J21836) 7-FEB-74 19:21; Title: Author(s): Pamela G. Kruzic/PGK;
Distribution: /DVN PGK ECW JCN; Sub-Collections: NIC; Clerk: PGK;
Origin: <ENERGY>7MEETING.NLS;2, 7-FEB-74 19:15 PGK ;

Memo on Datacomputer from Hal Murray

Net mail from site CCA-TENEX rcvd at 7-FEB-74 19:29:16   1

  Date: 7-FEB-74 2224-EDT   1a

  From: HGM at CCA   1b

  Re: GOODIES LEFT IN <CCA>@NIC   1c

  cc: MICHAEL at NIC, DALE, HGM   1d

I FTP'D A FEW THINGS OUT THERE.   PLEASE DELETE THEM (OR SOMETHING)
WHEN YOU HAVE   2

DCL IS A SIMPLE TELNET TYPE INTERFACE.   IT DOES MAINTAIN SYNC WITH
THE DATACOMPUTER.   IT TRANSFERS DATA OVER THE DATALANGUAGE PORTS.   3

RUN09 IS SLIGHTLY MORE COMPLICATED (INPUT FROM FILES ...) AND ALSO
SLIGHTLY OUT OF DATE. (VERSION 0/9 RATHER THAN NEWER 0/9.5) BUT IT
MIGHT BE INTERESTING.   4

FORPAC IS ALSO OUT OF DATE.   IT HAS BEEN USED A BIT BY THE ETAC GUYS
FROM FORTRAN (NUMBER CRUNCHING - TABLE GENERATING) TYPE PROGRAM(S?). 5

WE WILL PROBABLY REWRITE IT TO USE THE NEW NEW DCSUBR WHEN IT
ARRIVES.   6

THE OTHERS (SMART,TABLES,PI,DCSUBR) ALL GO TOGETHER TO MAKE A
SOMEWHAT 'SMART' PACKAGE THAT CAN BE USED TO SELECT RECORDS FROM A
FILE, AND COUNT OR PRINT THEM.   IT CAN ALSO PRINT ONLY SPECIFIED
FIELDS OF THE SELECTED RECORDS.   7

WE CAN ALSO SUPPLY A PSEUDO FTP WRITTEN IN HARVARD SORTA TOPS-10 CODE
IF THAT IS INTERESTING.   8

ME (MARTIN FROST) AT SU-AI ALSO HAS WRITTEN SOMETHING.   I DON'T KNOW
WHAT ITS CURRENT STATUS IS (PROBABLY STILL DEVELOPING) BUT IN CASE
YOU BUMP INTO HIM...   9

AS FOR FORKS,   I HAVE HAD TROUBLES TRYING TO DEBUG MULTI FORK THINGS
IN THE PAST, SO I WILL PROBABLY LOBBY FOR A SINGLE FORK APPROACH. SO
FAR, THERE HAS BEEN NO REAL NEED FOR A MULTI (DUAL?) FORK STRUCTURE,
BUT I THINK THERE ARE PROBABLY SIMPLE CASES WHERE IT WOULD BE EASIER
TO CATCH SOME (HOPEFULLY OBSCURE) DATACOMPUTER ERRORS WITH A SECOND
FORK AROUND TO KEEP WATCH. WITH THE TENEX BUFFER ALLOCATIONS, THERE
HAVE BEEN FEW IF ANY HANGUPS, AND THEY HAVE ONLY HAPPENED WHEN THINGS
GET OUT OF SYNC.   10

OPPS: THERE ARE ALSO SOME MUDDLE FUNCTIONS AT MIT-DM THAT RETRIVE
THEIR SURVEY DATA THAT ANOTHER PROGRAM (AN APPENDAGE TO THE ONE THAT

Memo on Datacomputer from Hal Murray

GENERATES THE REAL DATA) SENDS US.   CONTACT SAB@DM OR AKB@DM IF YOU
WANT MORE INFO AND/OR AND THINK/READ MUDDLEESE.   11

ENOUGH FOR NOW.   LET ME KNOW IF ANYTHING COMES UP.   12

DALE: HAVE U SEND SMART MEMO?   13

PS: IN CASE DALE DIDN'T TELL YOU, NEW IS SOCKET 203 (OCTAL) AND OLD
IS 103.   SOMEDAY (SOON HOPEFULLY) THE 'OLD' ONE WILL GET FLUSHED, AND
THE NEW ONE WILL GET MOVED TO 103.
  **14

Memo on Datacomputer from Hal Murray

(J21837) 7-FEB-74 21:08; Title: Author(s): Hallam G. Murray/HGM;
Distribution: /EKM HGL CHI JEW RWW DCE; Sub-Collections: NIC; Clerk:
HGL;

-------   1

Date: 7-FEB-74 2307-PDT   2

From: PURDUE at SRI-ARC   3

Re: Test journal mail   4

- - - -   5

I certainly hope this works   6

as my past attempts have only produced   7

the message '[--timed out--]   etc...   8

                                                                                 9

Bob.   10

-------   11

(J21838) 7-FEB-74 23:08;   Title: Author(s): Robert Kent Myers/RKM ;
Distribution: /WJC ; Sub-Collections: NONE; Clerk: RKM;

Display type linker/teleconferencer

This is to record my idea discuussed today with MEJ about a dnls type
teleconferencer or link mechanism. Basicly, one likes to edit what
one is typing, to not think that one is being forgotten by the other
participants while they are typing, to interrupt occasionally, and
not have the other person's typing mess up your own. The hardware,
(or software, in the case of IMNLS) an any DNLS type terminal can
support this type of activity nicely; the controlling program need
only set up a different window for each participant in the
conference. Each then sees what each is doing, none of them overtype
the others inputs, corrections are displayed.   1

At the same time, a scroll file is a nice thing to have, and the
question of where to insert the texts is probably easily enough
solved by treating inputs like they are in FORUM, i.e. one edits an
item and it is entered in the scroll when it is finished and
"submitted". Private comments and anonymous comments are also
workable within the same framework.   2

Display type linker/teleconferencer

(J21839) 8-FEB-74 02:33;   Title: Author(s): A. D. (Buz) Owen/ADO;
Distribution:' /ADO MEJ ARH; Sub-Collections: NIC; Clerk: ADO;

14 FEB 74
SRI 21840

Proposal For Research
SRI No. EGU 74-18

PRELIMINARY ANALYSIS FACILITY FOR DEIS-I
Part One---Technical Proposal

Prepared for:

Defense Advanced Research Projects Agency
1400 Wilson Boulevard
Arlington, Virginia 22209

Attn: Col. David C. Russell

Prepared by:

David R. Brown, Director
Information Science Laboratory

Richard A. Schmidt
Senior Geologist
Operations Evaluation Department

Approved:

George D. Hopkins, Director
Operations Evaluation Department

Ernest J. Moore, Executive Director
Engineering Systems Division
Stanford Research Institute

14 FEB 74
SRI 21840

Proposal For Research
SRI No. EGU 74-18

PRELIMINARY ANALYSIS FACILITY FOR DEIS-I

Part Two--Contractual Provisions

Prepared for:

Defense Advanced Research Projects Agency
1400 Wilson Boulevard
Arlington,Virginia 22209

Attn: Col. David C. Russell

David R. Brown
Richard A. Schmidt
Information Science Laboratory
Stanford Research Institute
Menlo Park, California 94025

To:
    Russell, David C.
    Nuclear Monitoring Research Office (ARPA)
    Advanced Research Projects Agency
    1400 Wilson Blvd.
    Arlington, Virginia 22209

                                                    21840

(J21840) 13-FEB-74 17:05;   Title: Author(s): David R. Brown, Richard
A. Schmidt/DRB RAS ; Distribution: /DCR2 DCE RWW JCN DVN NDM AGC
; Sub-Collections: NIC; Clerk: JCN ;
Origin: <VANNOUHUYS>DEISPROP.NLS;1, 13-FEB-74 09:49 DVN ;
    Title:

I   INTRODUCTION

1

Data now available in the DEIS-I report can assist the Director
for Energy (ASD(I&L)) in better understanding the status of supply
and consumption within the DOD of the essential fuels, if these
data are subject to considerable analysis. These analyses can be
carried out with hand operated calculators, but this method is
time consuming and inconvenient. Executing the analysis
automatically by computer can be far more effective, particularly
as the volume of data and the urgency of the energy problem grow.
This proposal suggests a practical way in which example analyses
may be made by computer and in which the results may be made
available to the Director and his staff in a facile and selective
manner.

1a

The choice of the analyses to be mechanized and the work of
implementing them, using the ARPA network and certain of its
computer facilities on a short time scale, should be seen as a
complementary effort in the context of a larger DEIS system design
effort underway, sponsored by ARPA. The evolutionary growth of
the DEIS system is a necessary characteristic of this system to
meet its goals as identified by the Defense Energy Task Group.
The role of the preliminary analysis facility that is the subject
of this proposal is to provide the Office of the Director for
Energy with an initial capability at an early date.

1b

The DEIS design effort will benefit from interaction with the
proposed analytical facility, both as this leads to insights into
the nature of the problems faced by the Director and his staff,
and as it demonstrates practically the applicability of the
technologies that may be used.

1c

II   OBJECTIVE

2

The objective of the preliminary analysis facility is to provide
the Director for Energy and his staff, as rapidly as possible,
with a limited number of useful analyses of the data in the DEIS-I
report.

2a

III APPROACH AND FACILITIES PROPOSED

3

A. USE OF ARPA NETWORK

3a

It is proposed to employ certain capabilities of the ARPA
Network and that of selected computers on the network to handle
the DEIS-I data and to carry out a number of types of analysis
as indicated in the menu given below. The computers chosen and

the manner of performing the required functions would be
dictated principally by the need to implement the proposed
facilities in the minimum time possible. The configuration of
these facilities is diagrammed in the accompanying figure.   3a1

INITIAL DEIS-I ANALYTICAL CAPABILITIES (1 to 2 months):   3a2

1. Compute overall regional supplies (retail and wholesale)
by fuel (stocks, consumption, etc.).   3a2a

2. Aggregate data for all bases by organization (e.g., 12th
Naval District, etc.).   3a2b

3. Compare actual reported values with previous week's
estimates of those values (e.g., stocks, consumption,
receipts, etc.).   3a2c

4. Calculate consumption as a percent of total stocks.
Compile those data in excess of some value (could be
different for different bases).   3a2d

5. Calculate consumption compared to resupply (either as
ratio or difference).   3a2e

6. Calculate "apparent shortage" by base or region   3a2f

    (a) difference between consumption and resupply
    (b) compare regional total vs. sum of bases
    (c) identify those installations in excess of some
    tolerance.   3a2f1

7. Calculate "outage time" (quantity on hand divided by
consumption rate less resupply rate)--by region, by
installation, by fuel.   3a2g

8. Calculate "raw deficiency" effects (time to resupply
less outage time)(consumption rate less arrival rate).   3a2h

9. Calculate weighted deficiency effects (above weighted by
a functional priority factor).   3a2i

LONGER TERM CAPABILITIES (3 to 4 months)   3a3

10. Calculate averages (over time).   3a3a

11. Identify values that exceed averages (or some other
standard) by stated limits.   3a3b

12.   Report bases having more (or less) fuel in last report than in previous report.   3a3c

13.   Calculate individual base stocks/consumption as a percent of region (region as percent of total, etc.).   3a3d

14.   Combine data for fuels that may be substituted for one another, present aggregated totals (by base, sub-region, region, etc.).   3a3e

15.   Perform standard statistical tests on data (e.g., trend analysis, deviations, etc.).   3a3f

16.   Provide for incorporation of uncertainty factors as an indication of accuracy.   3a3g

17.   Other interactive analytical procedures.   3a3h

B. SUPPORT TO USERS OF ANALYSIS FACILITIES   3b

SRI proposes the installation of terminals in the Office of the Director for Energy. Since this access will entail use of the ARPA Network, and its message capabilities, SRI proposes to make available for two weeks the services of an expert Network person. This SRI staff member would be available during the period immediately following the installation to train personnel of the Office of the Director in the use of the terminals for simple online communication.   3b1

It is further proposed that an SRI staff member trained in the use of network terminals be made available for two weeks at Cameron Station (DSA/DFSC) to train personnel in the use of the terminal there as appropriate.   3b2

C. ROLE OF MULTICS AND THE CONSISTENT SYSTEM   3c

It is proposed that the statistics implied in the listing of analytical capabilities be developed on the Honeywell 6180 computer at MIT. The processing would be done with the MULTICS system and with certain programs in the Consistent System operating under MULTICS. We believe now that this can be best accomplished if the print tape for the DEIS-I is taken to MIT for processing. It is assumed that support of the people at MIT who are most familiar with these two systems will be forthcoming.   3c1

D. ROLE OF OFFICE-1 (NLS)   3d

It is planned when the results of the chosen analyses have been

generated at MIT, they will be transferred to the OFFICE-1
computer (PDP-10 at TYMSHARE) where they will be put into NLS
format. In NLS at this location they will be embedded in
whatever explanatory text is deemed necessary to make them
readily usable. Through the capabilities of this NLS utility
the format of the statistics and of the DEIS data base, which
may also reside in OFFICE-1, may be rearranged easily to suit
the needs of the Director and his staff.   3d1

E. ROLE OF THE SRI EPAC'S   3e

In conjunction with the development and operation of this
analysis facility as well as the design of an advanced DEIS
system, SRI plans to maintain two energy problem analysis
centers (EPAC). Their basic purpose is to help SRI explore the
nature of the DoD energy problem so as to determine in detail
the full range of informational needs of DoD energy managers.
One will be in Menlo Park, Calif. at SRI's headquarters, the
other will be in SRI's Washington offices. Each will be on the
ARPA Network so as to allow facile communication among SRI
project personnel at both sites, the ARPA sponsors, and staff
members of the Office of the Director for Energy about the
proposed initial and future possible analytical capabilities
for the proposed Analysis Facility.   3e1

F. GOVERNMENT FURNISHED EQUIPMENT   3f

The specific government furnished equipment is detailed in Part
Two, Schedule #d   f1

G. OTHER EQUIPMENT   3g

SRI will supply one Texas Instruments Model 725 Terminal for
use in the Defense Energy Office.   3g1

I ESTIMATED TIME AND CHARGES

4

It is proposed that the work outlined here be performed during a
period of 4 months, between 1 March and 30 June 1974.   4a

Pursuant to the provisions of ASPR 16-206.2, a cost estimate and
support schedules are attached in lieu of the DD Form 633-4.   4b

II CONTRACT FORM   5

It is requested that any contract resulting from this proposal be
awarded as a modification to contract number DACA 23-73-C-0014.   5a

III ACCEPTANCE PERIOD   6

This proposal will remain in effect until 1 March 1974. If
consideration of the proposal requires a longer period, the
Institute will be glad to consider a request for an extension of
time.   6a

Part Two--Contractual Provisions   [1]

COST ESTIMATE

Personnel Costs

```
        Senior Prof      308 hrs.
        Prof             385 hrs.
        Clerical          77 hrs.
            Total Direct Labor              6,873
            Payroll Burden @ 28% *          1,924
            Total Labor and Burden          8,797
            Overhead @ 107% *               9,413
            Total Personnel Costs                    $ 18,210

Direct Costs
    Travel                              $  4,777
        4 trips Wash DC @ 336 =     1,344
         35 Days Subsistence @ 31= 1,085
        4 trips Boston  @ 367 =     1,468
         10 Days Subsistence @ 28=   280
        Auto Rental 40 days @ 15     600
    Communications                          250
    Equipment
    (one TI Terminal @ $150/mo. for 4 mo.)  $600
Total Direct Cost                                    $  5,627

Total Estimated Cost                                 $23,837
Fixed Fee @ 8%                                        $  1,907

TOTAL ESTIMATED COST PLUS FIXED FEE                  $ 25,744
```

* See following Schedules

Cost Schedules:

SCHEDULE A
DIRECT LABOR

Direct labor charges are based on the actual salaries for the staff members contemplated for the project work plus a judgmental factor applied to base salary for merit increases during the contract period of performance. Frequency of salary reviews and level of merit increases are in accordance with the Institute's Salary and Wage Payment Policy as published in Topic No. 505 of the SRI Administration Manual and as approved by the Defense Contract Administration Services Region.

SCHEDULE B
OVERHEAD AND PAYROLL BURDEN

These rates have been found acceptable by the Department of Defense for billing and bidding purposes for the calendar year of 1974. We request that these rates not be specifically included in the contract, but rather that the contract provide for reimbursement at billing rates acceptable to the Contracting Officer, subject to retroactive adjustment to fixed rates negotiated on the basis of historical cost data. Included in payroll burden are such costs as vacation, holiday and sick leave pay, social security taxes, and contributions to employee benefit plans.

SCHEDULE C
TRAVEL COSTS

Air fare is based on prices for travel to Washington D.C. at $336 and to Boston at $367 round trip tourist established in the Official Airline Guide dated January 1, 1974.
Domestic subsistence rates and travel by private auto are established standards based on cost data submitted to and approved by DCAA.

SCHEDULE D
GOVERNMENT EQUIPMENT

TYPEWRITER TERMINALS

   2 Couplers 30 cps

   2 GE TERMINETS
      (one at the Pentagon; one at DSA)

(J21840) 13-FEB-74 17:05;   Title: Author(s): David R. Brown, Richard
A. Schmidt/DRB RAS ; Distribution: /DCR2 DCE RWW JCN DVN NDM AGC
; Sub-Collections: NIC; Clerk: JCN ;
Origin: <VANNOUHUYS>DEISPROP.NLS;1, 13-FEB-74 09:49 DVN ;
   Title:

September 1970   1

Use of High Level Languages for Systems Programming   2

   Graham, Robert M.   2a

     TM-13   2a1

     ABSTRACT   2a2

The basic problems in the design and implementation of large software
systems are reviewed. Using a high level language, such as PL/I,
to implement a large software system has many advantages.
Several of the major advantages and how they contribute to the
solution of the major implementation problems are discussed. It
is pointed out that none of the high level languages existing
today help in solving the problem of performance prediction.
It is then postulated that a language designed specifically for
sottware design and implementation would not only be a major
factor in the solution of the basic problems of software design
and implementation previosuly discussed, but it would also
make it possilbe to automatically predict the performance of the
software being designed. Some properties of such a language
are expored. A direction for obtaining the performance measure
through the use of analysis and simulation is explored.   3

   September 1970   3a

   File Management and Related Topics   3b

     Graham, Robert M.   3b1

       TM-12   3b1a

       ABSTRACT   3b1b

This paper traces the evolution of a segment based file system.
The final system is typical of the virtual memory systems found
in large general purpose time-sharing systems. The contents of the
file system is a collection of symbolically named segments organized
in a hierarchial structure. The user directly references segments
in the file system. All movement of information between the
different levels of physical memory is done automatically by the
system using paging. Complete privacy of user information is
guaranteed, although controlled sharing is possible. The system
includes file backup facilities to protect users from information
loss due to system failure.   4

   July 1970   4a

The PDP-7/9 Communications Package was written to provide data transfers between the buffer controller (PDP-7 or PDP-9) of an ELS Display Console and a host computer via a 50-kilobit serial telephone link using Bell System Type 303 Dataphones. This memorandum describes the package programs and calling procedures, and includes detailed flow diagrams.   6

One of the respones to the need for effective interaction in the use of computers for a design project is the supersystem concept proposed for ICES, the Integrated Civil Engineering System. The supersystem is defined as the cooperative effort on the part of the designers of several problem oriented computer capabilities to implement project oriented capabilities by allowing each of their problem oriented subsystems to reference a single file of project data. The supersystem would allow design interaction by having each of the problem oriented computer subsystems reference a single file of information specifying the project.   8

Future work in the application of computers to interactive and project oriented design in the building industry will have to concentrate on the file sturcture to be used in the implementation of a computer building design supersystem.   9

10

(J21841) 8-FEB-74 09:29;   Title: Author(s): Herb S. Hughes/HSH ;
Distribution: /HSH MAP ; Sub-Collections: NIC; Clerk: HSH;

Draftsman for Line Processor Development

   This is a memo of explanation for the request to hire a senior
draftsman for approximately 120 hours to assist us in our Line
Processor development.   1

EXPLANATION: 2

    This draftsman is necessary to develop two printed circuit board
    layouts. These layouts are needed to provide models for the
    construction of the five Line Processors we intend to build in the
    near future, and other Line Processors we will perhaps build
    later. I have checked within SRI and, as of this date, there is no
    person availble that is qualified to do this work.
    -- Martin Hardy.   2a

Draftsman for Line Processor Development

(J21842) 8-FEB-74 15:53;   Title: Author(s): Martin E. Hardy/MEH;
Distribution: /MEH; Sub-Collections: SRI-ARC; Clerk: JML;
Origin: <HARDY>DRAFTS.NLS;7, 8-FEB-74 11:04 JML ;

Draftsman for Line Processor Layout

Memo to R. Wing   9 February, 1974   1

  Early last week arrangements were made with Blaine Johnson to do the
printed circuit board layout for our Line Processor.   2

  During the course of monitoring Blaine's work, it became evident
that he was not progressing as we had agreed, at a rate which had
been determined necessary to meet previously established schedules.   3

  In discussions with Blaine we concluded that he preferred not to
work on this project as long as it was overhead -- i.e., he would do
it only when he had nothing else to do. This attitude, needless to
say, is completely unacceptable because of the delay it will cause in
developing the Line Processor, which will cause serious delays in
meeting our commitments to our clients.   4

  Because of this, and because Dayton Bell is the only other qualified
person in the Institute that I am aware of that can do this type of
work, I request authorization to hire an outside draftsman (journal
-- 21842,).
  -- Martin Hardy.   5

Draftsman for Line Processor Layout

(J21843) 11-FEB-74 15:08;   Title: Author(s): Martin E. Hardy/MEH;
Distribution: /MEH DVN RWW JCN; Sub-Collections: SRI-ARC; Clerk: JML;
Origin: <HARDY>BLAINE.NLS;6, 8-FEB-74 16:54 JML ;

PROPOSED METHODOLOGY FOR DATA COLLECTION OF FEEDBACK FROM
WORKSHOP UTILITY USERS   1

The Analysis team at ARC (Augmentation Research Center), Paul Rech
and Susan Lee, would like to make themselves known to you and welcome
you to OFFICE-1.   2

With the Workshop Utility now in operation and a new command language
coming up in a few months, we are interested in establishing a data
base of Utility user's feedback to assist the evolutionary
development process. We are interested particularly in the following
information: 3

   1) We would like feedback about your experiences with the command
   language, system features, and any other aspect of using NLS on
   the Utility. The data base will be analyzed for recurring
   questions, suggestions, etc. from which plans can be made for
   changes in training, command language, manuals, etc.   3a

   2) We would like to know for what types of work people prefer to
   use NLS.   3b

We will be in contact with you periodically as we go about gathering
information about users' reactions to the system. We would
particularly like to encourage you to make use of the feedback
mechanism described in (Gjournal,21585,).   4

To reiterate, users' comments about the system can be handled in the
following ways: 5

   1) Messages can be sent via sndmsg to FEEDBACK, or   5a

   2) Via the Journal system to the ident FEED, or   5b

   3) Via sndmsg or the Journal to your Architect with a copy to
   FEEDBACK or FEED.   5c

   4) Comments communicated orally to the Architects can be passed on
   by one of the above means.   5d

All comments will be acknowledged and those requiring action will be
handled by Operations or User Development. If you have any
questions, contact Jim Bair (User Development) or Susan Lee
(Analysis).   6

Proposed Methodology for Data Collection of Feedback from Workshop
Utility Users

(J21844) 8-FEB-74 10:05;   Title: Author(s): Susan R. Lee/SRL;
Distribution: /BELL-CANADA RADC KWAC PR RWW; Sub-Collections: SRI-ARC
BELL-CANADA RADC KWAC; Clerk: SRL;
Origin: <LEE>COMB.NLS;5, 8-FEB-74 10:03 SRL ;

NDM 8-FEB-74 10:56   21846

Message from S Bailey of NSA: programming request

7-FEB-74 0603-PDT NSA at SRI-ARC: USER-PROGS
  Received 7-FEB-74 06:03:20   1

     In the user-progs "USER' GUIDE" it was stated to check with
you for applications that don't appear in the user-progs table of
contents. I need a prog so that a user after entering NLS would
only have to execute the prog which would call the nls file
assigned to the user by the prog and put the file in isert mode
after the last statement in the file. Since the user will no
almost nothing about nls the prog should take care of viewspecs,
levels, etc. and update the file when the user leaves. Also a
decent set of help statements would be desired if the user makes
a wrong entry or just needs help. There are many possiblities
but i'll stop here. I am very knew with l10 programms and
programming, but its appears that all I need is possible. I'm
sure there isn't a prog like this but any suggestions would be
very much appreciated.   1a

Thankyou much
Stephen Bailey   1b

1

Message from S Bailey of NSA: programming request

(J21846) 8-FEB-74 10:56;   Title: Author(s): N. Dean Meyer/NDM;
Distribution: /JCN; Sub-Collections: SRI-ARC; Clerk: NDM;

Office-1 Phone Number for Operations Problems

Connie: Please distribute this to the appropriate users at ARPA.
Thanks.

Office-1 Phone Number for Operations Problems

Notice of Tymshare Phone Number for Operations   1

There is now a direct line to the operator of the PDP-10 Computer,
Office-1, at Tymshare, Inc.:   1a

(403) 996-2770 through 2772   1a1

This is for operational problems.   1b

Operational problems need to be clarified. They include file
problems, such as lost files, bad files, locking conflicts, or
situations where a computer error message appears that is not
treated in Appendix C, ERROR MESSAGES, in the TNLS User Guide
(27 Nov 73 ARC 19200); questions about system crashes or the
status of the hardware and software (by this, of course, we
mean whether or not it is working normally) are included.   1b1

Non-operational problems   1c

As suggested in the announcement of the tranfer to Office-1
(GJOURNAL,21585,1h), most inquiries will involve questions
about how things work, problems arising from difficulties in
using the System, questions about how to do new things,
requests for training and access to certain features. Another
set of problems to be handled separately are those about
changes in resource allocation or services rendered.   1c1

Use FEEDBACK   1c2

These kinds of questions or requests should be sent using
the mechanism called Feedback, either a sndmsg to FEEDBACK
or a Journal message to FEED. Feedback will be reviewed
every weekday (unless impossible), and all items will be
acknowledged (action items, when the action is taken). Note
that, although I coordinate them, it is important not to
send them to me personally because of travel and the like.
In these cases another person will be in charge of Feedback.
In addition, using the mechanism called Feedback makes all
the problems, questions, and comments available to our
Analysis team for study.   Thank you.   1c2a

Office-1 Phone Number for Operations Problems

(J21347) 8-FEB-74 20:40;   Title: Author(s): James H. Bair/JHB;
Distribution: /PR SRL RADC BELL-CANADA KWAC WRF JIMB RLM2;
Sub-Collections: SRI-ARC RADC BELL-CANADA KWAC; Clerk: JHB;
Origin: <BAIR>NUMANN.NLS;2, 8-FEB-74 20:35 JHB ;

TENEX File Protection Codes Usage

In response to Mike Bedford's request.

TENEX File Protection Codes Usage

These notes on the TENEX File Protection Mechanism have been
extracted from the TENEX EXEC Manual. I hope they will provide some
solution to the security problem.   1

General   1a

File protection in TENEX is controlled by a six-digit octal
number, which occurs as part of the file name.   1a1

This protection field follows the version number. For
example: 1a1a

ALPHA.NLS;3;P775252   1a1a1

Protection Fields   1b

The six-digit octal number following the letter "P" above
consists of three fields of two digits each.   1b1

The left-most two-digit field controls protection for the
file owner.   1b1a

The middle two-digit field controls protection for a group
of users.   1b1b

The right-most two-digit field controls protection for all
users not covered by the two fields mentioned above.   1b1c

The most common protection codes: 1b1d

77   permits full access (read, write, execute, append,
list).   1b1d1

52   protects a file from modification (i.e., no write,
no append) but permits other functions.   1b1d2

02   protects a file from reading or writing, but allows
someone to see it in the directory listing.   1b1d3

00   protects a file from reading or writing and makes it
invisable in the directory listing.   1b1d4

How to Invoke the Mechanism   1c

1) When creating a file in NLS (for example via the commands
OUTPUT FILE or UPDATE FILE) then type the entire file name ---   1c1

FILENAME.EXTENSION;VERSION;Pxxxxxx   1c1a

TENEX File Protection Codes Usage

and put the desired protection code octal digits in the field
of x's.   1c2

    Example: GLURG.NLS;23;P775200   1c2a

    2) In the EXEC, use the COPY command and type the entire file
name as above.   1c3

    COP<esc>[Y (file list)] GLURG<esc>[.NLS;23 (TO)] ↑F ↑F ↑F
    Pxxxxxx CR [new version]   1c3a

where the three control F's merely allow you to avoid having to
type the name, extension, and version number, and the field of
x's is the desired protection code.   1c4

    NOTE: Do NOT precede the uppercase P with a semicolon,
    when using this method.   1c4a

How to find out what the protection bits are set to.   1d

Use the EXEC command DIRECTORY as follows: 1d1

    @ DIR<COMMA> CR
    @@ PR CR
    @@ CR   1d1a

where the symbol <COMMA> means you type the character
"comma",
<esc> means you type the "alt mode" key,
and CR means you type the "carriage return" key.   1d2

(Reference: KUDLICK>PROTECTION.NLS;6, 2-JAN-73 MDK)   2

TENEX File Protection Codes Usage

(J21348) 8-FEB-74 22:17;   Title: Author(s): James H. Bair/JHB;
Distribution: /KWAC MIKE; Sub-Collections: SRI-ARC KWAC; Clerk: JHB;
Origin: <BAIR>MIKEPRO.NLS;1, 8-FEB-74 22:04 JHB ;