Meeting Note on your request (25360,)

Doug, just a note to record the outcome of our brief discussion on
what was needed to satisfiy the request of (25360,), I indicated
that I thought that our Mid Contract Status Report for NSW (25181,)
and conversations on the phone and in person at the NSW meetings
clearly met most of the needs you had for communication of our
position on targets to the NSW steering committee, What Col. Mc
Govern and General Ro'bins think is controlled by the NSW steering
committee over which we have no control.   In (25208,) I clearly
stated to my staff that they were to arrange their tasks in at least
two categories, one, tsks absoolutely essential to getting NSW to run
and two, goodies desired, They were instructed to concentrte on
category one and when finished to move to category two on a best
effort basis, You were going to read these although it surprised me
that such important docs sent you in the Journal had not been read
earlier, We also looked at the eccounting info on NSW and I showed
you tht we were fully charging and that all resources are being paid
for and there few if any left (subject of another memo in
preparation), This discussion seemed to meet the info needs you had
in mind when creating the request and further discussion can follow
later as appropriate, Dick

1

Meeting Note on your request (25360,)

(J25365)   12-FEB-75 08:53;;;;   Title: Author(s): Richard W.
Watson/RWW; Distribution: /DCE([INFO-ONLY]) ; Sub-Collections:
SRI-ARC; Clerk: RWW;

NSW Site Engineers from the Norm Nielsen Group?

Might Carlsen entertain a proposal from the Norm Neilsen group to be
NSW Site Engineers?   1

NSW Site Engineers from the Norm Nielsen Group?

(J25366)   12-FEB-75 09:42;;;;   Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /RWW([ACTION]) RLL([INFO-ONLY]) DCE(
[INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: DVN;

Home office coordination--additions to my schedule

Thurs 1 pm   1

   Demo of DNLS for Jim Lloyd (ARPA-NSW) and another Air Force
   man--Steve Canton   1a

Thurs 3 pm   2

   DNLS beginning lesson (tutorial) for Dr. Licklider of ARPA   2a

Friday 9 am to 5 pm   3

   plan to begin the TNLS second course for ARPA-NSW at pentagon   3a

      [need copies of course outline STRUCTURE & VIEWING]   3a1

Home office coordination--additions to my schedule

(J25367) 12-FEB-75 10:57;;;;   Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /UD([INFO-ONLY]) ; Sub-Collections: SRI-ARC UD;
Clerk: JMB;

Contact report: Herman Leon of TRW Systems, visit of 6 Feb 75

(DATE) 6 Feb 75   1

(BY) LIEBERMAN   2

(ATTENDEES)   3

  Herman I. Leon of TRW   3a

  Douglas Engelbart (DCE) of SRI-ARC   3b

  Robert Lieberman (RLL) of SRI-ARC   3c

  Phil Whalen of SRI   3d

  Dave Myers of SRI   3e

(ADDRESSES) Full name of organization, address, and phone number   4

  Leon   4a

    Systems Group of TRW INC.   4a1

    7600 Colshire Dr.   4a2

    Mclean, VA 22101   4a3

    703-893-2000   4a4

  Myers and Whalen   4b

    SRI   4b1

    Systems Engineering Division   4b2

    Systems Evaluation Group   4b3

(MEDIUM) FACE-TO-FACE   5

(WHERE) SRI-ARC Menlo Park, CA   6

(ACTION-ITEMS)   7

  None   7a

(DISTRIBUTION) DCE JCN RLL   8

(REFERENCES)   9

(REMARKS)   10

Contact report: Herman Leon of TRW Systems, visit of 6 Feb 75

Herman Leon of TRW, Assistant Operations Manager for Engineering,
spent several hours with above attendees. At first he explained
his application. Following this we gave a brief overview of our
goals and purposes at SRI-ARC.   10a

Only a short ten minutes or so were spent in actually showing him
NLS.   10b

TRW Systems has an internally supported project for the
development of a Command Center. They have a few subscribers who
are interested in this project and have funded TRW to plan out
centers for them.   10c

    At the moment OSDI (Office of the Assistant Secretary for
    Defense Intelligence) is their principal supportor. (Henderson
    of OSDI).   10c1

    The FAA will also be buying into this project.   10c2

    The Navy has a Tactical Force Command Center (TFCC) planned for
    the future. This is also an example of a use for this command
    center service.   10c3

    Some contact with RADC intelligence people has been made.   10c4

Their command center is aimed at the decision maker rather than
the analyst that backs up the decision makers.   10d

TRW has a prime interest in subjective reaction. Much role
playing is considered (at a serious level rather than completely
made up one).   10e

    The WWMCCS exercising is an example of an end goal.   10e1

        This would include preparing briefings and   10e1a

        actual on line command/control functions.   10e1b

It is also important for them to improving the content of
information the decison makers are given.   10f

The objective is to find out what the information needs of a
senior or watch officer are.   10g

    One problem is that each is an individual with different format
    preferences, information needs, etc.   10g1

    Another problem is to augment them with little training.   10g2

This is important if any system is to be accepted,   10g2a

Basically, they want a collection of techniques.   10h

So far they are 18 months into this service project,   10i

At the moment they have some software but nothing very advanced,
They have two nodes (in the same building at Mclean, VA), one with
large screen display. There is another sister installation in
Recondo Beach,   10j

They are just getting to conferencing techniques.   10k

They have found a good technique for graphic display, namely
having slides projected for graphs and maps with computer
generated text,   10l

   This was necessary since there is a very strong objection, at
   moment, to computer generated graphics,   10l1

Another TWR program is called SUDS. It is a natural language input
interpretor that learns from its mistakes. This project was
mention as possibly one in which we would be interested,   10m

In summary DCE and I thought that the project itself at TRW could
be an interesting applicaton for NLS. The distinction between the
project using NLS and having NLS as part of their project's
product was not easily conveyed,   10n

The prospects of further interest from this group are low,   10o

(DOCUMENTS) Hard copy given and received   11

   (GIVEN) Date and documents given   11a

      Coordinated Information Services for a Discipline- or
      Mission-Oriented community (mjournal,12445,)   11a1

      The Augmented Knowledge Workshop, (ijournal,14724,)   11a2

      The SRI-ARC Workshop Utility Service: What and Why,
      (jjournal,24031,)   11a3

   (RECEIVED) Date and documents received   11b

Contact report: Herman Leon of TRW Systems, visit of 6 Feb 75

(J25369) 12-FEB-75 12:18;;;;   Title: Author(s): Robert N.
Lieberman/RLL; Distribution: /DCE([INFO-ONLY]) JCN([INFO-ONLY])
; Sub-Collections: ARC-LOG SRI-ARC; Clerk: RLL;

Contact report: Doug Williams of Ames Research Center, visit of 7 Feb
75

(DATE) 7 Feb 75	1
(BY) Lieberman	2
(ATTENDEES)	3
Doug Williams of Ames	3a
Robert Lieberman (RLL) of SRI-ARC	3b
(ADDRESSES) Full name of organization, address, and phone number	4
Doug Williams	4a
NASA	4a1
Ames Research Center	4a2
Mountain View, CA	4a3
(MEDIUM) FACE-TO-FACE	5
(WHERE) SRI-ARC, Menlo Park, CA	6
(ACTION-ITEMS)	7
None	7a
(DISTRIBUTION) JCN DCE RLL ARC-LOG	8
(REFERENCES)	9
(REMARKS)	10

At the request of the Long Range Planning Service of SRI (Gail
Murray) I gave a demonstration of the NLS system to Doug Williams
from Ames Reseach Center, Life Scienes Division.   10a

His background is in psychology and his particular application was
in the interactions between pilots and their cockpits.   10b

He was considering the CRT applications to navigational systems.   10c

  Some of the problems were that of format on the screen, keyword
  / full words / phrases / etc. recognition, and different kinds
  of input devices.   10c1

Our information handling techniques and service were not of

particular interest to him. Any observations made in our study of
people using the system were pertinent. I felt that Jim Bair (who
also has a psychology background) might be worth talking to.   10d

Unfortuately, I had to leave promptly after an hour. He did not
speak to Bair but promised to call back at some unspecified time.   10e

(DOCUMENTS) Hard copy given and received   11

   (GIVEN) Date and documents given   11a

   (RECEIVED) Date and documents received   11b

contact report: Doug Williams of Ames Research Center, visit of 7 Feb
75

(J25370)   12-FEB-75 12:25;;;;   Title: Author(s): Robert N.
Lieberman/RLL; Distribution: /ARC-LOG([ACTION]) JCN([INFO-ONLY])
DCE([INFO-ONLY]) ; Sub-Collections: ARC-LOG SRI-ARC; Clerk: RLL;

110 elsewhere

don, could you please answer in writing topic 3 and distribute to me
and triolo or if the answers already exist in writing some place
where? if any one has additions to the tentative agenda please get
them to me and i will add to the list (i have a list of the things we
discusedd at yesterdays meeting and will soon publish new adgenda.

110 elsewhere

12-FEB-75 1314-PST TRIOLO: elf
   Distribution: VICTOR, watson
   Received at: 12-FEB-75 13:14:34   1

   the following is a list of things on which i invite
    yor comment, i hope these issues can be resolved
    before or during your visit, i also invite you to expand the
   list as you see fit,   1a

   1, elf system loader
     a) corresponding 11 boootstrap   1b

   2, elf virtual addr space loader   1c

   3, running 110 compiler on decsystem-10
     a) jsys vs, uuos
     b) txt vs, nls input files   1d

   4, suitability of current elf tty handlers for fe   1e

   5, elf folklore   1f

110 elsewhere

(J25371) 12-FEB-75 15:11;;;;   Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /DIA([ACTION]) RWW([INFO-ONLY]) JLE([
INFO-ONLY]) CHI([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk:
KEV;

JBP 12-FEB-75 16:20   25372

The identfile record for the group nsw should be updated to delete
FJN and add JLE and VJT.
--jon.   1

NSW Group Ident Update

(J25372)   12-FEB-75 16:20;;;;   Title: Author(s): Jonathan B.
Postel/JBP; Distribution: /MLK([ACTION]) JAKE([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: JBP;

property perannual

The property boys have been around and there are still a few items
missing. any information relating to these little jewels will be
greatly appreciated.   1

1. tape recorder model 230 serial no. 9040   1a

2. tape recorder model 124cs serial no. 29935   1b

3. mouse serial no. 07   1c

4. file cabinet model 18354 serial no. g00109801   1d

5. tape recorder model tc126 serial no. 10372   1e

6. ti terminal model 725 property tag no. g0012045   1f

7. miniture joystick model 2438   1g

8. mouse property tag no. g55190017   1h

property perannual

(J25374) 12-FEB-75 16:41;;;;   Title: Author(s): Sandy L. Johnson/SLJ;
Distribution: /SRI-ARC([ACTION]) ; Sub-Collections: SRI-ARC; Clerk:
SLJ;   Origin: < JOHNSON, AHH.NLS;1, >, 12-FEB-75 16:30 SLJ
;;;;####;

discussion topics for my adr trip

sent via sndmsg to vic triolo. please tell me about anything else
you would like to see discussed.

discussion topics for my adr trip

vic, i've added some things to the list of discussion topics you sent
me, see you thursday, ken   1

   1. elf system loader   1a

   a) corresponding 11 boootstrap   1a1

   2. elf virtual addr space loader   1b

   3. running 110 compiler on decsystem-10   1c

   a) jsys vs. uuos   1c1

   b) txt vs. nls input files   1c2

   4. suitability of current elf tty handlers for fe   1d

   5. elf folklore   1e

   6. how adr releases new elfs   1f

   7. buffer management   1g

   8. current core estimates   1h

   9. integrating adr and arc work procedures   1i

discussion topics for my adr trip

(J25375) 12-FEB-75 16:54;;;;   Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /NPG([INFO-ONLY]) RWW([INFO-ONLY]) ;
Sub-Collections: SRI-ARC NPG; Clerk: KEV;   Origin: < VICTOR,
ADGENDA.NLS;1, >, 12-FEB-75 16:40 KEV ;;;;####;

copy of sdmsg to roetter - ckm journal

13-FEB-75 0728-PST   BECK: Connie needs help; she's losing her
journal mail
    Distribution: FEEDBACK AT OFFICE-1, roetter
    Received at: 13-FEB-75 07:28:39   1

    Connie McLindon has been deleting her initial file at office-1, on
    the assumption that when she has sendmail the system will create a
    new one. She says that the last thing whe did a week ago was
    delete a "partial copy". Today she went to her initial file to
    read mail she had been told was delivered; she got the message "PC
    does not exist". The file displayed is a very old version of her
    initial file. Where has all her mail gone. Please advise her (and
    send a copy to me @office-1); my know
    dge of the logic of journal mail delivery and partial copies is
    shaky in this area. Incidently, the new mail has not been going
    into this version of the file.
    Susan, I've sent you a cc to alert you to the message in feedback.
    Thanks.   Jeanne B.   1a

copy of sdmsg to roetter - ckm journal

(J25376) 13-FEB-75 08:36;;;; Title: Author(s): Susan Gail
Roetter/SGR; Distribution: /FEED([ACTION]) ; Sub-Collections:
SRI-ARC; Clerk: SGR;

copy of message to roetter - new dirs

13-FEB-75 0805-PST NORTON: new of-1 dirs placko request
    Distribution: ROETTER, norton
    Received at: 13-FEB-75 08:05:09   1

    Hmm here's a late action on a request Mike sent to me last week
    ugh, Can you get them set up? Thanks Jim   1a

    3-FEB-75 1023-PST *PLACKO: OFFICE-1 Directories for Packet Radio
    Project
        Distribution: NORTON, placko, fralick at sri-ai
        Received at: 3-FEB-75 10:23:35
        Jim,
            As a result of discussions with with Bob Kahn I'd like to
        request
        the
        following two directories on Office-1 for the Packet Radio
    Project,

        They would be allocated from Carlson's NSW slots,
        Directory name: FRALICK
            IDENT: SCF
            Account:
            Password: SCF
            Disk pages: 300
            Allocation group: ?
            Default protection: 770000
            Person's name: Fralick, Stanley C.
                Address: SRI
                Phone: 326-6200 x3279
            Organization: SRI/PRWG
            Function: Project Leader of Packet Radio Project at SRI

        Directory name: PRSETD
            IDENT: PRSETD
            Account:
            Password: PRSETD
            Disk pages: 300
            Allocation group: ?
            Default protection: 770000
            Person's name: Allan, Daniel S.
                Address: SRI
                Phone: 326-6200 x3636
            Organization: SRI/PRWG
            Function: Packet Radio Project Systems Engineer and
    Technical
                    Director

    -- Mike   1b

copy of message to roetter - new dirs

(J25377)   13-FEB-75 08:37;;;;   Title: Author(s): Susan Gail
Roetter/SGR; Distribution: /FEED([ACTION]) ; Sub-Collections:
SRI-ARC; Clerk: SGR;

Please Add Rita Hysmith to DIRT

Marcia, Please add Rita Hysmith (Jordan) (JR) to DIRT....Thanks   1

Please Add Rita Hysmith to DIRT

(J25378)   13-FEB-75 09:08;;;;   Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /MLK([ACTION]) JOAN([ACTION] dirt
notebook please) DIRT([INFO-ONLY]) ; Sub-Collections: SRI-ARC DIRT;
Clerk: DVN;

Notes about running L10 compiler on DECsystem-10

About running L10 compiler on DECsystem-10   1

  We have a version of L10's library package that worked on our
  10/40 system. It should work with either L10 or L1011 on a 10/50
  with no or little fixing up. We need access to a 10/50 to check it
  out.   1a

  The input to such a compiler would be text (.TXT) files and not
  NLS files. The TENEX version of L10 and L1011 will take either NLS
  or text files.   1b

  The output from a 10/50 based compiler would look the same as a
  TENEX based compiler. The REL files could be loaded with DEC
  loader on the 10/50 system and (L10) run and debugged providing
  10/50 I/O packages were inserted with it, OR (L1011) loaded and
  saved. I think the only way to format the saved files for loading
  on the PDP-11 is on a TENEX via SAVBIN.   1c

  DEC 10/50 UUO's can be inserted in the L10 code as instructions
  provided they are defined at the front of the file with the SET
  command. For example   1d

    SET OPEN=50B, chnout=1;   1d1

    ...   1d2

    IF NOT SKIP !OPEN chnout,fildes THEN GOTO blah;   1d3

Notes about running L10 compiler on DECsystem-10

(J25379) 13-FEB-75 10:15;;;;   Title: Author(s): Don I, Andrews/DIA;
Distribution: /KEV([ACTION]) RWW([INFO_ONLY]) ; Sub-Collections:
SRI-ARC; Clerk: DIA;

Thoughts on IBM Evaluation of NLS

Duane, I just read your document on the IBM NLS evaluation (31828,)
andhave the following off the top of my head comments.
1) Task I can not be done without their really studying both NLS and
how we do our work and programming. Better if they actually
programmed with us. Just studying manuals is no guarantee that they
would see immediately how to use NLS at methodology level. I would
say that some IBMer would have to spend some time here and work with
us for a while. This woullinvolve our time and require some funds
for consulting training etc for us.
2) Creating the COBOL support processor for the NSW type environment
for task II would be good. It might be required that the person
doing at least the first part of the study live here for a while.
Given our preent limited resources heavily committed to NSW until
July, what is the estimted start date? I thought they were going to
use NLS to do the SP documentation, what happened? without our being
able to have close contact with them I have little confidence that
anything useful or really valid will result. The reason is not just
parochial, NLS really presents a very different world from anything
that is in the IBM experience and to ask some cat from an African
tribe to evaluate Jeeps for hunting requires quite a bit of
acculturation before it would make any sense.

1

Thoughts on IBM Evaluation of NLS

(J25380)   13-FEB-75 10:27;;;;   Title: Author(s): Richard W.
Watson/RWW; Distribution: /DLS([ACTION]) DCE([INFO-ONLY]) JCN([
INFO-ONLY]) HGL([INFO-ONLY]) EKM([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: RWW;

ARC-LOG now in operation; send pertinent items.

TO: DCE JCN RLL   1

According to the our agreement, please send all SNDMSGs and JOURNAL
items pertinent to events, visits, demonstrations, trips, phone
calls, personnel where-abouts, etc. to ARC-LOG. This name is the
same for both the directory and the journal ident. Thank you.   2

All are encouraged to look at the file in <ARC-LOG,ALOG,> for the
latest information. The file is divided into four basic branches: 3

    INPUT - for incoming messages via SNDMSG   3a

    JOURNAL - for incoming journal items   3b

    SCHEDULE - to store items relevant to future and past events,
    visits, trips, and personnel scheudles   3c

    REPORTS - items that are reports, notes, minutes of trips,
    visits, phone calls, etc.   3d

Suggestions on methods of handling this information service are
welcomed. THANK YOU.   4

ARC-LOG now in operation; send pertinent items.

(J25381)   13-FEB-75 10:33;;;;   Title: Author(s): James C. Norton, Log
Augmentation/ARC-LOG; Distribution: /DCE([ACTION]) JCN([ACTION])
RLL([ACTION]) ; Sub-Collections: ARC-LOG; Clerk: ALOG;

Suggested Changes to Output Processor User's Guide

        I just finished using Dean's output processor user's
guide,I think it is excellent, but I have noted a few changes that
may be needed, See (panko,output-guide,).   1

1

suggested Changes to Output Processor User's Guide

(J25382)   13-FEB-75 10:49;;;;   Title: Author(s): Raymond R.
Panko/RA3Y; Distribution: /NDM([ACTION]) JCN([INFO-ONLY]) JHB([
INFO-ONLY]) SGR([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk:
RA3Y;

11-FEB-75 14:23:43,5551   1

Date: 11 FEB 1975 1423-PST   2

From: SATTLEY   3

Subject: FE Programming   4

To: IRBY   5

cc: MILLSTEIN at BBN-TENEXB   6

                                                                           7

Charles: 8

    Greetings. since neither of us was at the meeting, we're supposed
    to talk to each other. I hope I'll have reached you by phone by
    the time you read this, but in any case... I'm sending copies of
    two files which I've started building, for the purposes of
    discussion among ourselves here, and with you. Neither of them is
    in CML yet, but I'm working at it.   8a

                                                                           9

    The first file is a list of white boxes from Millstein. They are
    intentionally basic, and will no doubt be extended. Specifically,
    they contain nothing about tool suspension or resumption, since
    that has become a grey area we have to discuss -- if the FE can
    handle suspension, resumption, slewing, on its own, the WM doesn't
    care (except perhaps for restart information??); if not, Bob will
    be happy to discuss new white Boxes as you require them. He
    expects to talk to you about it soon, anyhow.   9a

                                                                          10

    The second file is even sketchier: it's the "skeleton" of a
    simple (-minded) BNF description of user-typed commands to the FE,
    and is intended just to provide lists to look at, After more talk
    between us, and more thinking on my part, I'll be writing them in
    CML (?) -- or maybe I'll be trying to understand your rewritings
    into CML. I don't really know how to think about display
    terminals, in any case.   10a

                                                                          11

Here's the first file: 12

                                                                          13

```
00100                                        TUE 11 FEB 75                  14

00200          WHITE BOXES, PRELIMINARY LIST                                15

00300                                                                       16

00400 >>>>>>>>>>Connection:                                                 17

00500                                                                       18

00600 LOGIN(Project, Nodename, Password)                                    19

00700  --> 	Userid   (integer)                                             20

00800          Profile (Node-relative + person-relative)                   21

00900          Systemmessage (Bodily)                                       22

01000          Ghavemail (boolean)                                          23

01100                                                                       24

01200 LOGOUT(Userid)                                                        25

01300  -->    Cost                                                          26

01400                                                                       27

01500 REATTACHTONSW(project, Nodename, Password, Tool(s)(?))                28

01600  -->    (as for LOGIN)                                                29

01700                                                                       30

01800 >>>>>>>>>>Tool running:                                               31

01900                                                                       32

02000 RUNtool(Userid, Toolname, [Filespec], [Qhelp])                       33

02100                          % Qhelp if called from tool, see below
  %                                                                         34

02200  -->    Tool-process-handle (integer)                                35

02300          Tool-grammar                                                 36

02400                                                                       37
```

```
02500 ENDtooluse(Userid,(Tooluse-name | process-handle) )              38

02600  -->    Cost                                                     39

02700                                                                  40

02800 >>>>>>>>>Files, no movement:                                     41

02900                                                                  42

03000 SHOW(Userid, Filespec)                                           43

03100  -->    Full-NSW-File-Name-List                                  44

03200                                                                  45

03300 DELETE(Userid, Filespec)                                         46

03400  -->    Full NSW File name (of deleted file)                     47

03500                                                                  48

03600 RENAME(Userid, Filespec, Filename)                               49

03700  -->    Full NSW File Name (old file)                            50

03800         Full NSW File Name (new file)                            51

03900                                                                  52

04000 UNSETSEMAPHORE(Userid, Filespec)                                 53

04100                                                                  54

04200 >>>>>>>>>Files, movement:                                        55

04300                                                                  56

04400 COPY(Userid, Filespec, Filename)                                 57

04500  -->    Full NSW File Name (source file)                         58

04600         Full NSW File Name (destination)                         59

04700                                                                  60

04800 EXPORT(Userid, Filespec, Externalname)                          61

04900  -->    Full NSW File name (source file)                         62
```

```
05000                                                             63

05100 IMPORT(Userid, Externalname, Filename)                     64

05200  -->    Full NSW File Name (destination)                   65

05300                                                             66

05400 TRANSFER(Userid, Externalname, Externalname)  ( = Call FTP) 67

05410                                                             68

05500 >>>>>>>>>>Calls from tools:                                69

05510                                                             70

05600        TPH:    Tool Process Handle                         71

05700        {...
ode:  Pointer to the Interactive Tool Descriptor,               72

05800                for referencing attributes of, or required for, 73

05850                files used or produced by the tool,          74

05900        Qhelp: A boolean to indicate whether HELP returns    75

06000                are to be referred to FE or not,             76

06200                                                             77

06400 OPEN(TPH, Inputcode, Filespec, Qhelp)                      78

06500  -->   Local File Name (Of the copy at the TBH)            79

06600         Full NSW File Name (of the transmitted file)       80

06700                                                             81

06800 DELIVER(TPH, Outputcode, Localfilename, Filename, Qhelp)   82

06900  -->   Full NSW File Name (Extension of 'Filename' argument 83

07000                under which delivered copy filed)           84

07100                                                             85

07200 WARRANT(TPH, Attributecode, NSWfilename, Qhelp)            86
```

```
07300  -->     {No return, except possible error conditions      87

                                                                  88

                                                                  89

And here's the second:                                            90

                                                                  91

00100          SKELETAL SKETCH OF FE GRAMMAR IN BNF               92

00150                                                             93

00200 CONVENTIONS:  Basically BNF, not CML,                       94

00300          UPPER CASE -- TYPED BY USER                        95

00400          lower case -- typed by fe                          96

00450          % Comment %                                        97

00500          < Construction, not literal >                      98

00600          [ Optional, may be omitted ]                       99

00700          { Repeated, 0 or more times                       100

00800          ( For grouping of alternatives )                  101

00900          | Separates alternatives                          102

01000          special characters 'single quoted' when in
construction.                                                    103

01100                                                            104

01150 Login, Logout, Move:                                       105

01175                                                            106

01200          NSW 'CR'                                          107

01300          project name: <PROJECT-NAME> 'CR'                 108

01400          node name: <NODE-NAME> 'CR'                       109

01500          password: <PASSWORD> 'CR'        % no echo %      110
```

01550		111
01600	LOGOUT QUICK 'CR' | LOGOUT 'CR'	112
01650		113
01700	MOVE login to node name <NODE-NAME>	114
01800		115
01850 Tools:		116
01900	RUN tool <TOOLNAME> ['('FILESPEC')'] 'CR'	117
02000		118
02100 File commands:		119
02150		120
02200	COPY file <FILESPEC> 'cr' to be named <FILENAME>	121
02300	COPYIN source <PATHNAME> 'cr' to be named <FILENAME>	122
02400	COPYOUT file <FILESPEC> 'cr' to destination <PATHNAME>	123
02450	TRANSFER source <PATHNAME> to destination <PATHNAME>	124
02500	RENAME file <FILESPEC> 'cr' to be named <FILENAME>	125
02600	DELETE [ALL] <FILESPEC>	126
02700	SHOW names <FILESPEC>	127
02800	PRINT <FILESPEC>	128
02900	UNSEMAPHORE <FILESPEC>	129
03000		130
03100 <FILENAME> ::= <Id> {,<Id>		131
03200		132
03300 <FILESPEC> ::= <Id>{,<Id> '...'<id>{,<Id> ['/'<Id>{,<Id>		133
03400		134

FE - WM interface notes from COMPASS

03500 <PATHNAME> ::= % ARPA Path Name + Password | Account Nr., etc.   135
%

136

137

If we haven't talked by phone before you see this, feel free to
call either me or Millstein for discussion. I'll be in the office
every afternoon this week, and, I trust, Millstein will be at
home. Cheers,   Kirk Sattley   137a

--------   138

FE - WM interface notes from COMPASS

(J25383) 13-FEB-75 11:23;;;;   Title: Author(s): Jonathan B.
Postel/JBP; Distribution: /NSW([INFO-ONLY]) NPG([INFO-ONLY]) ;
Sub-Collections: SRI-ARC NSW NPG; Clerk: JBP;

Phone Log, 13 Feb 75:   Max Beere re TRW interest in utility service

   Max Beere just called. He was with TYMSHARE during our early
negotiations to set up OFFICE-1, and has remained interested since
moving to TRW. He visited here last year with some TRW people just
to check further. In today's call he said that he thinks he has
found a group of technical writers that look promising (I believe
that they are proposal generators).   1

   I explained the current picture of services, costs, architects, etc.
Recommended his considering technical documentation as for a large
project, rather than as for a proposal-generation group -- a
particular reason being that the latter wouldn't seem to qualify them
for ARPANET use, while exploratory application within a large DOD
contract would.   2

   I think that he'd like to bring one or more people by for another
visit -- perhaps delve more heavily into different candidate types of
application possibilities. I mentioned that Jim Norton might
consider inviting them by for some time next week that the KWAC
meeting might have an "open" session, where interested non-architects
might prticipate -- that could be a very good eye-opener for them. I
told him that Jim (or Robert, perhaps) would give him a call soon,
for whatever kind of get-together was mutually agreeable. Max's
phone: (213) 475-6777.   3

Phone Log, 13 Feb 75:   Max Beere re TRW interest in Utility service

(J25384)   13-FEB-75 12:44;;;;   Title: Author(s): Douglas C,
Engelbart/DCE; Distribution: /JCN([ACTION]) ARC-LOG([INFO-ONLY])
; Sub-Collections: SRI-ARC ARC-LOG; Clerk: DCE;

How's the Service Way up There?

For the last three weeks, our customers using the ARPA=NET have
been getting bad service. Communication tends to be "bursty" and
they are getting disconnected. We think the troubles are in the net,
but I thought we should find out how your service has been the last
three weeks or so. Any abnormal problems?

Thanks for the message. I was about to call you about this when
I collected the message. Yes I'm alive and well, and any day now I
will find out what my job is going to be. So far they have given me
a broom and dust pan, but Jim says I have room to advance. I am
looking forward to the KWACers convention, although I have no formal
role in it. As a matter of fact, people have been very careful not
to tell me anything about it. It's no secret; it's just that nobody
knows what is happening. I am looking forward to meeting Ynez.

Again, if there is anything I can do down here to help you,
please let me know. Bye.   1

How's the Service Way up There?

(J25385)   13-FEB-75 13:19;;;;   Title: Author(s): Raymond R.
Panko/RA3Y; Distribution: /LHD([ACTION]) RA3Y([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: RA3Y;

Update to NSW Group Ident

Please add to the group NSW the idents for Jim Lloyd (JBLL) and Ron
Uhlig (RPU),
--jon,   1

Update to NSW Group Ident

(J25386)   13-FEB-75 13:28;;;;   Title: Author(s): Jonathan B.
Postel/JBP; Distribution: /MLK([ACTION]) JAKE([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: JBP;

USESTATS User Statistics subsystem: FY74 account numbers

FILE cusestats % (CML,) TO (meyer,usestats,cml,) %   1

  % DECLARATIONS %   1a

   DECLARE PARSEFUNCTION   1a1

answ,	% reads answer construct %	1a1a
answer,	% for questions - returns 0/1 %	1a1b
lookstat,	%looks for s and shows status for substitute command%	1a1c
sp,	% reads next char, TRUE if space %	1a1d
readconfirm,	% reads next char if ca %	1a1e
myrdconfirm,	% reads next char if ca; with variations for HELP %	1a1f
dumprompt,		1a1g
readbug,	% reads next char if BUG %	1a1h
readoption,	% TRUE if next char is optchar %	1a1i
readrepeat,	% TRUE if next char is repeat %	1a1j
lookansw,	% TRUE if next char is Y/CA %	1a1k
sublookansw,	% TRUE if next char is Y/CA with variations for substitute command%	1a1l
lookconfirm,	% TRUE if next char is CA/REPEAT/INSERT %	1a1m
lookbug,	% TRUE if next char is BUG %	1a1n
mylookbug,	% TRUE if next char is BUG; with variations for HELP %	1a1o
lookback,	% TRUE if next char is -; for HELP %	1a1p
looknum,	% TRUE if next char is a number %	1a1q
lookrpt,	% TRUE if next char is rpt; for HELP %	1a1r
prmptlsel,	% prompt for an LSEL %	1a1s
prmptdsel,	% prompt for an DSEL %	1a1t

```
        prmptssel,    % prompt for an SSEL %                    1a1u

        notca;              % reads next char, TRUE iff not CA char
        %                                                       1a1v

    DECLARE COMMAND WORD                                        1a2

      "BRANCH" = 1 ,                                            1a2a

      "GROUP" = 2 ,                                             1a2b

      "PLEX" = 3 ,                                              1a2c

      "STATEMENT" = 4 ,                                         1a2d

      "CHARACTER" = 5 ,                                         1a2e

      "CONTROLCHAR" = 6 ,                                       1a2f

      "INVISIBLE" = 7 ,                                         1a2g

      "LINK" = 8 ,                                              1a2h

      "DIRECTORY" = 9 ,                                         1a2i

      "PASSWORD" = 10 ,                                         1a2j

      "NUMBER" = 11 ,                                           1a2k

      "TEXT" = 12 ,                                             1a2l

      "VISIBLE" = 13 ,                                          1a2m

      "WORD" = 14 ,                                             1a2n

      "FILE" = 15 ,                                             1a2o

      "NEWFILELINK" = 16 ,                                      1a2p

      "OLDFILELINK" = 17 ,                                      1a2q

      "NAME" = 18 ,                                             1a2r

      "IDENT" = 19 ,                                            1a2s

      "IDENTLIST" = 20 ,                                        1a2t

      "EDGE" = 21 ,                                             1a2u
```

USESTATS User Statistics subsystem: FY74 account numbers

"MARKER" = 22 ,   1a2v

"NLS" = 23 ,   1a2w

"ITEM" = 24 ,   1a2x

"ITEMNOVS" = 25 ,   1a2y

"SUCCESSOR" = 26 ,   1a2z

"PREDECESSOR" = 27 ,   1a2a@

"UP" = 28 ,   1a2aa

"DOWN" = 29 ,   1a2ab

"HEAD" = 30 ,   1a2ac

"TAIL" = 31 ,   1a2ad

"END" = 32 ,   1a2ae

"BACK" = 33 ,   1a2af

"NEXT" = 34 ,   1a2ag

"ORIGIN" = 35 ,   1a2ah

"FILERETURN" = 36 ,   1a2ai

"RETURN" = 37 ,   1a2aj

"FILENAME" = 38 ,   1a2ak

"FIRSTNAME" = 39 ,   1a2al

"NEXTNAME" = 40 ,   1a2am

"EXTNAME" = 41 ,   1a2an

"FIRSTCONTENT" = 42 ,   1a2ao

"NEXTCONTENT" = 43 ,   1a2ap

"FIRSTWORD" = 44 ,   1a2aq

"NEXTWORD" = 45 ,   1a2ar

"DETACHED" = 46 ,   1a2as

USESTATS User Statistics subsystem: FY74 account numbers

"TTY" = 47 ,	1a2at
"AUTO" = 48 ,	1a2au
"CONTINUE" = 49 ,	1a2av
"ON" = 50 ,	1a2aw
"RECOVER" = 51 ,	1a2ax
"SLINKER" = 52 ,	1a2ay
"UPDATE" = 53 ,	1a2az
"CLEAR" = 54 ,	1a2b@
"IDENTS" = 55 ,	1a2ba
"FILES" = 56 ,	1a2bb
"DELETE" = 57 ,	1a2bc
"DEFERRED" = 58 ,	1a2bd
"IMMEDIATE" = 59 ,	1a2be
"NOT" = 60 ,	1a2bf
"PREVENT" = 61 ,	1a2bg
"RESET" = 62 ,	1a2bh
"ARCHIVE" = 63 ,	1a2bi
"SEQUENTIAL" = 64 ,	1a2bj
"TWO" = 65 ,	1a2bk
"JUSTIFIED" = 66 ,	1a2bl
"ASSEMBLER" = 67 ,	1a2bm
"BOTH" = 68 ,	1a2bn
"UNDELETE" = 69 ,	1a2bo
"FOR" = 70 ,	1a2bp
"STATUS" = 71 ,	1a2bq

                "TAPE" = 72 ,   1a2br

                "ACCOUNT" = 73 ,   1a2bs

                "NO" = 74 ,   1a2bt

                "VERSIONS" = 75 ,   1a2bu

                "EXTENSION" = 76 ,   1a2bv

                "DATE" = 77 ,   1a2bw

                "CREATION" = 78 ,   1a2bx

                "LAST" = 79 ,   1a2by

                "FIRST" = 80 ,   1a2bz

                "READ" = 81 ,   1a2c@

                "WRITE" = 82 ,   1a2ca

                "DUMP" = 83 ,   1a2cb

                "EVERYTHING" = 84 ,   1a2cc

                "LENGTH" = 85 ,   1a2cd

                "MISCELLANEOUS" = 86 ,   1a2ce

                "ACCESSES" = 87 ,   1a2cf

                "PROTECT" = 88 ,   1a2cg

                "SIZE" = 89 ,   1a2ch

                "TIME" = 90 ,   1a2ci

                "VERBOSE" = 91 ,   1a2cj

                "SORT" = 92 ,   1a2ck

                "BYTESIZE" = 93 ,   1a2cl

                "ARCHIVED" = 94 ,   1a2cm

                "ALL" = 95 ,   1a2cn

                "MODIFICATIONS" = 96 ,   1a2co

"UPPER" = 97 ,	1a2cp
"LOWER" = 98 ,	1a2cq
"MODE" = 99 ,	1a2cr
"SENDMAIL" = 100 ,	1a2cs
"BUSY" = 101 ,	1a2ct
"QUICKPRINT" = 102 ,	1a2cu
"JOURNAL" = 103 ,	1a2cv
"PRINTER" = 104 ,	1a2cw
"COM" = 105 ,	1a2cx
"TERMINAL" = 106 ,	1a2cy
"REMOTE" = 107 ,	1a2cz
"REST" = 108 ,	1a2d@
"CASE" = 109 ,	1a2da
"CONTENT" = 110 ,	1a2db
"TEMPORARY" = 111 ,	1a2dc
"VIEWSPECS" = 112 ,	1a2dd
"EXTERNAL" = 113 ,	1a2de
"TO" = 114 ,	1a2df
"PRIVATE" = 115 ,	1a2dg
"PUBLIC" = 116 ,	1a2dh
"TENEX" = 117 ,	1a2di
"ALLOW" = 118 ,	1a2dj
"EXECUTE" = 119 ,	1a2dk
"APPEND" = 120 ,	1a2dl
"LIST" = 121 ,	1a2dm

USESTATS User Statistics subsystem: FY74 account numbers

"SET" = 122 ,   1a2dn

"SELF" = 123 ,   1a2do

"FORBID" = 124 ,   1a2dp

"DISK" = 125 ,   1a2dq

"DEFAULT" = 126 ,   1a2dr

"OLD" = 127 ,   1a2ds

"NEW" = 128 ,   1a2dt

"COMPACT" = 129 ,   1a2du

"RENAME" = 130 ,   1a2dv

"ADD" = 131 ,   1a2dw

"SUBTRACT" = 132 ,   1a2dx

"MULTIPLY" = 133 ,   1a2dy

"DIVIDE" = 134 ,   1a2dz

"RIGHT" = 135 ,   1a2e@

"LEFT" = 136 ,   1a2ea

"ACTION" = 137 ,   1a2eb

"AUTHORS" = 138 ,   1a2ec

"COMMENT" = 139 ,   1a2ed

"EXPEDITE" = 140 ,   1a2ee

"HARDCOPY" = 141 ,   1a2ef

"INFORMATION" = 142 ,   1a2eg

"INSERT" = 143 ,   1a2eh

"KEYWORDS" = 144 ,   1a2ei

"OBSOLETES" = 145 ,   1a2ej

"RFC" = 146 ,   1a2ek

USESTATS User Statistics subsystem: FY74 account numbers

"SUBCOLLECTIONS" = 147 ,   1a2el

"TITLE" = 148 ,   1a2em

"UNRECORDED" = 149 ,   1a2en

"L10" = 150 ,   1a2eo

"PROCEDURE" = 151 ,   1a2ep

"SEQGENERATOR" = 152 ,   1a2eq

"BUFFER" = 153 ,   1a2er

"NDDT" = 154 ,   1a2es

"PARSERULE" = 155 ,   1a2et

"CA" = 156 ,   1a2eu

"CD" = 157 ,   1a2ev

"RPT" = 158 ,   1a2ew

"BC" = 159 ,   1a2ex

"BW" = 160 ,   1a2ey

"BS" = 161 ,   1a2ez

"LITESC" = 162 ,   1a2f@

"IGNORE" = 163 ,   1a2fa

"SC" = 164 ,   1a2fb

"SW" = 165 ,   1a2fc

"TAB" = 166 ,   1a2fd

"IMLAC" = 167 ,   1a2fe

"TI" = 168 ,   1a2ff

"NVT" = 169 ,   1a2fg

"EXECUPORT" = 170 ,   1a2fh

"MENU" = 171 ,   1a2fi

USESTATS User Statistics subsystem: FY74 account numbers

"DNLS" = 172 ,   1a2fj

"TNLS" = 173 ,   1a2fk

"COMMAND" = 174 ,   1a2fl

"RULE" = 175 ,   1a2fm

"SUBSYSTEM" = 176 ,   1a2fn

"DISPLAY" = 177 ,   1a2fo

"FROZEN" = 178 ,   1a2fp

"HLPCOM" = 179 ,   1a2fq

"PROGRAM" = 180 ,   1a2fr

"TERSE" = 181 ,   1a2fs

"INDENTING" = 182 ,   1a2ft

"UNIVERSAL" = 183 ,   1a2fu

"ENTRY" = 184 ,   1a2fv

"INCLUDE" = 185 ,   1a2fw

"BOTTOM" = 186 ,   1a2fx

"pAGE" = 187 ,   1a2fy

"OFF" = 188 ,   1a2fz

"FULL" = 189 ,   1a2g@

"PARTIAL" = 190 ,   1a2ga

"ANTICIPATORY" = 191 ,   1a2gb

"DEMAND" = 192 ,   1a2gc

"FIXED" = 193 ,   1a2gd

"CONTROL" = 194 ,   1a2ge

"CURRENTCONTEXT" = 195 ,   1a2gf

"FEEDBACK" = 196 ,   1a2gg

"HERALD" = 197 ,	1a2gh
"PRINTOPTIONS" = 198 ,	1a2gi
"PROMPT" = 199 ,	1a2gj
"RECOGNITION" = 200 ,	1a2gk
"STARTUP" = 201 ,	1a2gl
"LEVELADJUST" = 202 ,	1a2gm
"REVERSE" = 203 ,	1a2gn
"TEST" = 204 ,	1a2go
"TASKER" = 205 ,	1a2gp
"LINEPROCESSOR" = 206 ,	1a2gq
"CENTER" = 207 ,	1a2gr
"CNTLG" = 208 ;	1a2gs
% COMMON RULES %	1b
% ENTITY DEFINITIONS %	1b1
editentity = textent / structure;	1b1a
% TEXT ENTITY DEFINITIONS %	1b2
textent = text1 / "TEXT" / "LINK" / "NUMBER";	1b2a
text1 = "CHARACTER" / "WORD" / "VISIBLE" / "INVISIBLE";	1b2b
% STRUCTURE ENTITY DEFINITIONS %	1b3
structure = "STATEMENT" / notstatement;	1b3a
notstatement = "GROUP" / "BRANCH" / "PLEX" ;	1b3b
% SWITCH %	1b4
switch = ("ON"! 1!/"OFF"!2 L2!);	1b4a
% DEVICE TYPES %	1b5
devopt =	1b5a

```
                ( "TASKER"!L2!                                    1b5a1

                / "TI" <"Terminal">                              1b5a2

                / "NVT"                                          1b5a3

                / "LINEPROCESSOR"                                1b5a4

                / "IMLAC"                                        1b5a5

                / "EXECUPORT"                                    1b5a6

                / "33-TTY"! 33!                                  1b5a7

                / "35-TTY"! 35!                                  1b5a8

                / "37-TTY"! 37! );                               1b5a9

   SUBSYSTEM usestats KEYWORD "USESTATS"                         1c

     INITIALIZATION                                             1c1

       uinit =                                                  1c1a

         useinit() ;                                            1c1a1

     COMMAND                                                    1c2

       uconvert =                                               1c2a

         "CONVERT" <"and total">                                1c2a1

         ("FACT" <"File at">                                    1c2a2

            source _ DSEL(#"STATEMENT")                         1c2a2a

            CONFIRM                                             1c2a2b

            xconvfact (source)                                  1c2a2c

         /"SEQUENTIAL" <"Fact File">                            1c2a3

            source _ LSEL(#"OLDFILELINK")                       1c2a3a

            <"Insert Branch at"> dent _ DSEL(#"STATEMENT")      1c2a3b

            level _ LEVADJ                                      1c2a3c

            CONFIRM                                             1c2a3d
```

```
            xconvsfact (source,dent,level)                    1c2a3e

        ) ;                                                    1c2a4

    COMMAND                                                    1c3

      utotal =                                                 1c3a

        "TOTAL" "BRANCH" <"at">                                1c3a1

        source _ DSEL(#"STATEMENT")                            1c3a2

        CONFIRM                                                1c3a3

        xtotal(source) ;                                       1c3a4

    COMMAND                                                    1c4

      uextract =                                               1c4a

        "EXTRACT"|L2| "GROUP" <"Name">                         1c4a1

        ent _ LSEL(#"WORD")                                    1c4a2

        <"for Weeks">                                          1c4a3

        source _ DSEL(#"GROUP")                                1c4a4

        CLEAR <"Insert Branch at">                             1c4a5

        dent _ DSEL(#"STATEMENT")                              1c4a6

        level _ LEVADJ                                         1c4a7

        CONFIRM                                                1c4a8

        xextgrp (dent, level, ent, source) ;                   1c4a9

      END.                                                     1c5

    FINISH                                                     1d

FILE lusestats % (L10,) TO (meyer, usestats,subsys,) %          2

    % globals %                                                2a

      DECLARE sixty[2], hundred[2], cpuacc[2], conacc[2], cputot[2],
      contot[2] ;                                              2a1
```

12

```
    DECLARE                                                       2a2

        namlen = 16,                                              2a2a

        datlen = 10,                                              2a2b

        timlen = 12;                                              2a2c

    DECLARE STRING date[100] ;                                    2a3

(useinit) PROCEDURE (result, parsemode);                          2b

    REF result ;                                                  2b1

    CASE parsemode OF                                             2b2

        = parsing:                                                2b2a

            BEGIN                                                 2b2a1

            nfloat(s"60", ssixty, ssixty+1) ;                     2b2a2

            nfloat(s"100", shundred, shundred+1) ;                2b2a3

            END;                                                  2b2a4

        ENDCASE;                                                  2b2b

    RETURN (&result);                                             2b3

    END,                                                          2b4

(xtotal) PROCEDURE (result, parsemode, wkbranch);                 2c

    LOCAL indent ;                                                2c1

    REF result, wkbranch ;                                        2c2

    CASE parsemode OF                                             2c3

        = parsing:                                                2c3a

            BEGIN                                                 2c3a1

            % compute indentation adjustment %                    2c3a2

                indent _ 3 * (3 - getlev(wkbranch) ) ;            2c3a2a

                totalbr (wkbranch,indent) ;                       2c3a3
```

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```
        % done %                                                   2c3a4

            IF nlmode=fulldislay THEN alldsp() ;                   2c3a4a

        END;                                                       2c3a5

      ENDCASE;                                                     2c3b

    RETURN (&result);                                             2c4

    END,                                                          2c5

  (xconvsfact) PROCEDURE (result, parsemode, file, stid, levadj) ; 2d

    LOCAL astid, level, jfn ;                                     2d1

    LOCAL TEXT POINTER fptr1, fptr2, fptr3, fptr4, fptr5, fptr6 ; 2d2

    LOCAL STRING line[2000] ;                                     2d3

    REF result, file, stid, levadj ;                             2d4

    CASE parsemode OF                                            2d5

      = parsing;                                                 2d5a

        BEGIN                                                    2d5a1

        level _ levadj ;                                         2d5a2

        % open input file %                                      2d5a3

          lnbfls(&file,0, sline) ;                               2d5a3a

          IF NOT jfn _ lgetjfn (0, sline, stxtext, gtjoisf,
          slit)                                                  2d5a3b

            THEN SIGNAL (ofilerr, slit) ;                        2d5a3b1

          IF NOT sysopen (jfn, read, chrtyp, slit) THEN          2d5a3c

            BEGIN                                                2d5a3c1

            reljfn (jfn) ;                                       2d5a3c2

            SIGNAL (ofilerr, slit) ;                             2d5a3c3

            END;                                                 2d5a3c4
```

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```
              % get date %                                           2d5a4

                LOOP %header%                                        2d5a4a

                  BEGIN                                              2d5a4a1

                  IF NOT isread (jfn, sline, LF) THEN                2d5a4a2

                    BEGIN                                            2d5a4a2a

                    dismes (1, s"Invalid format for Fact File");     2d5a4a2b

                    RETURN (&result) ;                               2d5a4a2c

                    END;                                             2d5a4a2d

                  IF FIND SF(*line*) SNP "TENEX SUMMARY SHEET FOR PAY
                  PERIOD " 1sUL (',/TRUE) 1sSP 1sD 1sSP "THRU" 1sSP
                  "fptr1 SUL "fptr2 (',/TRUE) sSP "fptr3 1sD "fptr4
                  1sSP ("19"/TRUE) "fptr5 1sD "fptr6 THEN            2d5a4a3

                    BEGIN                                            2d5a4a3a

                    *date* _ fptr1 fptr2 ;                           2d5a4a3b

                    date.L _ MIN(date.L, 3) ;                        2d5a4a3c

                    *date* _ fptr3 fptr4, '=, *date*, '=, fptr5
                    fptr6 ;                                          2d5a4a3d

                    EXIT LOOP;                                       2d5a4a3e

                    END;                                             2d5a4a3f

                  END;                                               2d5a4a4

              % get week's  total %                                 2d5a5

                LOOP                                                 2d5a5a

                  BEGIN                                              2d5a5a1

                  IF NOT isread (jfn, sline, LF) THEN EXIT LOOP ;    2d5a5a2

                  IF FIND SF(*line*) SNP "fptr1 "TOTAL" "fptr2 THEN
                  EXIT LOOP ;                                        2d5a5a3

                  FIND SF(*line*) sNP "fptr1 SE(*line*) sNP "fptr2 >
                  ;                                                  2d5a5a4
```

```
         *line* _ fptr1 fptr2 ;                              2d5a5a5

         END;                                                2d5a5a6

     stconv (fptr1) ;                                        2d5a5b

     ST fptr1 fptr2 _ "Week ending" ;   %6 more chars than
     "TOTAL" so should line up columns just right%           2d5a5c

     FIND SF(*line*) "fptr1 SE(*line*) "fptr2 > ;            2d5a5d

     astid _ cinssta (stid, level, $fptr1, $fptr2) ;        2d5a5e

   % process each account %                                  2d5a6

     level _ -1 ;                                            2d5a6a

     LOOP                                                    2d5a6b

       BEGIN                                                 2d5a6b1

       %place account statement%                             2d5a6b2

         LOOP                                                2d5a6b2a

           BEGIN                                             2d5a6b2a1

           IF NOT isread (jfn, $line, LF) THEN EXIT LOOP
           2 ; %header%                                      2d5a6b2a2

           IF FIND SF(*line*) SNP "fptr1 "ACCOUNT:"
           "fptr2 THEN EXIT LOOP ;                           2d5a6b2a3

           END;                                              2d5a6b2a4

         acct (fptr1) ;                                      2d5a6b2b

         FIND SF(*line*) "fptr1 SE(*line*) "fptr2 > ;        2d5a6b2c

         stid _ astid _ cinssta (astid, level, $fptr1,
         $fptr2) ;                                           2d5a6b2d

         level _ -1 ;                                        2d5a6b2e

       %move directories under it%                           2d5a6b3

         LOOP                                                2d5a6b3a

           BEGIN                                             2d5a6b3a1
```

```
                        IF NOT isread (jfn, $line, LF) THEN EXIT LOOP
                        2 ;                                      2d5a6b3a2

                        IF FIND SF(*line*) SNP "fptr1 "USER" "fptr2
                        THEN EXIT LOOP ;                         2d5a6b3a3

                        END;                                     2d5a6b3a4

                    LOOP                                         2d5a6b3b

                        BEGIN                                    2d5a6b3b1

                        IF NOT isread (jfn, $line, LF) THEN EXIT LOOP
                        2 ;                                      2d5a6b3b2

                        IF FIND SF(*line*) SNP ("TOTAL"/ENDCHR) THEN
                        EXIT LOOP;                               2d5a6b3b3

                        IF FIND SF(*line*) SNP ("*USER ID CODE"/D)
                        THEN REPEAT LOOP;                        2d5a6b3b4

                        FIND SF(*line*) SNP "fptr1 SE(*line*) SNP
                        "fptr2 >;                                2d5a6b3b5

                        stid _ cinssta (stid, level, $fptr1, $fptr2)
                        ;                                        2d5a6b3b6

                        level _ 0 ;                              2d5a6b3b7

                        END;                                     2d5a6b3b8

                    level _ 0 ;                                  2d5a6b3c

                    %convert account branch%                     2d5a6b4

                    convtot (astid) ;                            2d5a6b4a

                END;                                             2d5a6b5

            % done %                                             2d5a7

                IF nlmode=fulldislay THEN alldsp() ;             2d5a7a

            END;                                                 2d5a8

        ENDCASE;                                                 2d5b

    RETURN (&result);                                            2d6
```

```
    END,                                                         2d7

  (xconvfact) PROCEDURE (result, parsemode, file) ;            2e

    LOCAL stid, astid, level ;                                 2e1

    LOCAL TEXT POINTER fptr1, fptr2, fptr3, fptr4, fptr5, fptr6 ;   2e2

    REF result, file ;                                         2e3

    CASE parsemode OF                                          2e4

      = parsing:                                               2e4a

      BEGIN                                                    2e4a1

      % get date %                                             2e4a2

        stid _ file ;                                          2e4a2a

        stid,stpsid _ origin ;                                 2e4a2b

        stid _ getsub(stid) ;                                  2e4a2c

        IF NOT FIND SF(stid) "TENEX SUMMARY SHEET FOR PAY
        PERIOD " 1$UL (',/TRUE) 1$SP 1$D 1$SP "THRU" 1$SP
        "fptr1 SUL "fptr2 (',/TRUE) $SP "fptr3 1$D "fptr4 1$SP
        ("19"/TRUE) "fptr5 1$D "fptr6 THEN                     2e4a2d

          BEGIN                                                2e4a2d1

          dismes (1, $"Invalid format for Fact File");         2e4a2d2

          RETURN (&result) ;                                   2e4a2d3

          END;                                                 2e4a2d4

        *date* _ fptr1 fptr2 ;                                 2e4a2e

        date.L _ MIN(date.L, 3) ;                              2e4a2f

        *date* _ fptr3 fptr4, '=, *date*, '=, fptr5 fptr6 ;    2e4a2g

      % get week's total %                                     2e4a3

        fptr1 _ stid ;                                         2e4a3a

        LOOP                                                   2e4a3b
```

```
        BEGIN                                                2e4a3b1

        IF FIND SF(fptr1) "fptr1 "TOTAL" "fptr2 THEN EXIT
        LOOP ;                                               2e4a3b2

        stid _ (fptr1 := getsuc(fptr1)) ;                    2e4a3b3

        cdelgro (stid, stid, 0, 0) ;                         2e4a3b4

        END;                                                 2e4a3b5

    stconv (fptr1) ;                                         2e4a3c

    ST fptr1 fptr2 _ "Week ending" ;   %6 more chars than
    "TOTAL" so should line up columns just right%            2e4a3d

level _ -1 ;                                                 2e4a4

astid _ stid _ fptr1 ;                                       2e4a5

LOOP % process each account %                                2e4a6

    BEGIN                                                    2e4a6a

    %place account statement%                                2e4a6b

        fptr1 _ getsuc(stid) ;                               2e4a6b1

        LOOP                                                 2e4a6b2

            BEGIN                                            2e4a6b2a

            IF FIND SF(fptr1) "fptr1 "ACCOUNT:" "fptr2 THEN
            EXIT LOOP ;                                      2e4a6b2b

            IF FIND SF(fptr1) "fptr1 SP ENDCHR THEN          2e4a6b2c

                IF (fptr2_getsub(fptr1)) # fptr1             2e4a6b2c1

                    THEN cmovsta(fptr1,0,fptr2,0,0);         2e4a6b2c1a

            fptr2 _ (fptr1 := getsuc(fptr1)) ;               2e4a6b2d

            cdelgro (fptr2, fptr2, 0, 0) ;                   2e4a6b2e

            IF fptr1.stpsid=origin THEN EXIT LOOP 2 ;        2e4a6b2f

            END;                                             2e4a6b2g
```

USESTATS User Statistics subsystem: FY74 account numbers

```
            acct (fptr1) ;                                    2e4a6b3

            astid _ cmovsta (astid, level, fptr1, 0,0) ;      2e4a6b4

            level _ 0 ;                                       2e4a6b5

         %move directories under it%                           2e4a6c

            fptr1 _ getsuc(stid) ;                            2e4a6c1

            LOOP                                              2e4a6c2

               BEGIN                                          2e4a6c2a

               IF FIND SF(fptr1) "USER" THEN EXIT LOOP ;      2e4a6c2b

               fptr1 _ getsuc(fptr1) ;                        2e4a6c2c

               END;                                           2e4a6c2d

            fptr1 _ fptr2 _ fptr3 _ getsuc(fptr1) ;           2e4a6c3

            LOOP                                              2e4a6c4

               BEGIN                                          2e4a6c4a

               IF FIND SF(fptr2) ("TOTAL"/NP) THEN EXIT LOOP ;
                                                              2e4a6c4b
               fptr2 _ getsuc(fptr3_fptr2) ;                  2e4a6c4c

               END;                                           2e4a6c4d

            cmovgro (astid, =1, fptr1, fptr3, 0,0) ;          2e4a6c5

         %convert account branch%                             2e4a6d

            convtot (astid) ;                                 2e4a6d1

         END;                                                 2e4a6e

      % done %                                                2e4a7

         IF nlmode=fulldislay THEN alldsp() ;                 2e4a7a

      END;                                                    2e4a8

   ENDCASE;                                                   2e4b

RETURN (&result);                                             2e5
```

20

```
        END,                                                           2e6

    (xextgrp) PROCEDURE (result, parsemode, where, levadj, grp,
    weeks);                                                            2f

        LOCAL level, stid, cpy ;                                       2f1

        LOCAL TEXT POINTER eptr1, eptr2, eptr3, eptr4 ;                2f2

        LOCAL STRING grpstr[50] ;                                      2f3

        REF result, where, levadj, grp, weeks ;                        2f4

        CASE parsemode OF                                              2f5

          = parsing:                                                   2f5a

            BEGIN                                                      2f5a1

            % get grpstr %                                             2f5a2

                eptr1 _ grp;     eptr1[1] _ grp[1];                    2f5a2a

                eptr2 _ grp[2]; eptr2[1] _ grp[3];                     2f5a2b

                *grpstr* _ eptr1 eptr2 ;                               2f5a2c

                astruc(sgrpstr) ;                                      2f5a2d

            % get dates %                                              2f5a3

                eptr1 _ weeks ;                                        2f5a3a

                eptr3 _ weeks[2] ;                                     2f5a3b

                IF NOT FIND SF(eptr1) [D] ^eptr1 _eptr1 SPT ^eptr2
                SF(eptr3) [D] ^eptr3 _eptr3 SPT ^eptr4 THEN            2f5a3c

                    BEGIN                                              2f5a3c1

                    dismes (1, s"Invalid format in Weeks") ;           2f5a3c2

                    RETURN (FALSE) ;                                   2f5a3c3

                    END ;                                              2f5a3c4

                *date* _ *grpstr*, SP, eptr1 eptr2, " thru ", eptr3
                eptr4 ;                                                2f5a3d
```

```
        FIND SF(*date*) ^eptr3 SE(*date*) ^eptr4 > ;              2f5a3e

        eptr2 _ stid _ cinssta (where, levadj, septr3, septr4)
        ;                                                          2f5a3f

      % copy all branches under new statement %                   2f5a4

      level _ -1 ;                                                 2f5a4a

      LOOP %for each week (eptr1)%                                 2f5a4b

        BEGIN                                                      2f5a4b1

        IF (cpy _ getsub(eptr1)) = eptr1 THEN                      2f5a4b2

          BEGIN                                                    2f5a4b2a

          dismes (1, s"No groups in Week") ;                       2f5a4b2b

          RETURN (FALSE) ;                                         2f5a4b2c

          END ;                                                    2f5a4b2d

        LOOp %find group%                                          2f5a4b3

          BEGIN                                                    2f5a4b3a

          IF FIND SF(cpy) *grpstr* SP THEN EXIT LOOP;              2f5a4b3b

          IF getftl(cpy) THEN                                      2f5a4b3c

            BEGIN                                                  2f5a4b3c1

            dismes (1, s"Group not in Week") ;                     2f5a4b3c2

            RETURN (FALSE) ;                                       2f5a4b3c3

            END ;                                                  2f5a4b3c4

          cpy _ getsuc(cpy) ;                                      2f5a4b3d

          END;                                                     2f5a4b3e

        stid _ ccopgro (stid, level, cpy, cpy, 0,0) ;             2f5a4b4

        level _ 0;                                                 2f5a4b5

        IF eptr1=weeks[2] OR getftl(eptr1) THEN EXIT LOOP; 2f5a4b6
```

```
            LOOP %find next week%                              2f5a4b7

                BEGIN                                          2f5a4b7a

                eptr1 _ getsuc(eptr1) ;                        2f5a4b7b

                IF FIND SF(eptr1) "Week" THEN EXIT LOOP ;      2f5a4b7c

                IF eptr1=weeks[2] OR getftl(eptr1) THEN EXIT
                LOOP 2;                                        2f5a4b7d

                END;                                           2f5a4b7e

            END;                                               2f5a4b8

        % total branch %                                       2f5a5

            totalbr (eptr2,6) ;                                2f5a5a

        % done %                                               2f5a6

            IF nlmode=fulldislay THEN alldsp() ;               2f5a6a

        END;                                                   2f5a7

      ENDCASE;                                                 2f5b

    RETURN (&result);                                          2f6

    END,                                                       2f7

  % Support Routines %                                         2g

    (totalbr) PROCEDURE (brch, add);                           2g1

      LOCAL TEXT POINTER tptr1, tptr2, tptr3, tptr4, tptr5, tptr6
      ;                                                        2g1a

      LOCAL STRING tname[50], tcpustr[25], tconstr[25], tratio[25]
      ;                                                        2g1b

      IF NOT FIND SF(brch) "tptr1 UL [' _ 2(D)] sD (sSP "thru" [' _
      2(D)] sD / TRUE) "tptr2                                  2g1c

        THEN                                                   2g1c1

          BEGIN                                                2g1c1a

          dismes (1, s"Improper format in Branch title") ;     2g1c1b
```

```
            RETURN (FALSE);                                      2g1c1c

          END                                                    2g1c1d

        ELSE                                                     2g1c2

          BEGIN                                                  2g1c2a

          *tname* _ tptr1 tptr2 ;                                2g1c2b

          strlen ($tname, namlen+datlen+add, 1) ;                2g1c2c

          END;                                                   2g1c2d

     IF (tptr3 _ getsub(tptr1)) = tptr1 THEN                     2g1d

       BEGIN                                                     2g1d1

       dismes (1, $"No members in Branch") ;                     2g1d2

       RETURN (TRUE);                                            2g1d3

       END;                                                      2g1d4

     % initialize variables %                                   2g1e

       nfloat($"0", scputot, scputot+1) ;                        2g1e1

       nfloat($"0", scontot, scontot+1) ;                        2g1e2

     LOOP % add up cpu and con tmes %                            2g1f

       BEGIN                                                     2g1f1

       IF (NOT FIND SF(tptr3) UL [',] < $PT "tptr3 > $PT "tptr4
       [',] < $PT "tptr5 > $PT "tptr6)                           2g1f2

         THEN                                                    2g1f2a

           BEGIN                                                 2g1f2a1

           ST tptr3 _ "*bad* ", SF(tptr3) SE(tptr3) ;            2g1f2a2

           END                                                   2g1f2a3

         ELSE                                                    2g1f2b

           BEGIN                                                 2g1f2b1
```

```
            % cpu %                                               2g1f2b2

                *tcpustr* _ tptr3 tptr4 ;                         2g1f2b2a

                nfloat(stcpustr, scpuacc, scpuacc+1) ;            2g1f2b2b

                qcadd (scputot, scpuacc) ;                        2g1f2b2c

            % con %                                               2g1f2b3

                *tconstr* _ tptr5 tptr6 ;                         2g1f2b3a

                nfloat(stconstr, sconacc, sconacc+1) ;            2g1f2b3b

                qcadd (scontot, sconacc) ;                        2g1f2b3c

            END;                                                  2g1f2b4

        IF getftl (tptr3) THEN EXIT LOOP ;                        2g1f3

        tptr3 _ getsuc(tptr3) ;                                   2g1f4

        END;                                                      2g1f5

    % rebuild statement %                                         2g1g

        % cpu %                                                   2g1g1

            qfloutp (scputot, stcpustr, 0) ;                      2g1g1a

            FIND SF(*tcpustr*) SNP "tptr3 SG(*tcpustr*) SNP "tptr4
            > ;                                                   2g1g1b

            *tcpustr* _ tptr3 tptr4 ;                             2g1g1c

            strlen (stcpustr, timlen, 2) ;                        2g1g1d

        % con %                                                   2g1g2

            qfloutp (scontot, stconstr, 0) ;                      2g1g2a

            FIND SF(*tconstr*) SNP "tptr3 SE(*tconstr*) SNP "tptr4
            > ;                                                   2g1g2b

            *tconstr* _ tptr3 tptr4 ;                             2g1g2c

            strlen (stconstr, timlen, 2) ;                        2g1g2d

        % ratio %                                                 2g1g3
```

```
            getratio (Stratio, scputot, scontot) ;                2g1g3a

            strlen (Stratio, timlen, 2) ;                         2g1g3b

        ST tptr1 _ *tname*, *tcpustr*, *tconstr*, *tratio* ;      2g1g4

    RETURN (TRUE);                                                2g1h

    END.                                                          2g1i

   (acct) PROCEDURE (stid) ;                                      2g2

    LOCAL TEXT POINTER aptr1, aptr2 ;                             2g2a

    LOCAL STRING anum[100] ;                                      2g2b

    IF NOT FIND SF(stid) [D] "aptr1 _aptr1 sD "aptr2 THEN
    RETURN;                                                       2g2c

    *anum* _ aptr1 aptr2 ;                                        2g2d

    CASE VALUE(Sanum) OF                                          2g2e

       = 1, =10:    ST stid _ "SYSTEM" ;                          2g2e1

       = 3:         ST stid _ "NIC" ;                             2g2e2

       = 20:        ST stid _ "TYMSHARE" ;                        2g2e3

       = 30:        ST stid _ "ARC" ;                             2g2e4

       = 35:        ST stid _ "SRI" ;                             2g2e5

       = 40, =43:   ST stid _ "RADC" ;                            2g2e6

       = 45:        ST stid _ "BRL" ;                             2g2e7

       = 46:        ST stid _ "NSRDC" ;                           2g2e8

       = 50:        ST stid _ "BELL" ;                            2g2e9

       = 60, =70, =700: ST stid _ "ENERGY" ;                     2g2e10

       = 80:        ST stid _ "ARPA" ;                            2g2e11

       = 90:        ST stid _ "NSA" ;                             2g2e12

       ENDCASE      ST stid _ "ACCOUNT";                          2g2e13
```

```
    ST stid _ SF(stid) SE(stid), " (", *anum*, ')' ;          2g2f

    RETURN;                                                    2g2g

    END,                                                       2g2h

(convtot) PROCEDURE (struc);                                   2g3

    LOCAL stid ;                                               2g3a

    LOCAL TEXT POINTER xcptr1, xcptr2 ;                        2g3b

    LOCAL STRING total[200], cpustr[20], constr[20],
    ratiostr[20], datstr[20] ;                                 2g3c

    % initializations %                                        2g3d

        nfloat($"0", $cpuacc, $cpuacc+1) ;                     2g3d1

        nfloat($"0", $conacc, $conacc+1) ;                     2g3d2

    % reformat group %                                         2g3e

        IF (stid_getsub(struc)) # struc THEN                   2g3e1

        LOOP                                                   2g3e2

            BEGIN                                              2g3e2a

            stconv (stid) ;                                    2g3e2b

            IF getftl(stid) THEN EXIT LOOP;                    2g3e2c

            stid _ getsuc(stid) ;                              2g3e2d

            END;                                               2g3e2e

    % insert total %                                           2g3f

        IF FIND SF(struc) "xcptr1 $(uL/SP) ('( $D ')/< $SP >)
        "xcptr2                                                2g3f1

            THEN *total* _ xcptr1 xcptr2                       2g3f1a

            ELSE *total* _ "GROUP TOTAL" ;                     2g3f1b

        *datstr* _ *date* ;                                    2g3f2

        qfloutp ($cpuacc, $cpustr, 0) ;                        2g3f3
```

```
    IF FIND SF(*cpustr*) "xcptr1 1SNP "xcptr2 THEN ST xcptr1
    xcptr2 _ NULL ;                                              2g3f4

    qfloutp (sconacc, sconstr, 0) ;                              2g3f5

    IF FIND SF(*constr*) "xcptr1 1SNP "xcptr2 THEN ST xcptr1
    xcptr2 _ NULL ;                                              2g3f6

    % ratio %                                                    2g3f7

        getratio (Sratiostr, scpuacc, Sconacc) ;                2g3f7a

    strlen (Stotal, namlen+3, 1) ;                               2g3f8

    strlen (Sdatstr, datlen, 2) ;                                2g3f9

    strlen (scpustr, timlen, 2) ;                                2g3f10

    strlen (sconstr, timlen, 2) ;                                2g3f11

    strlen (Sratiostr, timlen, 2) ;                              2g3f12

    ST struc _ *total*, *datstr*, *cpustr*, *constr*,
    *ratiostr* ;                                                 2g3f13

  RETURN;                                                        2g3g

  END.                                                           2g3h

(stconv) PROCEDURE (stid) ;                                      2g4

  % declarations %                                               2g4a

    LOCAL stncpu[2], stncon[2] ;                                 2g4a1

    LOCAL TEXT POINTER stptr1, stptr2, stptr3, stptr4,
    stptr5, stptr6;                                              2g4a2

    LOCAL STRING stcpu[50], stcon[50], stnam[50], stdat[50],
    stratio[50] ;                                                2g4a3

  % parse statement %                                            2g4b

    IF NOT FIND                                                  2g4b1

      SF(stid) "stptr1 SPT "stptr2                               2g4b1a

      ['?] < CH 1S(D) "stptr3 > ['?] ['?] SSP 1S(D) "stptr4      2g4b1b
```

```
            [';] < CH 1$(D) ^stptr5 > [';] [';] $SP 1$(D) ^stptr6   2g4b1c

         THEN                                                        2g4b2

            BEGIN                                                    2g4b2a

            ST stid _ "*bad* ", SF(stid) SE(stid) ;                 2g4b2b

            RETURN;                                                  2g4b2c

            END;                                                     2g4b2d

         *stnam* _ stptr1 stptr2 ;                                   2g4b3

         *stdat* _ *date* ;                                          2g4b4

         *stcpu* _ stptr3 stptr4 ;                                   2g4b5

         *stcon* _ stptr5 stptr6 ;                                   2g4b6

         *stratio* _ NULL ;                                          2g4b7

      % convert numbers %                                           2g4c

         IF NOT convadd ($stcpu, $cpuacc, $stncpu) THEN             2g4c1

            *stcpu* _ "*bad*" ;                                     2g4c1a

         IF NOT convadd ($stcon, $conacc, $stncon) THEN             2g4c2

            *stcon* _ "*bad*" ;                                     2g4c2a

      % ratio %                                                     2g4d

         getratio ($stratio, $stncpu, $stncon) ;                    2g4d1

      % rebuild statement %                                         2g4e

         strlen ($stnam, namlen, 1) ;                               2g4e1

         strlen ($stdat, datlen, 2) ;                               2g4e2

         strlen ($stcpu, timlen, 2) ;                               2g4e3

         strlen ($stcon, timlen, 2) ;                               2g4e4

         strlen ($stratio, timlen, 2) ;                             2g4e5

         ST stid _ *stnam*, *stdat*, *stcpu*, *stcon*, *stratio* ;  2g4e6
```

```
        RETURN;                                                    2g4f

        END,                                                       2g4g

    (getratio) PROCEDURE (str, cpuarr, conarr) ;                   2g5

        % declarations %                                          2g5a

            LOCAL ratarr[2] ;                                     2g5a1

            LOCAL TEXT POINTER rptr1, rptr2 ;                     2g5a2

            REF str, cpuarr, conarr ;                             2g5a3

        % ratio %                                                 2g5b

            qcdivw (&cpuarr, &conarr, $ratarr) ;                  2g5b1

            qcmult ($ratarr, $hundred) ;                          2g5b2

            qfloutp ($ratarr, &str, 0) ;                          2g5b3

            FIND SF(*str*) SNP ^rptr1 SE(*str*) SNP ^rptr2 > ;    2g5b4

            *str* _ rptr1 rptr2, 45B ;                            2g5b5

        RETURN;                                                    2g5c

        END,                                                       2g5d

    (convadd) PROCEDURE (str, accum, num) ;                        2g6

        % declarations %                                          2g6a

            LOCAL tnum[2] ;                                       2g6a1

            LOCAL TEXT POINTER nptr1, nptr2, nptr3, nptr4, nptr5,
            nptr6;                                                2g6a2

            LOCAL STRING numstr[20] ;                             2g6a3

            REF str, accum, num ;                                 2g6a4

        IF NOT FIND SF(*str*) ^nptr1 1s(D) ^nptr2 '; SSP ^nptr3
        1S2(D) ^nptr4 '; SSP ^nptr5 1S2(D) ^nptr6 THEN RETURN(FALSE)
        ;                                                         2g6b

        % seconds %                                               2g6c
```

30

```
            *numstr* _ nptr5 nptr6 ;                              2g6c1

             nfloat(snumstr, snum, snum+1) ;                      2g6c2

             qcdivw (snum, ssixty, snum) ;                        2g6c3

          % minutes %                                            2g6d

             *numstr* _ nptr3 nptr4 ;                             2g6d1

             nfloat(snumstr, stnum, stnum+1) ;                    2g6d2

             qcadd (snum, stnum) ;                                2g6d3

             qcdivw (snum, ssixty, snum) ;                        2g6d4

          % hours %                                              2g6e

             *numstr* _ nptr1 nptr2 ;                             2g6e1

             nfloat(snumstr, stnum, stnum+1) ;                    2g6e2

             qcadd (snum, stnum) ;                                2g6e3

          % add to accum %                                       2g6f

             qcadd (&accum, snum) ;                               2g6f1

          % replace number %                                     2g6g

             qfloutp (snum, snumstr, 0) ;                         2g6g1

             FIND SF(*numstr*) snP "nptr1 SE(*numstr*) "nptr2 > ; 2g6g2

             *str* _ nptr1 nptr2 ;                                2g6g3

          RETURN(TRUE) ;                                          2g6h

          END.                                                   2g6i

       (strlen) PROCEDURE (astr, length, just); %sets string whose
       address is passed to length passed by truncating and adding
       spaces, optionally left (1) or right (2) justified%         2g7

          LOCAL TEXT POINTER lptr ;                               2g7a

          REF astr ;                                              2g7b

          length _ MIN (length, astr.M) ;                         2g7c
```

```
        IF astr,L > length THEN                               2g7d

           BEGIN                                              2g7d1

           astr,L _ length + 1 ;                              2g7d2

           FIND SE(*astr*) [NP] SNP "lptr > ;                 2g7d3

           astr,L _ lptr[1] - 1 ;                             2g7d4

           END;                                               2g7d5

        FOR lptr _ astr,L + 1 UP UNTIL > length DO            2g7e

           CASE just OF                                       2g7e1

              =1: *astr*[lptr] _ SP;                          2g7e1a

              =2: *astr* _ SP, *astr* ;                       2g7e1b

              ENDCASE EXIT LOOP ;                             2g7e1c

        RETURN;                                               2g7f

        END,                                                  2g7g

     FINISH                                                   2h
```

USESTATS User statistics subsystem: FY74 account numbers

(J25387) 13-FEB-75 16:41;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /JCN([INFO-ONLY]) RA3Y([INFO-ONLY]) JCP([
INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: NDM;   Origin: <
MEYER, USESTATS.NLS;30, >, 28-JAN-75 17:08 NDM ;;;; ####;

This is to inform all network liaison that the hostname USC-ISIA has
been changed back to USC-ISI per request of ARPA. Please make the
necessary changeover.   1

.... 2

                            NIC SERVICES   3

ONLINE LISTS   4

    Since there are many new liaison and hosts on the network, I would
    like to point out to the new people that there are currently three
    files maintained by the NIC available for FTP from OFFICE-1 (Host
    43 dec, 53 oct.) by network users. These are: 4a

        <NETINFO>HOSTS.TXT   4a1

            An ASCII text file that lists official ARPA Hostnames. (See
            RFC 625). This file is updated each week if new
            information is received. It is available via FTP to any
            Arpanet user. Each Liaison is responsible for seeing that
            its local hostname table uses these names.   4a1a

                If new hosts are added to the Network at your facility
                please notify Jake Feinler (FEINLER@SRI-ARC) as to what
                the new hostname will be.   4a1a1

        <NETINFO>LIAISON.TXT   4a2

            An ASCII text file that lists for each Technical Liaison his
            name, U. S. mail address, network mailbox address, phone,
            and the host(s) for which the listed individual is liaison.
            Several people have modified their own copy of this file to
            produce mailing labels.   4a2a

        <NETINFO>LIAISON-SNDMSG.TXT   4a3

            A list of known network mailbox addresses of the Technial
            Liaison suitable for use as a sndmsg group distribution
            list.   4a3a

    In the near future we hope to receive a copy of the Network
    Principal Investigators from ARPA. This will be made into lists
    similar to the Technical Liaison lists mentioned above, and will
    be available for all to use. A separate notice will be sent out
    when this is available.   4b

ONLINE RFCs   5

1

All current RFCs are maintained as text files in the directory
<NETINFO> at OFFICE-1 (Decimal 43) and can be FTPd by using the
pathname <NETINFO>RFCnnnn.txt where nnnn = the appropriate RFC
number. Persons wishing to be notified each time an RFC is
received and posted in <NETINFO> should notify Jon Postel
(POSTEL@SRI-ARC) and request to be put on the RFC notification
list.   5a

   RFCs issued since June 1974 are maintained online by the NIC
   for at least 21 days from the date of last access. This is a
   long enough time to allow most interested parties to obtain a
   copy. If an RFC is not accessed for 21 days, it is
   automatically archived and must be retrieved by Jon Postel
   (POSTEL@SRI-ARC) or Jake Feinler (FEINLER@SRI-ARC) via sndmsg
   request.   5a1

   RFCs issued before June 1974 are not available online mainly
   because many of them were never entered online in the first
   place. The NIC has master copies of most old RFCs, and we are
   currently investigating ways to make them more readily
   available in hardcopy form to Arpanet users.   5a2

CURRENT NETWORK PROTOCOLS   6

   A hardcopy version of the ARPA Network Current Network protocols
   can now be obtained from the U. S. Dept. of Commerce, National
   Technical Information Service (NTIS), 5285 Port Royal Road,
   Springfield, Va. 22161, or from the Defense Documentation Center
   (DDC), Cameron Station, Alexandria, Va. 22314. This document
   contains current network protocols in use as of Dec. 1, 1974. Its
   order number is: AD A003890, $12.25 for hardcopy and $2.25 for
   microfiche.   6a

      NOTE: Unfortunately this volume does not contain the latest
      version of BBN 1822. The latest 1822 can be obtained from
      Carol Kidston of BBN (KIDSTON@BBN).   6a1

RESOURCE HANDBOOK   7

   The hardcopy version of the Resource Handbook is limping along,
   but progressing. Each SERVER host will be given a chance to
   peruse its write-up briefly before going to press. We will not be
   able to do major rewrites, but will try to change wrong data and
   minor inconsistencies. Another memo on this topic will be issued
   soon.   7a

   The online NIC/QUERY version of the Resource Handbook is available
   at OFFICE-1. To access connect to OFFICE-1, then type: 7b

```
[@]login nicguest arpa <SP><CR>
[@]nic <CR>                                                          7b1
```

NOTE: The same guest account can be used for FTP purposes.
It cannot, however, be used to access NLS at OFFICE-1.   7b1a

The online version of the Resource Handbook is also being updated,
but it will be awhile before it is current.   7c

ARPANET DIRECTORY   8

Arpanet users who need extra copies of the June 1974 Arpanet
Directory may obtain them from Jake Feinler (FEINLER@SRI-ARC). A
new hardcopy directory is slated to follow the hardcopy Resource
Handbook.   8a

NOTIFYING USERS OF NIC SERVICES   9

The Liaison are currently the channel by which Network users are
notified of NIC services. I am aware that this is not an adequate
distribution mechanism, but hope that all of you will do what you
can to inform users at your hosts that the above services are
available.   9a

Nicnotes-2/75

(J25388) 13-FEB-75 16:54;;;;   Title: Author(s): Elizabeth J. (Jake)
Feinler/JAKE; Distribution: /ACM([INFO-ONLY]) ; Sub-Collections:
SRI-ARC; Clerk: JAKE;   Origin: < FEINLER, NICNOTES-2/75.NLS;11,
>, 13-FEB-75 16:43 JAKE ;;;;####;

FILE cusestats % (CML,) TO (meyer,usestats,cml,) %   1

  % DECLARATIONS %   1a

    DECLARE PARSEFUNCTION   1a1

      answ,   % reads answer construct %   1a1a

      answer,   % for questions - returns 0/1 %   1a1b

      lookstat,   %looks for s and shows status for substitute
      command%   1a1c

      sp,   % reads next char, TRUE if space %   1a1d

      readconfirm,   % reads next char if ca %   1a1e

      myrdconfirm,   % reads next char if ca; with variations for
      HELP %   1a1f

      dumprompt,   1a1g

      readbug,   % reads next char if BUG %   1a1h

      readoption,   % TRUE if next char is optchar %   1a1i

      readrepeat,   % TRUE if next char is repeat %   1a1j

      lookansw,   % TRUE if next char is Y/CA %   1a1k

      sublookansw, % TRUE if next char is Y/CA with variations for
      substitute command%   1a1l

      lookconfirm, % TRUE if next char is CA/REPEAT/INSERT %   1a1m

      lookbug,   % TRUE if next char is BUG %   1a1n

      mylookbug,   % TRUE if next char is BUG; with variations for
      HELP %   1a1o

      lookback,   % TRUE if next char is _; for HELP %   1a1p

      looknum,   % TRUE if next char is a number %   1a1q

      lookrpt,   % TRUE if next char is rpt; for HELP %   1a1r

      prmptlsel,   % prompt for an LSEL %   1a1s

      prmptdsel,   % prompt for an DSEL %   1a1t

```
        prmptssel,     % prompt for an SSEL %                              1a1u

        notca;              % reads next char, TRUE iff not CA char
        %                                                                  1a1v

    DECLARE COMMAND WORD                                                   1a2

        "BRANCH" = 1 ,                                                     1a2a

        "GROUP" = 2 ,                                                      1a2b

        "PLEX" = 3 ,                                                       1a2c

        "STATEMENT" = 4 ,                                                  1a2d

        "CHARACTER" = 5 ,                                                  1a2e

        "CONTROLCHAR" = 6 ,                                                1a2f

        "INVISIBLE" = 7 ,                                                  1a2g

        "LINK" = 8 ,                                                       1a2h

        "DIRECTORY" = 9 ,                                                  1a2i

        "PASSWORD" = 10 ,                                                  1a2j

        "NUMBER" = 11 ,                                                    1a2k

        "TEXT" = 12 ,                                                      1a2l

        "VISIBLE" = 13 ,                                                   1a2m

        "WORD" = 14 ,                                                      1a2n

        "FILE" = 15 ,                                                      1a2o

        "NEWFILELINK" = 16 ,                                              1a2p

        "OLDFILELINK" = 17 ,                                              1a2q

        "NAME" = 18 ,                                                      1a2r

        "IDENT" = 19 ,                                                     1a2s

        "IDENTLIST" = 20 ,                                                 1a2t

        "EDGE" = 21 ,                                                      1a2u
```

USESTATS User Statistics subsystem: FY75 account numbers

"MARKER" = 22 ,	1a2v
"NLS" = 23 ,	1a2w
"ITEM" = 24 ,	1a2x
"ITEMNOVS" = 25 ,	1a2y
"SUCCESSOR" = 26 ,	1a2z
"PREDECESSOR" = 27 ,	1a2a@
"UP" = 28 ,	1a2aa
"DOWN" = 29 ,	1a2ab
"HEAD" = 30 ,	1a2ac
"TAIL" = 31 ,	1a2ad
"END" = 32 ,	1a2ae
"BACK" = 33 ,	1a2af
"NEXT" = 34 ,	1a2ag
"ORIGIN" = 35 ,	1a2ah
"FILERETURN" = 36 ,	1a2ai
"RETURN" = 37 ,	1a2aj
"FILENAME" = 38 ,	1a2ak
"FIRSTNAME" = 39 ,	1a2al
"NEXTNAME" = 40 ,	1a2am
"EXTNAME" = 41 ,	1a2an
"FIRSTCONTENT" = 42 ,	1a2ao
"NEXTCONTENT" = 43 ,	1a2ap
"FIRSTWORD" = 44 ,	1a2aq
"NEXTWORD" = 45 ,	1a2ar
"DETACHED" = 46 ,	1a2as

```
"TTY" = 47 ,                                            1a2at

"AUTO" = 48 ,                                           1a2au

"CONTINUE" = 49 ,                                       1a2av

"ON" = 50 ,                                             1a2aw

"RECOVER" = 51 ,                                        1a2ax

"SLINKER" = 52 ,                                        1a2ay

"UPDATE" = 53 ,                                         1a2az

"CLEAR" = 54 ,                                          1a2b@

"IDENTS" = 55 ,                                         1a2ba

"FILES" = 56 ,                                          1a2bb

"DELETE" = 57 ,                                         1a2bc

"DEFERRED" = 58 ,                                       1a2bd

"IMMEDIATE" = 59 ,                                      1a2be

"NOT" = 60 ,                                            1a2bf

"PREVENT" = 61 ,                                        1a2bg

"RESET" = 62 ,                                          1a2bh

"ARCHIVE" = 63 ,                                        1a2bi

"SEQUENTIAL" = 64 ,                                     1a2bj

"TWO" = 65 ,                                            1a2bK

"JUSTIFIED" = 66 ,                                      1a2bl

"ASSEMBLER" = 67 ,                                      1a2bm

"BOTH" = 68 ,                                           1a2bn

"UNDELETE" = 69 ,                                       1a2bo

"FOR" = 70 ,                                            1a2bp

"STATUS" = 71 ,                                         1a2bq
```

```
         "TAPE" = 72 ,                                        1a2br

         "ACCOUNT" = 73 ,                                     1a2bs

         "NO" = 74 ,                                          1a2bt

         "VERSIONS" = 75 ,                                    1a2bu

         "EXTENSION" = 76 ,                                   1a2bv

         "DATE" = 77 ,                                        1a2bw

         "CREATION" = 78 ,                                    1a2bx

         "LAST" = 79 ,                                        1a2by

         "FIRST" = 80 ,                                       1a2bz

         "READ" = 81 ,                                        1a2c@

         "WRITE" = 82 ,                                       1a2ca

         "DUMP" = 83 ,                                        1a2cb

         "EVERYTHING" = 84 ,                                  1a2cc

         "LENGTH" = 85 ,                                      1a2cd

         "MISCELLANEOUS" = 86 ,                               1a2ce

         "ACCESSES" = 87 ,                                    1a2cf

         "PROTECT" = 88 ,                                     1a2cg

         "SIZE" = 89 ,                                        1a2ch

         "TIME" = 90 ,                                        1a2ci

         "VERBOSE" = 91 ,                                     1a2cj

         "SORT" = 92 ,                                        1a2ck

         "BYTESIZE" = 93 ,                                    1a2cl

         "ARCHIVED" = 94 ,                                    1a2cm

         "ALL" = 95 ,                                         1a2cn

         "MODIFICATIONS" = 96 ,                               1a2co
```

"UPPER" = 97 ,	1a2cp
"LOWER" = 98 ,	1a2cq
"MODE" = 99 ,	1a2cr
"SENDMAIL" = 100 ,	1a2cs
"BUSY" = 101 ,	1a2ct
"QUICKPRINT" = 102 ,	1a2cu
"JOURNAL" = 103 ,	1a2cv
"PRINTER" = 104 ,	1a2cw
"COM" = 105 ,	1a2cx
"TERMINAL" = 106 ,	1a2cy
"REMOTE" = 107 ,	1a2cz
"REST" = 108 ,	1a2d@
"CASE" = 109 ,	1a2da
"CONTENT" = 110 ,	1a2db
"TEMPORARY" = 111 ,	1a2dc
"VIEWSPECS" = 112 ,	1a2dd
"EXTERNAL" = 113 ,	1a2de
"TO" = 114 ,	1a2df
"PRIVATE" = 115 ,	1a2dg
"PUBLIC" = 116 ,	1a2dh
"TENEX" = 117 ,	1a2di
"ALLOW" = 118 ,	1a2dj
"EXECUTE" = 119 ,	1a2dk
"APPEND" = 120 ,	1a2dl
"LIST" = 121 ,	1a2dm

USESTATS User Statistics subsystem: FY75 account numbers

"SET" = 122 ,   1a2dn

"SELF" = 123 ,   1a2do

"FORBID" = 124 ,   1a2dp

"DISK" = 125 ,   1a2dq

"DEFAULT" = 126 ,   1a2dr

"OLD" = 127 ,   1a2ds

"NEW" = 128 ,   1a2dt

"COMPACT" = 129 ,   1a2du

"RENAME" = 130 ,   1a2dv

"ADD" = 131 ,   1a2dw

"SUBTRACT" = 132 ,   1a2dx

"MULTIPLY" = 133 ,   1a2dy

"DIVIDE" = 134 ,   1a2dz

"RIGHT" = 135 ,   1a2e@

"LEFT" = 136 ,   1a2ea

"ACTION" = 137 ,   1a2eb

"AUTHORS" = 138 ,   1a2ec

"COMMENT" = 139 ,   1a2ed

"EXPEDITE" = 140 ,   1a2ee

"HARDCOPY" = 141 ,   1a2ef

"INFORMATION" = 142 ,   1a2eg

"INSERT" = 143 ,   1a2eh

"KEYWORDS" = 144 ,   1a2ei

"OBSOLETES" = 145 ,   1a2ej

"RFC" = 146 ,   1a2ek

USESTATS User Statistics subsystem: FY75 account numbers

            "SUBCOLLECTIONS" = 147 ,   1a2el

            "TITLE" = 148 ,   1a2em

            "UNRECORDED" = 149 ,   1a2en

            "L10" = 150 ,   1a2eo

            "PROCEDURE" = 151 ,   1a2ep

            "SEQGENERATOR" = 152 ,   1a2eq

            "BUFFER" = 153 ,   1a2er

            "NDDT" = 154 ,   1a2es

            "PARSERULE" = 155 ,   1a2et

            "CA" = 156 ,   1a2eu

            "CD" = 157 ,   1a2ev

            "RPT" = 158 ,   1a2ew

            "BC" = 159 ,   1a2ex

            "BW" = 160 ,   1a2ey

            "BS" = 161 ,   1a2ez

            "LITESC" = 162 ,   1a2f0

            "IGNORE" = 163 ,   1a2fa

            "SC" = 164 ,   1a2fb

            "SW" = 165 ,   1a2fc

            "TAB" = 166 ,   1a2fd

            "IMLAC" = 167 ,   1a2fe

            "TI" = 168 ,   1a2ff

            "NVT" = 169 ,   1a2fg

            "EXECUPORT" = 170 ,   1a2fh

            "MENU" = 171 ,   1a2fi

USESTATS User Statistics subsystem: FY75 account numbers

"DNLS" = 172 ,		1a2fj
"TNLS" = 173 ,		1a2fk
"COMMAND" = 174 ,		1a2fl
"RULE" = 175 ,		1a2fm
"SUBSYSTEM" = 176 ,		1a2fn
"DISPLAY" = 177 ,		1a2fo
"FROZEN" = 178 ,		1a2fp
"HLPCOM" = 179 ,		1a2fq
"PROGRAM" = 180 ,		1a2fr
"TERSE" = 181 ,		1a2fs
"INDENTING" = 182 ,		1a2ft
"UNIVERSAL" = 183 ,		1a2fu
"ENTRY" = 184 ,		1a2fv
"INCLUDE" = 185 ,		1a2fw
"BOTTOM" = 186 ,		1a2fx
"PAGE" = 187 ,		1a2fy
"OFF" = 188 ,		1a2fz
"FULL" = 189 ,		1a2g@
"PARTIAL" = 190 ,		1a2ga
"ANTICIPATORY" = 191 ,		1a2gb
"DEMAND" = 192 ,		1a2gc
"FIXED" = 193 ,		1a2gd
"CONTROL" = 194 ,		1a2ge
"CURRENTCONTEXT" = 195 ,		1a2gf
"FEEDBACK" = 196 ,		1a2gg

```
        "HERALD" = 197 ,                                          1a2gh

        "PRINTOPTIONS" = 198 ,                                    1a2gi

        "PROMPT" = 199 ,                                          1a2gj

        "RECOGNITION" = 200 ,                                     1a2gk

        "STARTUP" = 201 ,                                         1a2gl

        "LEVELADJUST" = 202 ,                                     1a2gm

        "REVERSE" = 203 ,                                         1a2gn

        "TEST" = 204 ,                                            1a2go

        "TASKER" = 205 ,                                          1a2gp

        "LINEPROCESSOR" = 206 ,                                   1a2gq

        "CENTER" = 207 ,                                          1a2gr

        "CNTLG" = 208 ;                                           1a2gs

    % COMMON RULES %                                              1b

      % ENTITY DEFINITIONS %                                      1b1

        editentity = textent / structure;                        1b1a

      % TEXT ENTITY DEFINITIONS %                                 1b2

        textent = text1 / "TEXT" / "LINK" / "NUMBER";             1b2a

        text1 = "CHARACTER" / "WORD" / "VISIBLE" / "INVISIBLE";   1b2b

      % STRUCTURE ENTITY DEFINITIONS %                            1b3

        structure = "STATEMENT" / notstatement;                  1b3a

        notstatement = "GROUP" / "BRANCH" / "PLEX" ;              1b3b

      % SWITCH %                                                  1b4

        switch = ("ON"! 1!/"OFF"!2 L2!);                          1b4a

      % DEVICE TYPES %                                            1b5

        devopt =                                                  1b5a
```

USESTATS User Statistics subsystem: FY75 account numbers

("TASKER"¦L₂¦	1b5a1
/ "TI" <"Terminal">	1b5a2
/ "NVT"	1b5a3
/ "LINEPROCESSOR"	1b5a4
/ "IMLAC"	1b5a5
/ "EXECUPORT"	1b5a6
/ "33-TTY"¦ 33¦	1b5a7
/ "35-TTY"¦ 35¦	1b5a8
/ "37-TTY"¦ 37¦);	1b5a9
SUBSYSTEM usestats KEYWORD "USESTATS"	1c
INITIALIZATION	1c1
uinit =	1c1a
useinit() ;	1c1a1
COMMAND	1c2
uconvert =	1c2a
"CONVERT" <"and total">	1c2a1
("FACT" <"File at">	1c2a2
source _ DSEL(#"STATEMENT")	1c2a2a
CONFIRM	1c2a2b
xconvfact (source)	1c2a2c
/"SEQUENTIAL" <"Fact File">	1c2a3
source _ LSEL(#"OLDFILELINK")	1c2a3a
<"Insert Branch at"> dent _ DSEL(#"STATEMENT")	1c2a3b
level _ LEVADJ	1c2a3c
CONFIRM	1c2a3d

```
              xconvsfact (source,dent,level)                    1c2a3e

              ) ;                                               1c2a4

        COMMAND                                                 1c3

           utotal =                                             1c3a

              "TOTAL" "BRANCH" <"at">                           1c3a1

              source _ DSEL(#"STATEMENT")                       1c3a2

              CONFIRM                                           1c3a3

              xtotal(source) ;                                  1c3a4

        COMMAND                                                 1c4

           uextract =                                           1c4a

              "EXTRACT"!L2! "GROUP" <"Name">                    1c4a1

              ent _ LSEL(#"WORD")                               1c4a2

              <"for weeks">                                     1c4a3

              source _ DSEL(#"GROUP")                           1c4a4

              CLEAR <"Insert Branch at">                        1c4a5

              dent _ DSEL(#"STATEMENT")                         1c4a6

              level _ LEVADJ                                    1c4a7

              CONFIRM                                           1c4a8

              xextgrp (dent, level, ent, source) ;             1c4a9

        END.                                                    1c5

     FINISH                                                     1d

FILE lusestats % (L10,) TO (meyer, usestats,subsys,) %          2

   % globals %                                                  2a

     DECLARE sixty[2], hundred[2], cpuacc[2], conacc[2], cputot[2],
     contot[2] ;                                                2a1
```

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```
    DECLARE                                                 2a2

        namlen = 16,                                        2a2a

        datlen = 10,                                        2a2b

        timlen = 12;                                        2a2c

    DECLARE STRING date[100] ;                              2a3

(useinit) PROCEDURE (result, parsemode);                   2b

    REF result ;                                            2b1

    CASE parsemode OF                                       2b2

        = parsing:                                          2b2a

        BEGIN                                               2b2a1

        nfloat(s"60", ssixty, ssixty+1) ;                   2b2a2

        nfloat(s"100", shundred, shundred+1) ;              2b2a3

        END;                                                2b2a4

        ENDCASE;                                            2b2b

    RETURN (&result);                                       2b3

    END,                                                    2b4

(xtotal) PROCEDURE (result, parsemode, wkbranch);          2c

    LOCAL indent ;                                          2c1

    REF result, wkbranch ;                                  2c2

    CASE parsemode OF                                       2c3

        = parsing:                                          2c3a

        BEGIN                                               2c3a1

        % compute indentation adjustment %                 2c3a2

            indent _ 3 * (3 - getlev(wkbranch) ) ;          2c3a2a

        totalbr (wkbranch,indent) ;                         2c3a3
```

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```
        % done %                                                  2c3a4

            IF nlmode=fulldislay THEN alldsp() ;                  2c3a4a

        END;                                                      2c3a5

    ENDCASE;                                                      2c3b

  RETURN (&result);                                              2c4

  END,                                                           2c5

(xconvsfact) PROCEDURE (result, parsemode, file, stid, levadj) ;   2d

  LOCAL astid, level, jfn ;                                      2d1

  LOCAL TEXT POINTER fptr1, fptr2, fptr3, fptr4, fptr5, fptr6 ;  2d2

  LOCAL STRING line[2000] ;                                      2d3

  REF result, file, stid, levadj ;                              2d4

  CASE parsemode OF                                              2d5

    = parsing:                                                   2d5a

      BEGIN                                                      2d5a1

      level _ levadj ;                                           2d5a2

      % open input file %                                        2d5a3

        lnbfls(&file,0, $line) ;                                 2d5a3a

        IF NOT jfn _ igetjfn (0, $line, stxtext, gtjoisf,
        slit)                                                    2d5a3b

          THEN SIGNAL (ofilerr, slit) ;                          2d5a3b1

        IF NOT sysopen (jfn, read, chrtyp, slit) THEN            2d5a3c

          BEGIN                                                  2d5a3c1

          reljfn (jfn) ;                                         2d5a3c2

          SIGNAL (ofilerr, slit) ;                               2d5a3c3

          END;                                                   2d5a3c4
```

```
% get date %                                                    2d5a4

  LOOP %header%                                                 2d5a4a

    BEGIN                                                       2d5a4a1

    IF NOT isread (jfn, sline, LF) THEN                         2d5a4a2

      BEGIN                                                     2d5a4a2a

      dismes (1, S"Invalid format for Fact File");             2d5a4a2b

      RETURN (&result) ;                                       2d5a4a2c

      END;                                                     2d5a4a2d

    IF FIND SF(*line*) SNP "TENEX SUMMARY SHEET FOR PAY
    PERIOD " 1SUL (',/TRUE) 1SSP 1SD 1SSP "THRU" 1SSP
    "fptr1 SUL "fptr2 (',/TRUE) SSP "fptr3 1SD "fptr4
    1SSP ("19"/TRUE) "fptr5 1SD "fptr6 THEN                     2d5a4a3

      BEGIN                                                     2d5a4a3a

      *date* _ fptr1 fptr2 ;                                    2d5a4a3b

      date,L _ MIN(date,L, 3) ;                                2d5a4a3c

      *date* _ fptr3 fptr4, '=, *date*, '=, fptr5
      fptr6 ;                                                   2d5a4a3d

      EXIT LOOP;                                                2d5a4a3e

      END;                                                     2d5a4a3f

    END;                                                       2d5a4a4

% get week's total %                                            2d5a5

  LOOP                                                          2d5a5a

    BEGIN                                                       2d5a5a1

    IF NOT isread (jfn, sline, LF) THEN EXIT LOOP ;            2d5a5a2

    IF FIND SF(*line*) SNP "fptr1 "TOTAL" "fptr2 THEN
    EXIT LOOP ;                                                 2d5a5a3

    FIND SF(*line*) SNP "fptr1 SE(*line*) SNP "fptr2 >
    ;                                                           2d5a5a4
```

```
          *line* _ fptr1 fptr2 ;                      2d5a5a5

      END;                                            2d5a5a6

   stconv (fptr1) ;                                   2d5a5b

   ST fptr1 fptr2 _ "Week ending" ;   %6 more chars than
   "TOTAL" so should line up columns just right%       2d5a5c

   FIND SF(*line*) "fptr1 SE(*line*) "fptr2 > ;        2d5a5d

   astid _ cinssta (stid, level, $fptr1, $fptr2) ;    2d5a5e

% process each account %                              2d5a6

   level _ -1 ;                                        2d5a6a

   LOOP                                                2d5a6b

      BEGIN                                            2d5a6b1

      %place account statement%                        2d5a6b2

         LOOP                                          2d5a6b2a

            BEGIN                                      2d5a6b2a1

            IF NOT isread (jfn, $line, LF) THEN EXIT LOOP
            2 ; %header%                               2d5a6b2a2

            IF FIND SF(*line*) $NP "fptr1 "ACCOUNT:"
            "fptr2 THEN EXIT LOOP ;                    2d5a6b2a3

            END;                                       2d5a6b2a4

         acct (fptr1) ;                               2d5a6b2b

         FIND SF(*line*) "fptr1 SE(*line*) "fptr2 > ;  2d5a6b2c

         stid _ astid _ cinssta (astid, level, $fptr1,
         $fptr2) ;                                     2d5a6b2d

         level _ -1 ;                                  2d5a6b2e

      %move directories under it%                      2d5a6b3

         LOOP                                          2d5a6b3a

            BEGIN                                      2d5a6b3a1
```

USESTATS User Statistics subsystem: FY75 account numbers

```
                    IF NOT isread (jfn, sline, LF) THEN EXIT LOOP
                    2 ;                                          2d5a6b3a2

                    IF FIND SF(*line*) SNP "fptr1 "USER" "fptr2
                    THEN EXIT LOOP ;                             2d5a6b3a3

                    END;                                         2d5a6b3a4

               LOOP                                             2d5a6b3b

               BEGIN                                            2d5a6b3b1

               IF NOT isread (jfn, sline, LF) THEN EXIT LOOP
               2 ;                                              2d5a6b3b2

               IF FIND SF(*line*) SNP ("TOTAL"/ENDCHR) THEN
               EXIT LOOP;                                       2d5a6b3b3

               IF FIND SF(*line*) SNP ("*USER ID CODE"/D)
               THEN REPEAT LOOP;                                2d5a6b3b4

               FIND SF(*line*) SNP "fptr1 SE(*line*) SNP
               "fptr2 >;                                        2d5a6b3b5

               stid _ cinssta (stid, level, $fptr1, $fptr2)
               ;                                                2d5a6b3b6

               level _ 0 ;                                      2d5a6b3b7

               END;                                             2d5a6b3b8

          level _ 0 ;                                          2d5a6b3c

       %convert account branch%                                2d5a6b4

          convtot (astid) ;                                    2d5a6b4a

       END;                                                    2d5a6b5

    % done %                                                   2d5a7

       IF nlmode=fulldislay THEN alldsp() ;                    2d5a7a

    END;                                                       2d5a8

  ENDCASE;                                                     2d5b

  RETURN (&result);                                            2d6
```

```
            END,                                                      2d7

    (Xconvfact) PROCEDURE (result, parsemode, file) ;                 2e

        LOCAL stid, astid, level ;                                    2e1

        LOCAL TEXT POINTER fptr1, fptr2, fptr3, fptr4, fptr5, fptr6 ; 2e2

        REF result, file ;                                            2e3

        CASE parsemode OF                                             2e4

            = parsing:                                                2e4a

                BEGIN                                                 2e4a1

                % get date %                                          2e4a2

                    stid _ file ;                                     2e4a2a

                    stid.stpsid _ origin ;                            2e4a2b

                    stid _ getsub(stid) ;                             2e4a2c

                IF NOT FIND SF(stid) "TENEX SUMMARY SHEET FOR PAY
                PERIOD " 1$UL (',/TRUE) 1$SP 1$D 1$SP "THRU" 1$SP
                "fptr1 $UL "fptr2 (',/TRUE) $SP "fptr3 1$D "fptr4 1$SP
                ("19"/TRUE) "fptr5 1$D "fptr6 THEN                     2e4a2d

                    BEGIN                                             2e4a2d1

                    dismes (1, S"Invalid format for Fact File");      2e4a2d2

                    RETURN (&result) ;                                2e4a2d3

                    END;                                              2e4a2d4

                *date* _ fptr1 fptr2 ;                                2e4a2e

                date.L _ MIN(date.L, 3) ;                             2e4a2f

                *date* _ fptr3 fptr4, '=, *date*, '=, fptr5 fptr6 ;   2e4a2g

                % get week's total %                                  2e4a3

                fptr1 _ stid ;                                        2e4a3a

                LOOP                                                  2e4a3b
```

```
        BEGIN                                             2e4a3b1

        IF FIND SF(fptr1) "fptr1 "TOTAL" "fptr2 THEN EXIT
        LOOP ;                                            2e4a3b2

        stid _ (fptr1 := getsuc(fptr1)) ;                 2e4a3b3

        cdelgro (stid, stid, 0, 0) ;                      2e4a3b4

        END;                                              2e4a3b5

    stconv (fptr1) ;                                      2e4a3c

    ST fptr1 fptr2 _ "Week ending" ;  %6 more chars than
    "TOTAL" so should line up columns just right%         2e4a3d

level _ -1 ;                                              2e4a4

astid _ stid _ fptr1 ;                                   2e4a5

LOOP % process each account %                            2e4a6

  BEGIN                                                   2e4a6a

  %place account statement%                               2e4a6b

    fptr1 _ getsuc(stid) ;                                2e4a6b1

    LOOP                                                  2e4a6b2

      BEGIN                                               2e4a6b2a

      IF FIND SF(fptr1) "fptr1 "ACCOUNT:" "fptr2 THEN
      EXIT LOOP ;                                         2e4a6b2b

      IF FIND SF(fptr1) "fptr1 SP ENDCHR THEN             2e4a6b2c

        IF (fptr2_getsub(fptr1)) # fptr1                  2e4a6b2c1

          THEN cmovsta(fptr1,0,fptr2,0,0);                2e4a6b2c1a

      fptr2 _ (fptr1 := getsuc(fptr1)) ;                  2e4a6b2d

      cdelgro (fptr2, fptr2, 0, 0) ;                      2e4a6b2e

      IF fptr1.stpsid=origin THEN EXIT LOOP 2 ;           2e4a6b2f

      END;                                                2e4a6b2g
```

```
                    acct (fptr1) ;                                    2e4a6b3

                    astid _ cmovsta (astid, level, fptr1, 0,0) ;      2e4a6b4

                    level _ 0 ;                                       2e4a6b5

                %move directories under it%                           2e4a6c

                    fptr1 _ getsuc(stid) ;                            2e4a6c1

                    LOOP                                              2e4a6c2

                        BEGIN                                         2e4a6c2a

                        IF FIND SF(fptr1) "USER" THEN EXIT LOOP ;     2e4a6c2b

                        fptr1 _ getsuc(fptr1) ;                       2e4a6c2c

                        END;                                          2e4a6c2d

                    fptr1 _ fptr2 _ fptr3 _ getsuc(fptr1) ;           2e4a6c3

                    LOOP                                              2e4a6c4

                        BEGIN                                         2e4a6c4a

                        IF FIND SF(fptr2) ("TOTAL"/NP) THEN EXIT LOOP ;
                                                                      2e4a6c4b
                        fptr2 _ getsuc(fptr3_fptr2) ;                 2e4a6c4c

                        END;                                          2e4a6c4d

                    cmovgro (astid, =1, fptr1, fptr3, 0,0) ;          2e4a6c5

                %convert account branch%                              2e4a6d

                    convtot (astid) ;                                 2e4a6d1

                END;                                                  2e4a6e

            % done %                                                  2e4a7

                IF nlmode=fulldislay THEN alldsp() ;                  2e4a7a

            END!                                                      2e4a8

        ENDCASE;                                                      2e4b

    RETURN (&result);                                                 2e5
```

```
        END .                                                    2e6

    (xextgrp) PROCEDURE (result, parsemode, where, levadj, grp,
    weeks);                                                      2f

        LOCAL level, stid, cpy ;                                 2f1

        LOCAL TEXT POINTER eptr1, eptr2, eptr3, eptr4 ;          2f2

        LOCAL STRING grpstr[50] ;                                2f3

        REF result, where, levadj, grp, weeks ;                  2f4

        CASE parsemode OF                                        2f5

          = parsing:                                             2f5a

            BEGIN                                                2f5a1

            % get grpstr %                                       2f5a2

                eptr1 _ grp;    eptr1[1] _ grp[1];               2f5a2a

                eptr2 _ grp[2]; eptr2[1] _ grp[3];               2f5a2b

                *grpstr* _ eptr1 eptr2 ;                         2f5a2c

                astruc(sgrpstr) ;                                2f5a2d

            % get dates %                                        2f5a3

                eptr1 _ weeks ;                                  2f5a3a

                eptr3 _ weeks[2] ;                               2f5a3b

                IF NOT FIND SF(eptr1) [D] "eptr1 _eptr1 sPT "eptr2
                SF(eptr3) [D] "eptr3 _eptr3 sPT "eptr4 THEN      2f5a3c

                    BEGIN                                        2f5a3c1

                    dismes (1, s"Invalid Format in weeks") ;     2f5a3c2

                    RETURN (FALSE) ;                             2f5a3c3

                    END ;                                        2f5a3c4

                *date* _ *grpstr*, SP, eptr1 eptr2, " thru ", eptr3
                eptr4 ;                                          2f5a3d
```

```
            FIND SF(*date*) "eptr3 SE(*date*) "eptr4 > ;        2f5a3e

            eptr2 _ stid _ cinssta (where, levadj, septr3, septr4)
            ;                                                    2f5a3f

    % copy all branches under new statement %                   2f5a4

        level _ -1 ;                                            2f5a4a

        LOOP %for each week (eptr1)%                            2f5a4b

            BEGIN                                              2f5a4b1

            IF (cpy _ getsub(eptr1)) = eptr1 THEN              2f5a4b2

                BEGIN                                         2f5a4b2a

                dismes (1, s"No groups in Week") ;            2f5a4b2b

                RETURN (FALSE) ;                              2f5a4b2c

                END ;                                         2f5a4b2d

            LOOp %find group%                                 2f5a4b3

                BEGIN                                         2f5a4b3a

                IF FIND SF(cpy) *grpstr* SP THEN EXIT LOOP;   2f5a4b3b

                IF getftl(cpy) THEN                           2f5a4b3c

                    BEGIN                                     2f5a4b3c1

                    dismes (1, s"Group not in Week") ;        2f5a4b3c2

                    RETURN (FALSE) ;                          2f5a4b3c3

                    END ;                                     2f5a4b3c4

                cpy _ getsuc(cpy) ;                           2f5a4b3d

                END;                                          2f5a4b3e

            stid _ ccopgro (stid, level, cpy, cpy, 0,0) ;     2f5a4b4

            level _ 0;                                        2f5a4b5

            IF eptr1=weeks[2] OR getftl(eptr1) THEN EXIT LOOP; 2f5a4b6
```

```
            LOOP %find next week%                              2f5a4b7

                BEGIN                                          2f5a4b7a

                eptr1 _ getsuc(eptr1) ;                        2f5a4b7b

                IF FIND SF(eptr1) "week" THEN EXIT LOOP ;      2f5a4b7c

                IF eptr1=weeks[2] OR getftl(eptr1) THEN EXIT
                LOOP 2;                                        2f5a4b7d

                END;                                           2f5a4b7e

            END;                                               2f5a4b8

        % total branch %                                      2f5a5

            totalbr (eptr2,6) ;                               2f5a5a

        % done %                                              2f5a6

            IF nlmode=fulldislay THEN alldsp() ;              2f5a6a

        END;                                                  2f5a7

    ENDCASE;                                                  2f5b

  RETURN (&result);                                           2f6

  END,                                                        2f7

% Support Routines %                                          2g

(totalbr) PROCEDURE (brch, add);                              2g1

    LOCAL TEXT POINTER tptr1, tptr2, tptr3, tptr4, tptr5, tptr6
    ;                                                         2g1a

    LOCAL STRING tname[50], tcpustr[25], tconstr[25], tratio[25]
    ;                                                         2g1b

    IF NOT FIND SF(brch) "tptr1 UL [#- 2(D)] sD (sSP "thru" [#-
    2(D)] sD / TRUE) "tptr2                                   2g1c

        THEN                                                  2g1c1

            BEGIN                                             2g1c1a

            dismes (1, s"Improper format in Branch title") ;  2g1c1b
```

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```
          RETURN (FALSE);                                              2g1c1c

          END                                                          2g1c1d

       ELSE                                                            2g1c2

          BEGIN                                                        2g1c2a

          *tname* _ tptr1 tptr2 ;                                      2g1c2b

          strlen (Stname, namlen+datlen+add, 1) ;                      2g1c2c

          END;                                                         2g1c2d

    IF (tptr3 _ getsub(tptr1)) = tptr1 THEN                            2g1d

       BEGIN                                                           2g1d1

       dismes (1, S"No members in Branch") ;                           2g1d2

       RETURN (TRUE);                                                  2g1d3

       END;                                                            2g1d4

    % initialize variables %                                          2g1e

       nfloat(S"0", scputot, scputot+1) ;                             2g1e1

       nfloat(S"0", scontot, scontot+1) ;                             2g1e2

    LOOP % add up cpu and con tmes %                                   2g1f

       BEGIN                                                           2g1f1

       IF (NOT FIND SF(tptr3) UL [*,] < SPT "tptr3 > SPT "tptr4
       [*.] < SPT "tptr5 > SPT "tptr6)                                 2g1f2

          THEN                                                         2g1f2a

             BEGIN                                                     2g1f2a1

             ST tptr3 _ "*bad* ", SF(tptr3) SE(tptr3) ;                2g1f2a2

             END                                                       2g1f2a3

          ELSE                                                         2g1f2b

             BEGIN                                                     2g1f2b1
```

```
                 % cpu %                                         2g1f2b2

                     *tcpustr* _ tptr3 tptr4 ;                   2g1f2b2a

                     nfloat(stcpustr, scpuacc, scpuacc+1) ;      2g1f2b2b

                     qcadd (scputot, scpuacc) ;                  2g1f2b2c

                 % con %                                         2g1f2b3

                     *tconstr* _ tptr5 tptr6 ;                   2g1f2b3a

                     nfloat(stconstr, sconacc, sconacc+1) ;      2g1f2b3b

                     qcadd (scontot, sconacc) ;                  2g1f2b3c

             END;                                                2g1f2b4

         IF getftl (tptr3) THEN EXIT LOOP ;                      2g1f3

         tptr3 _ getsuc(tptr3) ;                                 2g1f4

         END;                                                    2g1f5

     % rebuild statement %                                       2g1g

         % cpu %                                                 2g1g1

             qfloutp (scputot, stcpustr, 0) ;                    2g1g1a

             FIND SF(*tcpustr*) SNP "tptr3 SE(*tcpustr*) SNP "tptr4
             > ;                                                 2g1g1b

             *tcpustr* _ tptr3 tptr4 ;                           2g1g1c

             strlen (stcpustr, timlen, 2) ;                      2g1g1d

         % con %                                                 2g1g2

             qfloutp (scontot, stconstr, 0) ;                    2g1g2a

             FIND SF(*tconstr*) SNP "tptr3 SE(*tconstr*) SNP "tptr4
             > ;                                                 2g1g2b

             *tconstr* _ tptr3 tptr4 ;                           2g1g2c

             strlen (stconstr, timlen, 2) ;                      2g1g2d

         % ratio %                                               2g1g3
```

```
                    getratio (stratio, scputot, scontot) ;              2g1g3a

                    strlen (stratio, timlen, 2) ;                       2g1g3b

               ST tptr1 _ *tname*, *tcpustr*, *tconstr*, *tratio* ;     2g1g4

          RETURN (TRUE);                                                2g1h

          END.                                                          2g1i

        (acct) PROCEDURE (stid) ;                                       2g2

          LOCAL TEXT POINTER aptr1, aptr2 ;                             2g2a

          LOCAL STRING anum[100] ;                                      2g2b

          IF NOT FIND SF(stid) [D] ~aptr1 _aptr1 $D ~aptr2 THEN
          RETURN;                                                       2g2c

          *anum* _ aptr1 aptr2 ;                                        2g2d

          CASE VALUE(sanum) OF                                          2g2e

              = 10:        ST stid _ "SYSTEM" ;                         2g2e1

              = 20:        ST stid _ "TYMSHARE" ;                       2g2e2

              = 30:        ST stid _ "ARC-UTIL" ;                       2g2e3

              = 90:        ST stid _ "CONSULTANTS" ;                    2g2e4

              =200:        ST stid _ "NSRDC" ;                          2g2e5

              =320:        ST stid _ "HUDSON" ;                         2g2e6

              =340:        ST stid _ "ETS" ;                            2g2e7

              =360:        ST stid _ "ARC-APP" ;                        2g2e8

              =380:        ST stid _ "ARC-MGT" ;                        2g2e9

              =400:        ST stid _ "RADC" ;                           2g2e10

              =440:        ST stid _ "AFAA" ;                           2g2e11

              =500:        ST stid _ "BELL" ;                           2g2e12

              =600:        ST stid _ "BRL" ;                            2g2e13
```

```
        =700:        ST stid _ "SRI" ;                                2g2e14

        =800:        ST stid _ "ARPA" ;                               2g2e15

        =820:        ST stid _ "MIT-SEISMIC" ;                        2g2e16

        =840:        ST stid _ "NICGUEST" ;                           2g2e17

        =880:        ST stid _ "ARPA-NSW" ;                           2g2e18

        =900:        ST stid _ "NSA" ;                                2g2e19

        ENDCASE      ST stid _ "ACCOUNT";                             2g2e20

    ST stid _ SF(stid) SE(stid), " (", *anum*, ") ;                   2g2f

    RETURN;                                                           2g2g

    END,                                                              2g2h

(convtot) PROCEDURE (struc);                                          2g3

    LOCAL stid ;                                                      2g3a

    LOCAL TEXT POINTER xcptr1, xcptr2 ;                               2g3b

    LOCAL STRING total[200], cpustr[20], constr[20],
    ratiostr[20], datstr[20] ;                                        2g3c

    % initializations %                                               2g3d

        nfloat($"0", Scpuacc, Scpuacc+1) ;                            2g3d1

        nfloat($"0", Sconacc, Sconacc+1) ;                            2g3d2

    % reformat group %                                                2g3e

        IF (stid_getsub(struc)) # struc THEN                          2g3e1

        LOOP                                                          2g3e2

            BEGIN                                                     2g3e2a

            stconv (stid) ;                                           2g3e2b

            IF getftl(stid) THEN EXIT LOOP;                           2g3e2c

            stid _ getsuc(stid) ;                                     2g3e2d
```

```
            END;                                                    2g3e2e

        % insert total %                                           2g3f

          IF FIND SF(struc) "xcptr1 $(uL/SP) ('( SD ')/< SSP >)
          "xcptr2                                                  2g3f1

              THEN *total* _ xcptr1 xcptr2                         2g3f1a

              ELSE *total* _ "GROUP TOTAL" ;                       2g3f1b

          *datstr* _ *date* ;                                     2g3f2

          qfloutp (scpuacc, scpustr, 0) ;                          2g3f3

          IF FIND SF(*cpustr*) "xcptr1 1$NP "xcptr2 THEN ST xcptr1
          xcptr2 _ NULL ;                                         2g3f4

          qfloutp (sconacc, sconstr, 0) ;                          2g3f5

          IF FIND SF(*constr*) "xcptr1 1$NP "xcptr2 THEN ST xcptr1
          xcptr2 _ NULL ;                                         2g3f6

        % ratio %                                                  2g3f7

          getratio (sratiostr, scpuacc, sconacc) ;                2g3f7a

          strlen (stotal, namlen+3, 1) ;                          2g3f8

          strlen (sdatstr, datlen, 2) ;                           2g3f9

          strlen (scpustr, timlen, 2) ;                           2g3f10

          strlen (sconstr, timlen, 2) ;                           2g3f11

          strlen (sratiostr, timlen, 2) ;                         2g3f12

          ST struc _ *total*, *datstr*, *cpustr*, *constr*,
          *ratiostr* ;                                            2g3f13

      RETURN;                                                      2g3g

      END.                                                        2g3h

  (stconv) PROCEDURE (stid) ;                                     2g4

      % declarations %                                            2g4a

        LOCAL stncpu[2], stncon[2] ;                              2g4a1
```

```
        LOCAL TEXT POINTER stptr1, stptr2, stptr3, stptr4,
        stptr5, stptr6;                                              2g4a2

        LOCAL STRING stcpu[50], stcon[50], stnam[50], stdat[50],
        stratio[50] ;                                                2g4a3

      % parse statement %                                            2g4b

        IF NOT FIND                                                  2g4b1

          SF(stid) ^stptr1 SPT ^stptr2                               2g4b1a

          ['=] < CH 1$(D) ^stptr3 > ['=] ['=] SSP 1$(D) ^stptr4     2g4b1b

          ['=] < CH 1$(D) ^stptr5 > ['=] ['=] SSP 1$(D) ^stptr6     2g4b1c

        THEN                                                         2g4b2

          BEGIN                                                      2g4b2a

          ST stid _ "*bad* ", SF(stid) SE(stid) ;                   2g4b2b

          RETURN;                                                    2g4b2c

          END;                                                       2g4b2d

        *stnam* _ stptr1 stptr2 ;                                    2g4b3

        *stdat* _ *date* ;                                           2g4b4

        *stcpu* _ stptr3 stptr4 ;                                    2g4b5

        *stcon* _ stptr5 stptr6 ;                                    2g4b6

        *stratio* _ NULL ;                                           2g4b7

      % convert numbers %                                            2g4c

        IF NOT convadd (sstcpu, scpuacc, sstncpu) THEN               2g4c1

          *stcpu* _ "*bad*" ;                                        2g4c1a

        IF NOT convadd (sstcon, sconacc, sstncon) THEN               2g4c2

          *stcon* _ "*bad*" ;                                        2g4c2a

      % ratio %                                                      2g4d

        getratio (sstratio, sstncpu, sstncon) ;                      2g4d1
```

```
        % rebuild statement %                                         2g4e

            strlen (sstnam, namlen, 1) ;                              2g4e1

            strlen (sstdat, datlen, 2) ;                              2g4e2

            strlen (sstcpu, timlen, 2) ;                              2g4e3

            strlen (sstcon, timlen, 2) ;                              2g4e4

            strlen (sstratio, timlen, 2) ;                            2g4e5

            ST stid _ *stnam*, *stdat*, *stcpu*, *stcon*, *stratio* ; 2g4e6

        RETURN;                                                       2g4f

        END.                                                          2g4g

    (getratio) PROCEDURE (str, cpuarr, conarr) ;                      2g5

        % declarations %                                             2g5a

            LOCAL ratarr[2] ;                                        2g5a1

            LOCAL TEXT POINTER rptr1, rptr2 ;                        2g5a2

            REF str, cpuarr, conarr ;                                2g5a3

        % ratio %                                                    2g5b

            qcdivw (&cpuarr, &conarr, sratarr) ;                     2g5b1

            qcmult (sratarr, shundred) ;                             2g5b2

            qfloutp (sratarr, &str, 0) ;                             2g5b3

            FIND SF(*str*) SNP "rptr1 SE(*str*) SNP "rptr2 > ;       2g5b4

            *str* _ rptr1 rptr2, 45B ;                              2g5b5

        RETURN;                                                       2g5c

        END.                                                          2g5d

    (convadd) PROCEDURE (str, accum, num) ;                          2g6

        % declarations %                                             2g6a

            LOCAL tnum[2] ;                                          2g6a1
```

```
        LOCAL TEXT POINTER nptr1, nptr2, nptr3, nptr4, nptr5,
        nptr6;                                                      2g6a2

        LOCAL STRING numstr[20] ;                                   2g6a3

        REF str, accum, num ;                                       2g6a4

IF NOT FIND SF(*str*) "nptr1 1$(D) "nptr2 ': SSP "nptr3
1$2(D) "nptr4 ': SSP "nptr5 1$2(D) "nptr6 THEN RETURN(FALSE)
;                                                                   2g6b

% seconds %                                                         2g6c

  *numstr* _ nptr5 nptr6 ;                                          2g6c1

  nfloat($numstr, $num, $num+1) ;                                   2g6c2

  qcdivw ($num, $sixty, $num) ;                                     2g6c3

% minutes %                                                         2g6d

  *numstr* _ nptr3 nptr4 ;                                          2g6d1

  nfloat($numstr, $tnum, $tnum+1) ;                                 2g6d2

  qcadd ($num, $tnum) ;                                             2g6d3

  qcdivw ($num, $sixty, $num) ;                                     2g6d4

% hours %                                                           2g6e

  *numstr* _ nptr1 nptr2 ;                                          2g6e1

  nfloat($numstr, $tnum, $tnum+1) ;                                 2g6e2

  qcadd ($num, $tnum) ;                                             2g6e3

% add to accum %                                                    2g6f

  qcadd (&accum, $num) ;                                            2g6f1

% replace number %                                                  2g6g

  qfloutp ($num, $numstr, 0) ;                                      2g6g1

  FIND SF(*numstr*) $NP "nptr1 SE(*numstr*) "nptr2 > ;              2g6g2

  *str* _ nptr1 nptr2 ;                                             2g6g3
```

```
        RETURN(TRUE) ;                                          2g6h

        END.                                                    2g6i

        (strlen) PROCEDURE (astr, length, just); %sets string whose
        address is passed to length passed by truncating and adding
        spaces, optionally left (1) or right (2) justified%        2g7

        LOCAL TEXT POINTER lptr ;                               2g7a

        REF astr ;                                              2g7b

        length _ MIN (length, astr.M) ;                         2g7c

        IF astr.L > length THEN                                 2g7d

          BEGIN                                                 2g7d1

          astr.L _ length + 1 ;                                 2g7d2

          FIND SE(*astr*) [NP] $NP ~lptr > ;                    2g7d3

          astr.L _ lptr[1] - 1 ;                                2g7d4

          END;                                                  2g7d5

        FOR lptr _ astr.L + 1 Up UNTIL > length DO              2g7e

          CASE just OF                                          2g7e1

            =1: *astr*[lptr] _ SP;                              2g7e1a

            =2: *astr* _ SP, *astr* ;                           2g7e1b

            ENDCASE EXIT LOOP ;                                 2g7e1c

        RETURN;                                                 2g7f

        END.                                                    2g7g

    FINISH                                                      2h
```

USESTATS User statistics subsystem: FY75 account numbers

(J25389) 13-FEB-75 16:54;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /JCN([INFO-ONLY]) RA3Y([INFO-ONLY]) JCP([
INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: NDM; Origin: <
MEYER, USESTATS.NLS;31, >, 13-FEB-75 16:53 NDM ;;;; ####;

Add TFL to NSW group

please add Tom Lawrence (TFL) to the NSW group ident.   1

Add TFL to NSW group

(J25390)   14-FEB-75 08:20;;;;   Title: Author(s): Jonathan B.
Postel/JBP; Distribution: /MLK([ACTION]) JAKE([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: JBP;

'Letter to XXX Tyler at YYY.'

DvNTyLER can bow be read as a journal item under the above title.   1

'Letter to XXX Tyler at YYY.'

(J25391)   14-FEB-75 08:23;;;;   Title: Author(s): JOAN HAMILTON/JOAN;
Distribution: /DPCS([ACTION]) ; Sub-Collections: SRI-ARC DPCS;
Clerk: JOAN;

DVNTYLER

DVNTYLER can now be read as a journal item under the above title.   1

DVNTYLER

(J25392)   14-FEB-75 08:28;;;;   Title: Author(s): JOAN HAMILTON/JOAN;
Distribution: /JOAN([ACTION]) ; sub-collections: SRI-ARC; Clerk:
JOAN;

missing mouse

I have mouse serial 07. Nice little fellow,   1

missing mouse

(J25393)   14-FEB-75 09:28;;;;   Title: Author(s): Don I. Andrews/DIA;
Distribution: /SLJ([ACTION]) ; Sub-Collections: SRI-ARC; Clerk:
DIA;

e Alert! New <SUBSYS>L10 with bug fix

   The previous L10 is now <SUBSYS>L10.OLD;30 and the current L10 is
<SUBSYSL10.SAv;31 -- It has a correction for the bug Dave Hopper
found. Any problems should show up as register screwups in code that
computes complicated expressions, but it appears to be OK. If
problems, rename L10.SAV;31 to L10.UGH, reame L10.OLD;30 to .SAV and
notify DIA.   1

Be Alert! New <SUBSYS>L10 with bug fix

(J25394)   14-FEB-75 09:55;;;;   Title: Author(s): Don I, Andrews/DIA;
Distribution: /NPG([ACTION]) ; Sub-Collections: SRI-ARC NPG; Clerk:
DIA;

Third NSW Documentation Work Loading

Following the work proposal discussion <25305,> we met to discuss structure for the Help Data Bases for the different tools, Two things emerged: 1

    We propose a three-tier file structure: 1a

    Help for a specific tool
    If the search fails, it goes on to: 1a1

    An umbrella file for general NLS terms.
    If the search fails, it goes on to: 1a2

    A file on the NSW front end.   1a3

    In each file, links may cite the higher level file, but not the
    lower level file.   1a4

    Although we have not been paid to document the Works Manager,
    in order to document the tools, we need to be able to
    link/search for a certain minimum of Works Manager information,
    e. g. commands universal to NSW. We propose to have that
    information in the top-level, front end file.   1a5

In our discussion, we found that the boundaries between tools were
not clear enough for us to plan file structure meaningfully. The
outline in <25305,> turned out to be a fantasy. Extended
conversations with Elizabeth and others allowed us to make the
outline below. In some case, something we describe as a tool may
be later integrated into the NLS Editor. It is easier to
integrate a separate tool file into a longer fle than the other
way around. More scheduling information will appear next week,   1b

NSW DOCUMENTATION   2

    Below is a list of the proposed documentation for NSW. Each tool
    will have a help data base that is written according to the
    description in <documentation,helpd.> For certain tools, we will
    write discursive introductions (Disc) no more than six pages which
    will include a general description of the tool and the reason for
    its existence. In addition, some tools will have Tutorial
    Scenarios (Scentorials, Tutarios) which will be task oriented
    documents that help the user get something done but do not
    necessarily teach everyting he never always wanted to know but
    didn't know how to ask about the tool. With the exception of
    Graphics, these will be written for the TNLS user with future
    hopes of making the necessary changes for the DNLS user.
    We recognize that some of these tools may merge.   2a

    DCPS   2a1

secretarial functions. This document will reach accross
several tools and include those elements that seem appropriate
for the tasks assigned to the user.   3b1

Kirk, a tutorial for secretarial tasks that will include
inserting and modifying text, various means of printing text so
it can be viewed, reading and sending mail,   3b2

Sequential I/O   3c

Pooh, a tutorial on how to use Sequential I/O,   3c1

We recognize that it is important to co-ordinate tutorials with
similar work going on in Applications,   4

Third NSW Documentation work Loading

(J25395) 14-FEB-75 11:53;;;;   Title: Author(s): Dirk H. Van Nouhuys,
Kirk E. Kelley, Ann Weinberg/DVN KIRK POOH; Distribution: /DIRT([
INFO-ONLY]) ; Sub-Collections: SRI-ARC DIRT; Clerk: POOH;
Origin: < WEINBERG, NSWTOOLS,NLS;6, >, 14-FEB-75 11:46 POOH ;;;;####;

Links in Locator to Output Processor's User's Guide in Locator Don't

This is the Output Processor Branch in Locator. The files named in the link are not online. Instead a single file <userguides,op-guide,> contains the information.

(J25396) 14-FEB-75 13:54;;;;   Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /FEED([ACTION]) DPCS([INFO-ONLY]) ;
Sub-Collections: SRI-ARC DPCS; Clerk: DVN;

Results of the Most Useless Command Contest

KIRK 11-FEB-75 21:53   25364
More than most useless command
Message: Execute Sendmail Message TYPEIN OK:
(your message is deleted next time you try to go to sendmail)
*****Note: Author Copy*****

1

   Comment: A good try, but useless only to experienced users.   1a

10-FEB-75 1055-PST DCROCKER at USC-ISIA: Most Useless Command
Contest
   Distribution: DVN AT ARC, POOH AT ARC
   Received at: 10-FEB-75 11:09:19   2

   (with assisstance from Cxxx Kxxx -- who probably would prefer to
   remain anonymous):
   1. Delete Roots
   2. Delete Journal System
   3. Output Device Cardreader
   4. (a strong vote for "Show Herald" which almost sounds
   plausible.)
   5. Prune Branch
   6. (and of course) Multi Plex
   7. Forget Origin   2a

   .... It just occurred to us that the commands you are looking for
   may actually exist now, in which case we can't contribute, since
   we do not have any experience witht the new system. If, however,
   you are looking for NEW useless command, we hope you find some of
   the above useful(?).   2b

      Comment: creative, but no useless imaginary comand can be as
      useless as a useless real command.   2b1

10-FEB-75 0951-PST LEHTMAN: contest
   Distribution: VANNOUHUYS, WEINBERG
   Received at: 10-FEB-75 09:51:22   3

   Herewith, my entry. NLS on any day we're down a memory box
   ranks as the most useless command. Syntax: "NLS" OK.   3a

      Comment: Entry shows deep feeling, but brazen attemps to bribe
      and coerce judges disqualified contestant.   3a1

   HGL   3b

DLS 11-FEB-75 13:58   31851
Most Useless Command Contest
Message: With lost characters, 10 minute echo lags, and 5 suspended

connections per hour; my candidate for most useless command is: @ 1
43...In 3 weeks y'all will 'preciate this more.
*****Note: [ACTION] *****

4

Comments: Ref (25313,)...There was no specific exclusion of
commands outside NLS. The 'system' from our view point has to
include the network, an unfortunate circumstance the past few
weeks!!

4a

Comment: At Jeff Peters' suggestions we disqualified this entry
on the grounds it is not a command at all but a prayer, and we
choose not to mix religion with technology.

4a1

DIA 11-FEB-75 10:10 25361
DIA's contest entry (worthless commnd)
Message: Execute (command in) Current Subsystem
*****Note: [ACTION] *****

5

Comments: The winner! Early in the bicentenial year Don will
recieve his prize, an autographed copy of the NLS-8 Glossary.

5a

Results of the Most Useless Command Contest

(J25397) 14-FEB-75 14:33;;;; Title: Author(s): Dirk H. Van Nouhuys,
Ann Weinberg/DVN POOH; Distribution: /DIA([ACTION]) SRI-ARC([
INFO-ONLY]) DLS([INFO-ONLY]) DHC([INFO-ONLY]) NJN([INFO-ONLY
]) LEG([INFO-ONLY]) PWO([INFO-ONLY]) MAP2([INFO-ONLY]) LPD(
[INFO-ONLY]) ECW([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk:
DVN;   Origin: < VANNOUHUYS, CONTEST.NLS;1, >, 14-FEB-75 14:29 DVN
;;;;####;

.Correction to 'Third NSW Documentation Work Loading' 2539

Reference: <HJOURNAL, 25395, 1a4>

.Correction to 'Third NSW Documentation Work Loading' 2539

Reference: <HJOURNAL, 25395, 1a4>

Correction to 'Third NSW Documentation Work Loading' 2539

We will link down to lower level files as well as higer level files.
If for some reason, you do not have access to a linked-to description
file, we write from the assumption you will be informed when the
works manager tries to load the lower level file with a message such
as "access has been denied to you" and your current view will not be
changed. If you have access to that file we assume you will be
placed in it and your subsequent searches will be made in relation to
that location.   1

-Correction to 'Third NSW Documentation Work Loading' 2539

(J25398)   14-FEB-75 14:41;;;;   Title: Author(s): Kirk E, Kelley/KIRK;
Distribution: /JOAN([ACTION] dirt) DIRT([INFO-ONLY]) ;
Sub-Collections: SRI-ARC DIRT; Clerk: KIRK;

Demonstration of Tymshare's Microtym System, 4 Feb 75

At 11:00 a.m. on 4 February, John Hoy (systems sales, Western Region)
and Neil Sullivan (Manager, Engineering Software) of Tymshare's Data
Services Division gave a demonstration of the Microtym System in
ARC's conference room.   1

   Attendees were: 1a

      Mike Placko -- SRI Architect   1a1

      Steve Port -- Technology Applications Department (Phil Whalen)   1a2

      Joe Ehardt -- ARC   1a3

      Doug Engelbart -- ARC   1a4

      Jake Feinler -- ARC   1a5

      Pat Whiting-O'Keefe -- Information Science Lab (EPC Proposal)   1a6

As demonstrated, the system consists of a microfilm display terminal
which communicates with an XDS 940 at Tymshare; the computer controls
the reeling of the microfilm. The demonstrators also brought a
standard CRT terminal which is not normally part of the unit, but
which was used to display to a group of people the interactive
routines usually seen on a small strip of paper underneath the screen
of the microfilm terminal.   2

The microfilm terminal displayed page images and "blips" --
Tymshare's term for the signals that the computer interprets in order
to locate pages in the film. The computer holds an online index to
the film, and an associated indexing query program which has Boolean
operations for searching.   3

A more complete description of the system can be seen in Tymshare's
brochure (XDOC -- 25233,).   4

So far most of the applications of the system have been limited to
searching for numbers (social security, account, etc.), but it seems
that the user has a wide range of types of identifiers he can choose
to be indexed. Jake Feinler sees its indexing capabilities as being
fairly standard, with the system's most promising feature its ability
to store a great deal of information.   5

The microfilm terminal is bought as a kit and assembled by Tymshare
itself. The cost to the customer of the microfilm display is 15K,
and can be accompanied by a printer for 10K, bringing the total cost
of an installation up to 25K. The printer is a Xerox-like unit.   6

Typical customer applications of the system are described in (XDOC --
25234,) and (XDOC -- 25235,).   7

Although one customer plans to have four terminals, it is more
typical for each customer to have a single installation, with
information stored in one place; since the cost per installation is
so high, the system is not well suited to document dissemination
purposes.   8

After the demonstration, Doug, Jake and Dirk went to lunch with Mr.
Sullivan. The conversation centered on the way Tymshare has evolved
into a dynamic marketplace for customers' services to each other,
rather than just a vendor of Tymshare's own services.   9

Information for this journal item was gathered by talking to DVN and
EJF.   10

Demonstration of Tymshare's Microtym System, 4 Feb 75

(J25399) 14-FEB-75 14:58;;;; Title: Author(s): Jeanne M.
Leavitt/JML; Distribution: /SRI-ARC([INFO-ONLY]) MAP2([INFO-ONLY]
) SDP([INFO-ONLY]) PWO([INFO-ONLY]) ; Sub-Collections: SRI-ARC;
Clerk: JML;   Origin: < LEAVITT, DEMO.NLS;3, >, 13-FEB-75 12:02
JML ;;;;;####;

This morning I put on tape 0002 at ISI files as follows: 1

    SOURCE FILE(S):FORMAT1.;1
    3840 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMAT2?FORMAT0.;1
    3840 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMAT10.;1
    6912 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMAT11.;1
    3840 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMAT3.;1
    6144 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMAT4.;1
    8448 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMAT6.;1
    6144 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMAT7.;1
    4608 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMAT7.;1
    4608 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMAT9.;1
    6144 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMT2.;1
    3840 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FORMT5?FRMAT5.;1
    4608 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):FO\ORMAT8.;1
    6912 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):JAKEPROG.COM;3
    25344 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):JAKEPROG.COM;2;
    25344 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):JAKEPROG.COM;1;
    25344 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):JAKESITES.COM;1
    26112 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):JAKETABLES.COM;1
    24576 (DECIMAL) SIX-BIT BYTES.
    SOURCE FILE(S):   1a

The files having a name like "format" are the format library. The
files beginning with the name "Jake" are small samples of the Network
Resource Hnadbook for purposes of establishing format.   2

I put the files at ISI the evening before , when I reached the stage
of hitting CR after giving a file name in MTA copy, the system
returned to exec with the message "LOCATION = 400411". The night
operator, though he had been through our tape handling proceurde

before, could not help me. When I tried again this morning, after
delays because of ISI crashes, everything went fine.   3

(J25400) 14-FEB-75 15:29;;;;   Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /JOAN([ACTION] dpcs notebook please) JAKE(
[INFO-ONLY]) KIRK([INFO-ONLY]) NDM([INFO-ONLY]) ;
Sub-Collections: DPCS SRI-ARC; Clerk: DVN;