Suggested Changes to NLS

If there are no serious objections, these changes will be scheduled for implementation.

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The following is my understanding of the agreements made in the recent NLS command language meetings plus a few additional suggestions. Unless someone feels th need to discuss this further, the changes described here will be scheduled for implementation and will be accompanied by documentation changes. 1

The following changes will be made in the command language: 1a

The command language will be made to consist of 1a1

first level commands 1a1a

frequently used commands, which are recognized by their first letter 1a1a1

second level commands 1a1b

infrequently used, new, or experimental commands, which are "one shot" and which are either recognized when the user types enough characters (this will be the system default) or, as a user setable option, only upon user request. (Recognition is requested by typing a CA, ALTMODE, or SP (as in TENEX) -- This user setable option would be saved in the user's PROFILE (explained below)). Recognition within these second level commands should be via this same method. 1a1b1

This allows new commands to be added without worrying about first letter conflicts -- a significant problem currently. 1a1b1a

These commands can be repeated by making further bug selections. However, if a non-bug selection character is input it will be parsed at the top level. 1a1b1b

That is, the command can have subcommands, but one can not change from one subcommand to another without specifying the full command again. 1a1b1b1

subsystems. 1a1c

The subsystem name is recognized upon request or sufficient type in (as in second level commands). Once in the subsystem the same pattern should be applied (top level, second level, and subsystems). All subsystems should terminate with the "Quit"

command, as should NLS. All subsystems should have help commands. 1a1c1

The concept of Address Expression will be generalized for DNLS, TNLS, and DEX such that wherever a statement name or number is currently used, an appropriate ADDRESS EXPRESSION will be allowed. 1a2

For DNLS, a selection will be defined as 1a2a

SEL = (BUG / CDOT DAE CA) $(ALTMODE DAE CA); 1a2a1

note that this syntax allows one to make a selection and then modify it any number of times with a DAE (Dynamic Address Expression) which will use the current result as its starting point. 1a2a1a

If a CDOT DAE CA is used instead of a BUG, the starting point for that DAE will be 1a2a1a1

for the first selection of the command, 1a2a1a1a

the first character of the statement which should appear at the top of the display area, 1a2a1a1a1

or for subsequent selections, 1a2a1a1b

the result of the previous selection. 1a2a1a1b1

If the command requires the identification of a display area, this will be based on the position of the cursor when the CA is typed. 1a2a1a1c

Note also that the statement name/number field of a link will contain a DAE (see definition of a link below). 1a2a1b

The Jump command will be defined to expect either a SEL or a SP DAE CA $(ALTMODE DAE CA). 1a2a1c

Note that the use of markers in DNLS by holding the rightmost mouse button down and typing the marker name will no longer be possible. Instead, one will be able to type CDOT (will be available on the mouse) and an arbitrary DAE followed by a CA. 1a2a1d

In TNLS a selection will be defined as 1a2b

SEL = DAE CA $(ALTMODE DAE CA); 1a2b1

This allows one to modify a selection if it was incorrect. 1a2b1a

The starting point for the first selection of a command will be the CM (CSP). The starting point of subsequent selections will be the result of the previous selection. 1a2b1b

The CM (CSP) will not be modified until the successful completion of the command -- as is now the case. 1a2b1c

In DEX a selection is defined as 1a2c

SEL = STAE CA; 1a2c1

Where DAE (Dynamic Address Expression) is defined below, and STAE (STatic file Address Expression) is defined in the DEX-II design document. 1a2d

A Dynamic Address Expression should be consistent with existing links, the same DAE should work in TNLS and in DNLS, and the elements of the expression should be reasonably mneumonic. A DAE should be available in NLS wherever a statement number or statement name is now used (as in links, jumps, etc.). This DAE will be as follows: 1a2d1

Dynamic Address Expression elements 1a2d1a

location number 1a2d1a1

A statement number is D $(L / D). 1a2d1a1a

note: no alphabetic zero. 1a2d1a1a1

name 1a2d1a2

A statement name is as defined by the name delimiter routine -- currently defined to be L $(L/ D/ ''/ '-). 1a2d1a2a

Note that '' and '- are included in this definition of name so that attempts to terminate a name in a DAE with an element begining with '' or '- will not work properly. To get this sequence to work,

one will have to terminate the name with a SP or period. 1a2d1a2a1

(I suggest that at some point in time the definition of statement name could stand some improvement -- like make it L $(L/ D) and use upper-lower case letters (e.g. SriArc) and format routines to put in arbitrary special characters when printing or interacting with the user, as in the ident system, or make names be visibles.) 1a2d1a2a1a

A sequence of digits and letters preceeded immediately by a period can contain the following letters, with associated "Jump" meaning. NOTE: default value for <number> is 1. 1a2d1a3

[number]'s jump to successor <number> times 1a2d1a3a

[number]'p jump to predecessor <number> times 1a2d1a3b

[number]'u jump to up <number> times 1a2d1a3c

[number]'d jump to down <number> times 1a2d1a3d

[number]'a jump to ahead <number> times 1a2d1a3e

[number]'r jump to return <number> times 1a2d1a3f

[number]"fa" jump to file ahead <number> times 1a2d1a3g

[number]"fr" jump to file return <number> times 1a2d1a3h

[number]'o jump to origin 1a2d1a3i

[number]'e jump to end 1a2d1a3j

[number]'n jump to next <number> times 1a2d1a3k

[number]'b jump to back <number> times 1a2d1a3l

[number]'h jump to head 1a2d1a3m

[number]'t jump to tail 1a2d1a3n

[number]'l jump to the <number>th link 1a2d1a3o

[number]'w jump to next occurance of word <number> times 1a2d1a3p

[number]'c jump to next occurance of content <number> times 1a2d1a3q

a sequence of digits and letters preceeded immediately by a plus (skip forward) or minus (skip backward) can contain the following letters, with associated meaning. NOTE, default value of <number> is 1. 1a2d1a4

[number]'c skip <number> characters 1a2d1a4a

[number]'w skip <number> word 1a2d1a4b

[number]'v skip <number> visible 1a2d1a4c

[number]'i skip <number> invisible 1a2d1a4d

[number]'n skip <number> number(s) 1a2d1a4e

scans for a digit. 1a2d1a4e1

[number]'L skip <number> link(s) 1a2d1a4f

[number]'l skip <number> line(s) 1a2d1a4g

determined by current level and window size 1a2d1a4g1

'* name jumps to the next statement by that name 1a2d1a5

'(text ') link 1a2d1a6

text = Comment FileAddress ViewSpecs; 1a2d1a6a

See definition of link below. 1a2d1a6a1

'[text '] content search 1a2d1a7

text excludes '] unless preceeded by the literal escape character 1a2d1a7a

'< text '> word search 1a2d1a8

text excludes '> unless preceeded by the literal escape character 1a2d1a8a

'; text '; intra-statement content search 1a2d1a9

text excludes '; unless preceeded by the literal escape character 1a2d1a9a

'' character character search 1a2d1a10

← beginning of statement 1a2d1a11

> end of statement 1a2d1a12

'# text marker name, text = L $(L/D) 1a2d1a13

'] text Statement IDentifier (SID), text = 1$L 1a2d1a14

an SID is a system supplied identifier for each statement in a file. Each SID is unique within a file. The SID of a deleted statement will not be reused. SID may be displayed and printed just as statement numbers are. 1a2d1a14a

'/ print context 1a2d1a15

' print statement 1a2d1a16

'@ reference pointer 1a2d1a17

note that '/ and ' are part of a DAE. In DNLS this will be accomplished via a two line tty-simulation area above the Command Feedback Area which will also allow one to see broadcast messages and terminal-linking dialog. 1a2d2

The syntax of a link will be as follows: 1a2e

Link = 1a2e1

LeftDelim Comment FileAddress ViewSpecs RightDelim; 1a2e1a

LeftDelim = 1a2e1b

('(/ '<) $NP; 1a2e1b1

```
Comment =                                                    1a2e1c

   [CommentText CommentSep]                                  1a2e1c1

   CommentText =                                             1a2e1c2

      any text excluding LeftDelim, RightDelim,
      and CommentSep.                                        1a2e1c2a

   CommentSep =                                              1a2e1c3

      "--";                                                  1a2e1c3a

FileAddress =                                                1a2e1d

   $NP [DirName FieldSep FileName FieldSep DAE /             1a2e1d1

   DirName FieldSep FileName /                               1a2e1d2

   FileName] $NP;                                            1a2e1d3

   DirName =                                                 1a2e1d4

      valid directory name;                                  1a2e1d4a

   FileName =                                                1a2e1d5

      valid file name;                                       1a2e1d5a

   DAE =                                                     1a2e1d6

      Dynamic Address Expression;                            1a2e1d6a

   FieldSep =                                                1a2e1d7

      If there are no commas in the FileAddress
      then                                                   1a2e1d7a

         1$NP                                                1a2e1d7a1

      otherwise                                              1a2e1d7b

         $NP ', $NP;                                         1a2e1d7b1

ViewSpecs =                                                  1a2e1e

   [ViewSpecSep ViewSpecText];                               1a2e1e1

   ViewSpecSep =                                             1a2e1e2
```

```
        ': $NP;                                                 1a2e1e2a

      ViewSpecText =                                            1a2e1e3

        $(L / NP);                                              1a2e1e3a

    RightDelim =                                                1a2e1f

      $NP (') / '>);                                            1a2e1f1

the following interpretations will be applied to links:         1a2f

  (text text text :text) or (text, text, text :text)            1a2f1

    1: (dirname, flename, DAE : viewspecs)                      1a2f1a

    2: Scan from current RightDelim to end of
    statement for next RightDelim; try again if find
    one.                                                        1a2f1b

  (text text :text) or (text, text :text)                       1a2f2

    1: (dirname, flename : viewspecs)                           1a2f2a

    2: (flename, DAE : viewspecs)                               1a2f2b

    3: Scan from current RightDelim to end of
    statement for next RightDelim; try again if find
    one.                                                        1a2f2c

  (text :text)                                                  1a2f3

    1: (flename : viewspecs)                                    1a2f3a

    2: (DAE : viewspecs)                                        1a2f3b

    3: Scan from current RightDelim to end of
    statement for next RightDelim; try again if find
    one.                                                        1a2f3c

  (, text, text :text)                                          1a2f4

    1: (flename, DAE : viewspecs)                               1a2f4a

    2: Scan from current RightDelim to end of
    statement for next RightDelim; try again if find
    one.                                                        1a2f4b

  (text, text, :text)                                           1a2f5
```

1: (dirname, flename, : viewspecs) 1a2f5a

2: Scan from current RightDelim to end of statement for next RightDelim; try again if find one. 1a2f5b

(,, text :text) 1a2f6

1: (,, DAE : viewspecs) 1a2f6a

2: Scan from current RightDelim to end of statement for next RightDelim; try again if find one. 1a2f6b

(:text) 1a2f7

1: (: viewspecs) 1a2f7a

(text,, text :text) 1a2f8

1: Scan from current RightDelim to end of statement for next RightDelim; try again if find one. 1a2f8a

The replacement of the statement name/number field by a DAE provides a powerful extention to the link syntax and will be compatible with extant links. 1a2g

Also, 1$NP may be used instead of comma as a field delimiter in links provided the FileAddress does not contain any commas. 1a2h

Editing command changes 1a3

For editing commands, it will be possible to 1a3a

1) specify more than one operand type 1a3a1

This excludes insert and delete, of course. 1a3a1a

2) modify the verbs of editing commands through the use of the prepositions "ahead" or "onto", and the adjective "Filtered". 1a3a2

The preposition "Filtered" can be specified for all structure manipulation commands (excluding inserts, of course). 1a3a2a

This will cause the command to use the sequence

generator in performing the operation (i.e. the operation will be perform only on those statements which pass the filter, consisting of the viewspecs and user content analysis and/or sequence generator programs). 1a3a2a1

For a filtered delete (FDelete), whenever a statement is deleted its sub structure will be moved up one level in the structure. 1a3a2a1a

In addition, either of the prepositions "Ahead" or "Onto" can be specified for the insert, move, and copy commands. 1a3a2b

"onto" is essentially a replace (followed by a delete for move). 1a3a2b1

"ahead" means to insert the new text ahead of the selected location instead of following it. 1a3a2b2

3) use CDOT to terminate all editing commands. This will mean terminate the current command and begin an insert statement command, having selected the statement to which the CM (CSP) would have moved in TNLS. 1a3a3

4) specify a set of operands to a single command. 1a3a4

For example, one will be able to specify the move branch command, select the target and a set of branches to be moved (using TAB), followed by the final CA. 1a3a4a

This requires a new flavor of confirmation, TAB, which does not terminate the command but rather accumulates operand selections. 1a3a4a1

Also, the notion of operand-type defaulting in DNLS will be changed so that it is like Jump to Item. That is, for any given command, the default is always the same (statement -- or should it be branch? -- for all editing commands), and an extra CA to accept the default will not be required. 1a3b

The general form of NLS editing commands will be 1a3c

textual editing: 1a3c1

For DNLS 1a3c1a

DTECommand = 1a3c1a1

operation <operand-type-default> 1a3c1a1a

[('a <Ahead> / 'o <Onto>) 1a3c1a1a1

<operand-type-default>] 1a3c1a1a1a

[1st-textual-operand-type 1a3c1a1a2

[2nd-textual-operand-type]] 1a3c1a1a2a

operand-selections 1a3c1a1b

[LIT] 1a3c1a1b1

Confirmation; 1a3c1a1c

For TNLS 1a3c1b

TTECommand = 1a3c1b1

operation 1a3c1b1a

['a <Ahead> / 'o <Onto>] 1a3c1b1a1

1st-textual-operand-type 1a3c1b1b

[ALTMODE 2nd-textual-operand-type] 1a3c1b1b1

operand-selections 1a3c1b1c

[LIT] 1a3c1b1c1

Confirmation; 1a3c1b1d

Where the optional LIT following the operand selectiions is not allowed for delete, replace (if two operands were selected), and transpose. 1a3c1c

Note this allows one to type in an optional literal when moving or copying textual operands. The literal will be inserted between the old and new text, as in append statement. 1a3c1c1

If a space would normally have been inserted, the literal will be inserted instead. 1a3c1c1a

```
structural editing:                                              1a3c2
   For DNLS                                                      1a3c2a
      DSECommand =                                               1a3c2a1
         operation <default-operand-type>                        1a3c2a1a
            ['f <Filtered> <default-operand-type>]               1a3c2a1a1
            [('a <Ahead> / 'o <Onto>)                           1a3c2a1a2
               <default-operand-type>]                          1a3c2a1a2a
            [1st-structural-operand-type                        1a3c2a1a3
               [2nd-structural-operand-type]]                   1a3c2a1a3a
         operand-selections                                     1a3c2a1b
         LEVADJ [LIT]                                           1a3c2a1c
         Confirmation;                                          1a3c2a1d
   For TNLS                                                     1a3c2b
      TSECommand =                                              1a3c2b1
         operation                                              1a3c2b1a
            ['f <Filtered>]                                     1a3c2b1a1
            ['a <Ahead>/'o <Onto>]                              1a3c2b1a2
         1st-structural-operand-type                            1a3c2b1b
            [ALTMODE 2nd-structural-operand-type]               1a3c2b1b1
         operand-selections                                     1a3c2b1c
         LEVADJ [LIT]                                           1a3c2b1d
         Confirmation;                                          1a3c2b1e
   Where "filtered" is not available for Insert and
   LEVADJ is only valid for move, insert, and copy,
   and the literal following the LEVADJ is only valid
   for insert.                                                  1a3c2c
```

where 1a3c3

Confirmation = 1a3c3a

$(TAB operand-selection) (CA / CDOT); 1a3c3a1

"ahead" and "onto" are valid only for Move, Copy, and Insert. 1a3c3b

The 2nd-operand-type option is not available for the Insert and Delete commands, and no operand-type specification is allowed for Append and Break. 1a3c3c

Substitute changes 1a3d

An elipses capability will be made available in the substitute command. That is, text...text will be allowed for the specification of text to be replaced. This will result in instances of <text1 arbitrary text text2> being replaced in the substitute. 1a3d1

This is subject to the constraint that the <text1...text2> be in one statement, and that an occurance of text1 can only be paired with the first occurance of text2 following text1. 1a3d1a

If text1 is null then assume String Front (SF); if text2 is null then assume String End (SE). 1a3d1a1

Also, the "filtered" option will be available for substitute. 1a3d2

In TNLS, the substitute command will be changed so that it will accept either a literal or a SEL. 1a3d3

The form for the substitute command will be 1a3d4

DSubstCommand = 1a3d4a

's <Substitute>
<structural-operand-type-default> 1a3d4a1

[filtered] 1a3d4a1a

[1st-textual-operand-type
<structural-operand-type-default> 1a3d4a1b

```
            [2nd-textual-operand-type
            <structural-operand-type-default>]]     1a3d4a1b1

         [structural-operand-type]                  1a3d4a1c

      structural-operand-selection                  1a3d4a2

      1$((LIT CA / CDOT textual-operand-selection)  1a3d4a3

         (LIT CA / CDOT textual-operand-selection)) 1a3d4a3a

      Confirmation;                                 1a3d4a4

   TSubstCommand =                                  1a3d4b

      's <Substitute>                               1a3d4b1

         [filtered]                                 1a3d4b1a

         [1st-textual-operand-type                  1a3d4b1b

            [2nd-textual-operand-type]]             1a3d4b1b1

      structural-operand-type                       1a3d4b2

      structural-operand-selection                  1a3d4b3

      1$((LIT CA / CDOT textual-operand-selection)  1a3d4b4

         (LIT CA / CDOT textual-operand-selection)) 1a3d4b4a

      Confirmation;                                 1a3d4b5
```

In TNLS, the replace command will expect a literal as its second parameter unless the user types CDOT. 1a3e

The form for replace in TNLS will be 1a3e1

```
   TReplaceCommand =                                1a3e1a

      'r <Replace>                                  1a3e1a1

         [filtered]                                 1a3e1a1a

      1st-operand-type                              1a3e1a2

         [2nd-operand-type]                         1a3e1a2a

      1st-operand-selection                         1a3e1a3
```

(LIT / CDOT 2nd-operand-selection) 1a3e1a4

Confirmation; 1a3e1a5

The delete statement command will be made valid even if the statement being deleted has sub-structure. In this case the substructure will be moved up one level in the structure. 1a3f

Level adjust will be defined as 1a3g

```
LEVADJ = $('u/'d) [SP / CA];
```
1a3g1

instead of $([NUM] ('u/'d)) [SP / CA]. 1a3g1a

A new Force Case (XSET) mode, Initialcaps, will be added to force the first letter of each word to upper case and the rest to lower case. 1a3h

Textual Operand Types (TOT) are 1a3i

```
TOTNoSpace = character / invisible / text /
statement;
```
1a3i1

```
TOTIncludeSpace = word / visible / number / link;
```
1a3i2

```
TOTOneSel = character / word / visible / invisible /
number / link / statement;
```
1a3i3

```
TOTTwoSel = text;
```
1a3i4

Structural Operand Types (SOT) are 1a3j

```
SOT = statement / branch / plex / and group;
```
1a3j1

```
SOTOneSel = statement / branch / plex;
```
1a3j2

```
SOTTwoSel = group;
```
1a3j3

Help commands will be available for all of NLS. 1a4

A novice command will be added to NLS such that in DNLS a new display area will show the user what the system next expects from him. This will be done for TNLS also but will be echoed as part of the command feedback. 1a4a

such as 1a4a1

BC / SEL / LIT / CD 1a4a1a

or 1a4a2

Final CA / CDOT / TAB / CD 1a4a2a

or 1a4a3

Next Command / SEL 1a4a3a

or 1a4a4

1st operand type / SEL / CD 1a4a4a

or 1a4a5

2nd operand type / SEL / CD 1a4a5a

It might be nice in TNLS to automatically type out the statment where the CM (CSP) was positioned at the termination of all commands. 1a4b

In addition, it might be nice to get feedback when making selections. 1a4b1

Thus, I suggest a command which will cause a '/ to be appended to all DAE's which do not already end with a '/ and which will cause the statement where the CM was left to be printed, moving the CM to the beginnig of that statement. 1a4b2

Optionally, one could have a '/ done at the end of the edit instead of a ' . Also, the number of charaters which '/ types should be increased. 1a4b2a

I propose that this command be called Execute assistance, with subcommands like feedback and print statement at end of edit. 1a4b2b

This should be automatically invoked as a result of the Novice command. Also, one should be able to set the number of charcters to type in the '/ command. 1a4b2c

Terminal Specific 1a5

For the TI terminal, I suggest the following character definitions be made standard: 1a5a

CA: CR 1a5a1

C.: (verticle bar) 1a5a2

CD: ` (key to left of DEL) 1a5a3

BC: tilda 1a5a4

New mouse button functions 1a6

CDOT on mouse -- two right most buttons down and up. 1a6a

ALTMODE on mouse -- all buttons down and up. 1a6b

TAB on mouse -- left- and right-most buttons down and up. 1a6c

In addition to its normal meaning, TAB will also be used as a new form of command confirmation which indicates that the user wishes to continue making selections before actually executing the command. 1a6c1

This capability is described below. 1a6c1a

Also, in TNLS, TAB at the top command level will mean that the user wishes to continue making selections for the last command which he specified. 1a6c2

control shift on mouse -- all buttons down. 1a6d

Jump command changes 1a7

The Jump commands will be made to be like the rest -- no state of its own. 1a7a

Jump to Successor, Jump to Predecessor will require one to type 'J 'S 'J 'P just as Insert Character, Insert Word requires one to type 'I 'C 'I 'W. 1a7a1

Jump to Return (Ahead) will be like Jump File Return (Ahead) in that it will display the first 15 chars of the statement in the name area and allow the user to skip back (forward) through the ring. 1a7b

The sub commands of Jump to End will be deleted. 1a7c

The Jump File Return command will be removed since Jump to Link will be exactly equivalent. 1a7d

The Goto Display Area Control facility will be replaced by a Window command which will have "Half" commands which will

split a window into two halves (horizontally or vertically) as well as other facilities. 1a8

There will be a "Print-rest-of-file" command in TNLS. 1a9

Viewspec changes 1a10

The meaning of A,B viewspecs (indenting on,off) will be changed slightly as follows: indenting off will mean left justification if branch only or plex only viewspecs are in effect and will have no effect otherwise. 1a10a

New viewspecs will be defined for SID's. One pair will determine whether or not they are displayed/printed and another pair will determine whether they appear on the left or on the right. 1a10b

In general, we could conserve viewspec letters if we used double letters. For example, we could use "n" to mean numbers on and "nn" to mean numbers off. We could even go to triples for the i,j,k and g,h,l viewspecs. 1a10c

The character RUBOUT will be a no-op charcter. Control O will serve the same purpose. 1a11

This is because 1a11a

1) RUBOUT is often typed by accident, thus aborting the command and 1a11a1

2) RUBOUT is a very common noise character for phone lines. 1a11a2

The character Carriage Return (CR) will be useable as CA or CDOT. 1a12

This almost works now, but echos an extra CR LF. 1a12a

The user now has to use the character definition capability to set this up (set echo to null). When the PROFILE mechanism is working, the users character set definitions will be automatically retrieved when he enters NLS. 1a12b

A new file will be maintained for each user, called the user PROFILE. This file will be used for maintaining user specific data and state information. 1a13

The user's command language defaults and macros,

character definitions, display area positioning and configuration, jump and link rings, as well as his editing history list will be maintained in his PROFILE. 1a13a

This allows the user to maintain his jump and link rings over more than one session and allows him to see a description of the edits that he has made as well as the ability to undo those edits. 1a13a1

WHP is writing up a description of the PROFILE and how this will work. We will have some meetings to discuss what the PROFILE will be used for initially. 1a13a2

The IDENTFILE was suggested ealier for some of these functions. It seems very unwise to use a critical file like that for these purposes. Also, the data might get quite large for some users. 1a13a3

Proposed Command Language 1b

Definitions 1b1

TextSpec1 = 'c <... Character> / 'w <... Word> / 'v <... Visible> / 'i <... Invisible> / 'l <... Line> / 'L <... Link> / 'n <... Number>; 1b1a

TextSpec2 = 't <... Text>; 1b1b

StructureSpec1 = 's <... Statement> / 'b <... Branch> / 'p <... Plex>; 1b1c

StructureSpec2 = 'g <... Group>; 1b1d

Where <... x> denotes 1b1e

for DNLS 1b1e1

x replaces the current last word in the Command Feedback Line 1b1e1a

for TNLS 1b1e2

x is appended to the command echo. 1b1e2a

In the following, x and y are instances of either TOT's, SOT's, or literals. The specification of what types of operands they are is assumed to be inherent in the command specification. 1b1f

First level commands 1b2

? 1b2a

prints the names of all the commands available at the first level, with a comment about typing the first letter of any command followed by a '? to find out about that command. Also the user is advised to use the command Help to find out about definitions. 1b2a1

append statement 1b2b

Syntax: 'a <Append Statement> SEL SEL [LIT] Confirmation; 1b2b1

break statement 1b2c

Syntax for DNLS: 'b <Break Statement at Visible> 1b2c1

[TextSpec1] SEL [CDOT LEVADJ] [LIT] Confirmation; 1b2c1a

Syntax for TNLS: 'b <Break Statement at> 1b2c2

[TextSpec1] SEL [CDOT LEVADJ] [LIT] Confirmation; 1b2c2a

copy 1b2d

Syntax for DNLS: 'c <Copy Statement> 1b2d1

(['o <Copy onto Statement> / 'a <Copy ahead Statement>] 1b2d1a

(TextSpec1 1b2d1a1

(TextSpec2 SEL / [TextSpec1]) 1b2d1a1a

SEL SEL [LIT] / 1b2d1a1b

TextSpec2 1b2d1a2

(TextSpec1 / [TextSpec2] SEL) 1b2d1a2a

SEL SEL [LIT]) / 1b2d1a2b

['f <... Filtered Statement>] 1b2d1a3

(StructureSpec2 1b2d1a3a

(StructureSpec1 / [StructureSpec2] SEL) 1b2d1a3a1

```
                SEL SEL LEVADJ /                                    1b2d1a3a2
             StructureSpec1                                         1b2d1a3b
                (StructureSpec2 SEL / [StructureSpec1])             1b2d1a3b1
                SEL SEL LEVADJ) /                                   1b2d1a3b2
          SEL SEL LEVADJ)                                           1b2d1b
          Confirmation;                                             1b2d1c
       Syntax for TNLS: 'c <Copy>                                   1b2d2
          ['o <Copy onto> / 'a <Copy ahead>]                        1b2d2a
             (TextSpec1                                             1b2d2a1
                (TextSpec2 SEL / [TextSpec1])                       1b2d2a1a
                SEL SEL [LIT] /                                     1b2d2a1b
             TextSpec2                                              1b2d2a2
                (TextSpec1 / [TextSpec2] SEL)                       1b2d2a2a
                SEL SEL [LIT]) /                                    1b2d2a2b
             ['f <... Filtered>]                                    1b2d2a3
                (StructureSpec2                                     1b2d2a3a
                   (StructureSpec1 / [StructureSpec2] SEL)          1b2d2a3a1
                   SEL SEL LEVADJ /                                 1b2d2a3a2
                StructureSpec1                                      1b2d2a3b
                   (StructureSpec2 SEL / [StructureSpec1])          1b2d2a3b1
                   SEL SEL LEVADJ))                                 1b2d2a3b2
          Confirmation;                                             1b2d2b
       Semantics:                                                   1b2d3
          TextualCopy [onto/ahead] x y [LIT]                        1b2d3a
             If onto then                                           1b2d3a1
```

equivalent to TextualReplace x y 1b2d3a1a

Otherwise 1b2d3a2

equivalent to insert [ahead] x y with insertion semantics of y. 1b2d3a2a

If LIT NOT= Null then 1b2d3a2a1

If y = TOTIncludeSpace then 1b2d3a2a1a

LIT is used instead of SP in IncludeSpaceInsert 1b2d3a2a1a1

otherwise 1b2d3a2a1b

If ahead then 1b2d3a2a1b1

NoSpaceInsert of y LIT 1b2d3a2a1b1a

otherwise 1b2d3a2a1b2

NoSpaceInsert of LIT y. 1b2d3a2a1b2a

StructuralCopy [onto/ahead] [filtered] x y LEVADJ 1b2d3b

If onto then 1b2d3b1

equivalent to StructuralReplace [filtered] x y 1b2d3b1a

Otherwise 1b2d3b2

equivalent to StructuralInsert [ahead] x y' LEVADJ, where y' is that portion of y which passed the filter. 1b2d3b2a

Example: 1b2d4

copy character visible <select character> <select visible> ca 1b2d4a

the text of the selected visible, preceeded by a space, is inserted following the selected character. 1b2d4a1

delete 1b2e

Syntax for DNLS: 'd <Delete Statement> 1b2e1

```
    (TextSpec1 / TextSpec2 SEL) SEL /                          1b2e1a
    ([ 'f <Delete Filtered Statement>]                         1b2e1b
       ([StructureSpec1] / StructureSpec2 SEL)                 1b2e1b1
       SEL)                                                    1b2e1b2
    Confirmation;                                              1b2e1c
Syntax for TNLS: 'd <Delete>                                   1b2e2
    (TextSpec1 / TextSpec2 SEL) SEL /                          1b2e2a
    ([ 'f <Delete Filtered>]                                   1b2e2b
       (StructureSpec1 / StructureSpec2 SEL)                   1b2e2b1
       SEL)                                                    1b2e2b2
    Confirmation;                                              1b2e2c
Semantics:                                                     1b2e3
    TextualDelete x                                            1b2e3a
       If x = TOTIncludeSpace then                             1b2e3a1
          IncludeSpaceDelete x                                 1b2e3a1a
             If there is a space on the right,                 1b2e3a1a1
                delete x SP                                    1b2e3a1a1a
             otherwise                                         1b2e3a1a2
                If there is a space on the left,               1b2e3a1a2a
                   delete SP x.                                1b2e3a1a2a1
                otherwise                                      1b2e3a1a2b
                   NoSpaceDelete x.                            1b2e3a1a2b1
       Otherwise                                               1b2e3a2
          NoSpaceDelete x                                      1b2e3a2a
             Just the text of x is deleted.                    1b2e3a2a1
```

StructuralDelete [filtered] x 1b2e3b

The structure x is deleted from the file. 1b2e3b1

if filtered, then only those statements passing the filter will be deleted. 1b2e3b1a

Whenever a statement is deleted its sub-structure is moved up one level in the structure. 1b2e3b1a1

execute (second level command) 1b2f

format 1b2g

syntax: 'f <format for> 1b2g1

('q <Quickprint> / 1b2g1a

's <Sequential File> / 1b2g1b

'd <Device Printer> (etc.)) 1b2g1c

FILENAME Confirmation; 1b2g1d

goto subsystem 1b2h

help 1b2i

prints out instructions for new or confused users including definitions of terms used in syntax rules for commands. 1b2i1

insert 1b2j

Syntax for DNLS: 'i <Insert Statement> 1b2j1

((TextSpec1 / TextSpec2) SEL / 1b2j1a

(StructureSpec2 / [StructureSpec1]) SEL [CDOT LEVADJ]) 1b2j1b

LIT 1b2j1c

Confirmation; 1b2j1d

Syntax for TNLS: 'i <Insert> 1b2j2

((TextSpec1 / TextSpec2) SEL / 1b2j2a

(StructureSpec2 / [StructureSpec1]) SEL [CDOT LEVADJ]) 1b2j2b

LIT 1b2j2c

Confirmation; 1b2j2d

Semantics: 1b2j3

TextualInsert [ahead/onto] x y 1b2j3a

If onto then 1b2j3a1

equivalent to TextualReplace x y 1b2j3a1a

otherwise 1b2j3a2

insert semantics of x 1b2j3a2a

if x = TOTIncludeSpace then 1b2j3a2a1

IncludeSpaceInsert of y 1b2j3a2a1a

If y is being inserted ahead of x then 1b2j3a2a1a1

insert y SP before the first character of x, 1b2j3a2a1a1a

otherwise, 1b2j3a2a1a2

insert SP y after the last character of x. 1b2j3a2a1a2a

otherwise 1b2j3a2a2

NoSpaceInsert of y. 1b2j3a2a2a

If y is being inserted ahead of x then 1b2j3a2a2a1

insert y before the first character of x 1b2j3a2a2a1a

otherwise 1b2j3a2a2a2

insert y after the last character of x. 1b2j3a2a2a2a

StructuralInsert [ahead/onto] x y LEVADJ 1b2j3b

If onto then 1b2j3b1

equivalent to StructuralReplace x y 1b2j3b1a

otherwise 1b2j3b2

insert y as a new statement 1b2j3b2a

If "ahead" then the level adjust semantics will behave as though the user had selected the predecessor of the selected statement, even if there is no such predecessor statement. 1b2j3b2a1

Example: 1b2j4

insert ahaed word <select word> <enter lit> ca 1b2j4a

the literal followed by a space is inserted before the first character of the word. 1b2j4a1

jump (DNLS and TNLS) 1b2k

Syntax for DNLS: 'j <Jump to Item> 1b2k1

('i <... Item> / 1b2k1a

's <... Successor> / 1b2k1b

'p <... Predecessor> / 1b2k1c

'u <... Up> / 1b2k1d

'd <... Down> / 1b2k1e

'h <... Head> / 1b2k1f

't <... Tail> / 1b2k1g

'e <... End of Branch> / 1b2k1h

'o <... Origin> / 1b2k1i

'l <... Link>) (SEL / SP DAE CA $(ALTMODE DAE CA)) VEIWSPECS / 1b2k1j

'r <... Return> 1b2k1k

```
      %text from next statement% $(NOT Confirmation
      %text from statement%) /                          1b2k1k1

   'a <... Ahead>                                       1b2k1l

      %text from next statement% $(NOT Confirmation
      %text from statement%) /                          1b2k1l1

   'f <... File Return>                                 1b2k1m

      ['a <... Ahead> /                                 1b2k1m1

      'r <... Return>]                                  1b2k1m2

      %file name% $(NOT Confirmation %next file
      name%) /                                          1b2k1m3

   'n <... Name>                                        1b2k1n

      ['f <... Name First> /                            1b2k1n1

      'n <... Name Next>]                               1b2k1n2

      (SEL / LIT CA) VIEWSPECS /                        1b2k1n3

   'c <... Content First>                               1b2k1o

      ['f <... First> /                                 1b2k1o1

      'n <... Next>]                                    1b2k1o2

      (SEL SEL / ALTMODE <Accept old content> / LIT
      CA) VIEWSPECS/                                    1b2k1o3

   'w <... Word First>                                  1b2k1p

      ['f <... First> /                                 1b2k1p1

      'n <... Next>]                                    1b2k1p2

      (SEL / ALTMODE <Accept old content> / LIT CA)
      VIEWSPECS)                                        1b2k1p3

   Confirmation;                                        1b2k1q

Syntax for TNLS: 'j <Jump to>                           1b2k2

   ('i <... Item> /                                     1b2k2a
```

```
's <... Successor> /                                    1b2k2b

'p <... Predecessor> /                                  1b2k2c

'u <... Up> /                                           1b2k2d

'd <... Down> /                                         1b2k2e

'h <... Head> /                                         1b2k2f

't <... Tail> /                                         1b2k2g

'e <... End of Branch> /                                1b2k2h

'o <... Origin> /                                       1b2k2i

'l <... Link> ) SEL VEIWSPECS /                         1b2k2j

'r <... Return>                                         1b2k2k

   %text from next statement% $( NOT-Confirmation
   %text from statement%) /                             1b2k2k1

'a <... Ahead>                                          1b2k2l

   %text from next statement% $( NOT-Confirmation
   %text from statement%) /                             1b2k2l1

'f <... File>                                           1b2k2m

   ('a <... Ahead> /                                    1b2k2m1

   'r <... Return>)                                     1b2k2m2

   %file name% $( NOT-Confirmation %next file
   name%) /                                             1b2k2m3

'n <... Name>                                           1b2k2n

   ('f <... First> /                                    1b2k2n1

   'n <... Next>)                                       1b2k2n2

   (SEL / LIT CA) VIEWSPECS /                           1b2k2n3

'c <... Content>                                        1b2k2o

   ('f <... First> /                                    1b2k2o1
```

```
            'n <... Next>)                                          1b2k2o2

            (SEL SEL / ALTMODE <Accept old content> / LIT
            CA) VIEWSPECS/                                          1b2k2o3

         'w <... Word>                                              1b2k2p

            ('f <... First> /                                       1b2k2p1

            'n <... Next>)                                          1b2k2p2

            (SEL / ALTMODE <Accept old content> / LIT CA)
            VIEWSPECS)                                              1b2k2p3

         Confirmation;                                              1b2k2q

      k (unused)                                                    1b2l

      l (unused)                                                    1b2m

      move                                                          1b2n

         Syntax for DNLS: 'm <Move Statement>                       1b2n1

            ([ 'o <Move onto Statement> / 'a <Move ahead
            Statement>]                                             1b2n1a

               (TextSpec1                                           1b2n1a1

                  (TextSpec2 SEL / [TextSpec1])                     1b2n1a1a

                  SEL SEL [LIT] /                                   1b2n1a1b

               TextSpec2                                            1b2n1a2

                  (TextSpec1 / [TextSpec2] SEL)                     1b2n1a2a

                  SEL SEL [LIT]) /                                  1b2n1a2b

               ['f <... Filtered Statement>]                        1b2n1a3

                  (StructureSpec2                                   1b2n1a3a

                     (StructureSpec1 / [StructureSpec2] SEL)
                                                                    1b2n1a3a1
                     SEL SEL LEVADJ /                               1b2n1a3a2

                  StructureSpec1                                    1b2n1a3b
```

```
            (StructureSpec2 SEL / [StructureSpec1])
                                                        1b2n1a3b1
            SEL SEL LEVADJ) /                           1b2n1a3b2
      SEL SEL LEVADJ)                                   1b2n1b
      Confirmation;                                     1b2n1c
   Syntax for TNLS: 'c <Move>                           1b2n2
      ['o <Move onto> / 'a <Move ahead>]                1b2n2a
         (TextSpec1                                     1b2n2a1
            (TextSpec2 SEL / [TextSpec1])               1b2n2a1a
            SEL SEL [LIT] /                             1b2n2a1b
         TextSpec2                                      1b2n2a2
            (TextSpec1 / [TextSpec2] SEL)               1b2n2a2a
            SEL SEL [LIT]) /                            1b2n2a2b
         ['f <... Filtered>]                            1b2n2a3
            (StructureSpec2                             1b2n2a3a
               (StructureSpec1 / [StructureSpec2] SEL)
                                                        1b2n2a3a1
               SEL SEL LEVADJ /                         1b2n2a3a2
            StructureSpec1                              1b2n2a3b
               (StructureSpec2 SEL / [StructureSpec1])
                                                        1b2n2a3b1
               SEL SEL LEVADJ))                         1b2n2a3b2
      Confirmation;                                     1b2n2b
   Semantics:                                           1b2n3
      TextualMove [onto/ahead] x y  [LIT]               1b2n3a
         TextualCopy [ahead/onto] x y [LIT]             1b2n3a1
         TextualDelete y                                1b2n3a2
      StructuralMove [onto/ahead] [filtered] x y LEVADJ 1b2n3b
```

StructuralCopy [ahead/onto] [filtered] x y 1b2n3b1

StructuralDelete y 1b2n3b2

NOTE: not filtered 1b2n3b2a

Example: 1b2n4

move onto character word <select character> <select word> ca 1b2n4a

the selected character is replaced by the text of the selected word and the selected word is deleted as in a normal delete word. 1b2n4a1

new file 1b2o

Syntax: 'n <New File> FILENAME Confirmation; 1b2o1

Creates a new (empty) file. 1b2o1a

FILENAME = SEL / LIT; 1b2o2

open file 1b2p

Syntax: 'o <Open File> FILENAME [CDOT VIEWSPECS] Confirmation; 1b2p1

same as old load file. 1b2p1a

p (unused in DNLS) print (TNLS) 1b2q

Syntax for TNLS print: 1b2q1

'p <Print> 1b2q1a

[StructureSpec1 / StructureSpec2 SEL] 1b2q1a1

SEL 1b2q1b

[CDOT VIEWSPECS] 1b2q1b1

Confirmation; 1b2q1c

if no structure is specified, printing will continue until terminated by control o or until the end of the file is reached. 1b2q1c1

quit 1b2r

```
replace                                                          1b2s
   Syntax for DNLS: 'r <Replace Statement>                       1b2s1
      (TextSpec1                                                 1b2s1a
         (TextSpec2 SEL (SEL SEL / LIT) /                        1b2s1a1
         [TextSpec1] SEL (SEL / LIT)) /                          1b2s1a2
      TextSpec2                                                  1b2s1b
         (TextSpec1 SEL SEL (SEL / LIT) /                        1b2s1b1
         [TextSpec2] SEL SEL (SEL SEL / LIT)) /                  1b2s1b2
      ['f <... Filtered Statement>]                              1b2s1c
         (StructureSpec2                                         1b2s1c1
            (StructureSpec1  SEL SEL (SEL / LIT) /               1b2s1c1a
            [StructureSpec2] SEL SEL (SEL SEL / LIT)) /
                                                                 1b2s1c1b
         StructureSpec1                                          1b2s1c2
            (StructureSpec2 SEL (SEL SEL / LIT) /                1b2s1c2a
            [StructureSpec1] SEL (SEL / LIT))) /                 1b2s1c2b
      SEL (SEL / LIT))                                           1b2s1d
      Confirmation;                                              1b2s1e
   Syntax for TNLS: 'r <Replace>                                 1b2s2
      (TextSpec1                                                 1b2s2a
         (TextSpec2 SEL (LIT / CDOT SEL SEL) /                   1b2s2a1
         [TextSpec1] SEL (LIT / CDOT SEL)) /                     1b2s2a2
      TextSpec2                                                  1b2s2b
         (TextSpec1 SEL SEL (LIT / CDOT SEL) /                   1b2s2b1
         [TextSpec2] SEL SEL (LIT / CDOT SEL SEL)) /             1b2s2b2
      ['f <... Filtered>]                                        1b2s2c
```

(StructureSpec2 1b2s2c1

(StructureSpec1 SEL SEL (LIT / CDOT SEL) / 1b2s2c1a

[StructureSpec2] SEL SEL (LIT / CDOT SEL SEL)) / 1b2s2c1b

StructureSpec1 1b2s2c2

(StructureSpec2 SEL (LIT / CDOT SEL SEL) / 1b2s2c2a

[StructureSpec1] SEL (LIT / CDOT SEL)))) 1b2s2c2b

Confirmation; 1b2s2d

Semantics: 1b2s3

TextualReplace x y 1b2s3a

equivalent to 1b2s3a1

NoSpaceInsert x y 1b2s3a1a

NoSpaceDelete x 1b2s3a1b

StructuralReplace [filtered] x y 1b2s3b

StructuralInsert x y', where y' is that portion of y which passed the filter 1b2s3b1

StructuralDelete x x 1b2s3b2

Example: 1b2s4

replace word text <select word> <select text> ca 1b2s4a

the text of the selected word is replaced by the selected text. 1b2s4a1

substitute 1b2t

Syntax for DNLS: 's <Substitute Statement> 1b2t1

[TextSpec1 <... in Statement>] 1b2t1a

([StructureSpec1] SEL CA / StructureSpec2 SEL SEL CA) 1b2t1a1

<TOTOneSel> (SEL / LIT) CA <for TOTOneSel>

```
            (SEL / LIT) CA $( NOT-Confirmation
            <TOTOneSel> (SEL / LIT) CA <for TOTOneSel>
            (SEL / LIT) CA) /                                  1b2t1a1a

         [TextSpec2 <... in Statement>]                        1b2t1b

            ([StructureSpec1] SEL CA / StructureSpec2 SEL
            SEL CA)                                            1b2t1b1

               <TOTTwoSel> (SEL / LIT) CA <for TOTTwoSel>
               (SEL / LIT) CA $( NOT-Confirmation
               <TOTTwoSel> (SEL / LIT) CA <for TOTTwoSel>
               (SEL / LIT) CA)                                 1b2t1b1a

         Confirmation                                          1b2t1c

         <Substitute in Progress>                              1b2t1d

         <Subs = NUMBER, Type CA>;                             1b2t1e

      Syntax for TNLS: 's <Substitute>                         1b2t2

         [TextSpec1 <... in>]                                  1b2t2a

            ([StructureSpec1] SEL CA / StructureSpec2 SEL
            SEL CA)                                            1b2t2a1

               <TOTOneSel> (LIT / CDOT SEL) CA <for
               TOTOneSel> (LIT / CDOT SEL) CA $(
               NOT-Confirmation <TOTOneSel> (LIT / CDOT
               SEL) CA <for TOTOneSel> (LIT / CDOT SEL) CA)
               /                                               1b2t2a1a

         [TextSpec2 <... in>]                                  1b2t2b

            ([StructureSpec1] SEL CA / StructureSpec2 SEL
            SEL CA)                                            1b2t2b1

               <TOTTwoSel> (LIT / CDOT SEL SEL) CA <for
               TOTTwoSel> (LIT / CDOT SEL SEL) CA $(
               NOT-Confirmation <TOTTwoSel> (LIT / CDOT SEL
               SEL) CA <for TOTTwoSel> (LIT / CDOT SEL SEL)
               CA)                                             1b2t2b1a

         Confirmation                                          1b2t2c

         <Substitute in Progress>                              1b2t2d

         <Subs = NUMBER, Type CA>;                             1b2t2e
```

```
transpose                                                          1b2u
   Syntax for DNLS: 't <Transpose Statement>                       1b2u1
      (TextSpec1                                                   1b2u1a
         (TextSpec2 SEL SEL SEL /                                  1b2u1a1
         [TextSpec1] SEL SEL) /                                    1b2u1a2
      TextSpec2                                                    1b2u1b
         (TextSpec1 SEL SEL SEL /                                  1b2u1b1
         [TextSpec2] SEL SEL SEL SEL) /                            1b2u1b2
      ['f <... Filtered Statement>]                                1b2u1c
         (StructureSpec2                                           1b2u1c1
            (StructureSpec1  SEL SEL SEL /                         1b2u1c1a
            [StructureSpec2] SEL SEL SEL SEL) /                    1b2u1c1b
         StructureSpec1                                            1b2u1c2
            (StructureSpec2 SEL SEL SEL /                          1b2u1c2a
            [StructureSpec1] SEL SEL)) /                           1b2u1c2b
      SEL SEL)                                                     1b2u1d
      Confirmation;                                                1b2u1e
   Syntax for TNLS: 't <Transpose>                                 1b2u2
      (TextSpec1                                                   1b2u2a
         (TextSpec2 SEL SEL SEL /                                  1b2u2a1
         [TextSpec1] SEL SEL) /                                    1b2u2a2
      TextSpec2                                                    1b2u2b
         (TextSpec1 SEL SEL SEL /                                  1b2u2b1
         [TextSpec2] SEL SEL SEL SEL) /                            1b2u2b2
      ['f <... Filtered>]                                          1b2u2c
```

```
            (StructureSpec2                                          1b2u2c1
               (StructureSpec1  SEL SEL SEL /                        1b2u2c1a
               [StructureSpec2] SEL SEL SEL SEL) /                   1b2u2c1b
            StructureSpec1                                           1b2u2c2
               (StructureSpec2 SEL SEL SEL /                         1b2u2c2a
               [StructureSpec1] SEL SEL)) )                          1b2u2c2b
         Confirmation;                                               1b2u2d
      Semantics:                                                     1b2u3
         TextualTranspose x y                                        1b2u3a
            TextualCopy x y                                          1b2u3a1
            TextualCopy y x                                          1b2u3a2
            TextualDelete x                                          1b2u3a3
            TextualDelete y                                          1b2u3a4
         StructuralTranspose [filtered] x y LEVADJ                   1b2u3b
            StructuralCopy [filtered] x y                            1b2u3b1
            StructuralCopy [filtered] y x                            1b2u3b2
            StructuralDelete x                                       1b2u3b3
               NOTE: not filtered                                    1b2u3b3a
            StructuralDelete y                                       1b2u3b4
               NOTE: not filtered                                    1b2u3b4a
   update file                                                       1b2v
      Syntax: 'u <Update File> %default file name%                   1b2v1
         [ALTMODE 'r <Reordered>] [FILENAME] Confirmation;           1b2v1a
            reordered is the old output file.                        1b2v1a1
   viewspecs                                                         1b2w
```

Syntax: 'v <Viewspecs> VIEWSPECS Confirmation; 1b2w1

The 'f viewspec will also work. 1b2w1a

window (DNLS) 1b2x

h-split, v-split, move boundry, h-half, v-half, expand, contract, expand and delete other windows, character size. 1b2x1

x (unused) 1b2y

y (unused) 1b2z

z (unused) 1b2a*

'. (TNLS) show CM (CSP) 1b2aa

'; Comment 1b2ab

'/ (TNLS) type context of CM (CSP) 1b2ac

' (TNLS) print statement 1b2ad

linefeed (TNLS) print next statement 1b2ae

'↑ (TNLS) print back statement 1b2af

SP move Current Statement Pointer (same as Jump SP) 1b2ag

'@ sets reference pointer to CM (CSP) 1b2ah

first character of the statement at top of the display area in DNLS (with no user supplied filters in effect). 1b2ah1

TAB (TNLS) Repeat last command. 1b2ai

ALTMODE (TNLS) jump to next occurrance of content/word 1b2aj

(whichever was done most recently) 1b2aj1

Second level commands -- infrequently used commands. 1b3

a (unused) 1b3a

browse mode 1b3b

content analysis 1b3c

device set (e.g display, TI-terminal) / delete partial copy 1b3d

edit 1b3e

force case (upper / lower / initialcaps) 1b3f

g (unused) 1b3g

h (unused) 1b3h

insert sequential 1b3i

journal (submit branch/ comment) 1b3j

k (unused) 1b3k

l (unused) 1b3l

merge, markers, measurement?? 1b3m

name delimiters, new file 1b3n

ownership, output 1b3o

Syntax for output: 'o <Output to> 1b3o1

('a <Assembler> ASSEMBLER-NAME / 1b3o1a

'c <Compiler> COMPILER-NAME) 1b3o1b

FILENAME Confirmation; 1b3o1c

p (unused) 1b3p

q (unused) 1b3q

reset veiwspecs 1b3r

status, sort 1b3s

terminal link 1b3t

undelete partial copy 1b3u

verify file, viewchange (TNLS) 1b3v

w (unused) 1b3w

CHI 14-APR-72 16:38 10081

Suggested Changes to NLS

(J10081) 14-APR-72 16:38; Title: Author(s): Charles H. Irby/CHI; Distribution: Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, John T. Melvin, Jeanne B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews, L. Peter Deutsch, James G. Mitchell/SRI-ARC LPD JGM; Sub-Collections: SRI-ARC; Clerk: CHI; Origin: <IRBY>NEWPARSER.NLS;50, 14-APR-72 16:35 CHI ;

WLB 17-APR-72 12:32 10082

Concerning the ident "NIC"

The ident "NIC" should be used for reaching NIC staff -- not for reaching everyone in the NET. Is there a good reason for this not to be the case? 1

WLB 17-APR-72 12:32 10082

Concerning the ident "NIC"

(J10082) 17-APR-72 12:32; Title: Author(s): Walt Bass/WLB;
Distribution: Richard W. Watson, Jeanne B. North, James C. Norton/RWW
JBN JCN; Sub-Collections: SRI-ARC; Clerk: WLB;

DHC 17-APR-72 14:15 10084

hello echo back

hello, bruce;

i got your journal message last night. it somehow seems appropriate that the nic was down for a week, right during the time everyone was (and is) upset about server reliability. anyhow, tanx for the test. next time steve sends me a message saying i can stay at cordell's, i'll get it before going up to sri.

how's the weather and all that?

bye now. 1

DHC 17-APR-72 14:15 10084

hello echo back

(J10084) 17-APR-72 14:15; Title: Author(s): David H. Crocker/DHC;
Distribution: Bruce A. Dolan/BAD; Sub-Collections: NIC; Clerk: DHC;

Mark C. Krilanovich
University of California at Santa Barbara
Computer Center
Santa Barbara, California 93106

To:
Access Copy

10085

MCK 17-APR-72 14:28 10085

Comment on the NIC

(J10085) 17-APR-72 14:28; Title: Author(s): Mark C. Krilanovich/MCK; Distribution: Mark C. Krilanovich/MCK; Sub-Collections: NIC; Clerk: MCK; Origin: <UCSB>MCK.NLS;1, 17-APR-72 10:56 MCK ;

MCK 17-APR-72 14:28 10085

Comment on the NIC

1

far out -- the NIC is back up again... 2

Walt Bass
Augmentation Research Center
Stanford Research Institute
Menlo Park, California 94025

To:
Access Copy

10086

Report on PODCOM Meeting 10 April 1972

(J10086) 17-APR-72 14:35; Title: Author(s): Walt Bass/WLB;
Distribution: Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, John T. Melvin, Jeanne B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: WLB;
Origin: <BASS>PODCOM.NLS;1, 17-APR-72 14:29 WLB ;

REPORT ON PODCOM MEETING 10 APRIL 1972 1

Present: 2

Cedar: KEV PR 2a

Fir: MEJ JTM 2b

Oak: WLB JDH 2c

Redwood: MDK 2d

This was the first meeting of PODCOM following a decision to change its organization and mode of operation. 3

PODCOM now has a chairman (currently WLB) who is responsible for seeing that matters which are brought before PODCOM receive due consideration, with some decision being reached and promulgated -- this in response to a general complaint that PODCOM typically has jumped from one issue to another without ever resolving any of them. 3a

Doug will no longer automatically attend all PODCOM meetings, but only when he wants to bring something before PODCOM or is requested to come so as to answer questions, resolve ambiguities, set policy, etc. 3b

PODCOM will be responsible for overseeing the POD Activity and implementing established PODAC policy, fostering inter-POD communication, and seeing that the lines of communication between Doug and the PODs remain open. The question of how PODAC policy comes to be established remains open; basically, Doug will be held responsible for overall policy decisions, and PODCOM will attempt to guide Doug in making these decisions and will set policy itself (in a domain yet to be specified) with the advice and consent of Doug. 3c

The question of ARC seminars was brought up again, and the following actions were taken so as to make it possible for PODCOM to procede to other issues: 4

Since no agreement could be reached on what exactly should be the dividing line between seminars which are the province of PODAC and seminars which are the province of LINAC, and since it seemed that most of the seminar topics which had been proposed probably fell into the province of LINAC, it was decided to table the issue of appointing a PODAC Seminar Coordinator until some new developments made the issue viable. 4a

PODCOM hereby strongly suggests that LINAC soon appoint a Seminar Coordinator who will be responsible for coordinating facilities, resources, and scheduling for seminars which are relevant to the pursuit of LINAC goals. This would include ARC seminars by ARCers, non-ARC seminars by ARCers, and ARC seminars by non-ARCers. There was disagreement within PODCOM regarding the question of whether the Seminar Coordinator should also be a Seminar Pusher, responsible for pushing his fellow ARCers to give and attend seminars. 4b

PODCOM will attempt to serve as coordinator for any seminars which are clearly relevant to the pursuit of PODAC goals until such time as there is a distinct PODAC Seminar Coordinator. 4c

Several issues related to the hiring and enculturization (?) of new ARC members were discussed. 5

Paul and Mike felt that they had not been adequately warned about what to expect at ARC in the way of pressures to adapt to the atmosphere of social experimentation -- e.g., PODs and our unorthodox management structure. 5a

It was agreed that potential new employees were entitled to a "full disclosure" of the conditions which would be imposed upon them as members of ARC and that such a disclosure would be of great value to ARC itself in helping to prevent avoidable misunderstandings. 5b

Several mechanisms for guaranteeing this full disclosure were discussed, and it was finally decided that PODCOM should prepare a brief document, perhaps in the form of a checklist, covering issues which PODCOM feels should be discussed with potential hires. This document would be given to individuals which are responsible for coordinating interviews for applicants with the hope that they would check with each applicant before he leaves the interview to be sure that all the items on the checklist have been discussed with and are understood by the applicant. 5c

We also discussed the question of how interviews are set up for applicants and agreed that it should be the responsibility of LINAC to designate some individual as being "responsible" for that applicant. In addition to seeing that the applicant receives the information described above, he should see to it that all ARC members are made aware of the facts of the interview so that they can schedule a talk with the applicant on the day of the interview, if they are so inclined. 5d

A similar procedure should be followed for all other

visitors so that everyone who might be interested in meeting with a visitor knows of the visit far enough in advance to make appropriate arrangements. 5d1

We did not go deeply into the question of whether an ARCer could/should be excluded from talking with an applicant or of how a given ARCer's objections to a specific applicant are/should be weighted -- perhaps some discussion of these topics by the PODs would be useful. 5e

It was agreed that seminars given by applicants form a very useful role in the interview process and should become more common, particularly in the case of more experienced applicants. 5f

Several items of general interest regarding PODAC were discussed. 6

It was agreed that the ad hoc methods by which new ARCers were being assigned (?) to PODs should not continue and that this was an appropriate function for PODCOM to perform. Henceforth, PODCOM will take the responsibility for making these assignments, and anyone wishing to influence the assignment process should make their wishes known to their PODCOM representative. 6a

We briefly discussed the following issues and agreed that PODCOM should take no position on them until they have been discussed in the PODs so that the members of PODCOM could have a broader basis of understanding and consensus on which to base their stands: 6b

How many PODCOM representatives should each POD have (1 or 2) and how should they serve (permanent or rotating)? One favorite scheme was that there be 2 PODCOM representatives, one rotating and one permanent (i.e., long rotation period) with an additional provision that both representatives could not be changed at the same PODCOM meeting (so as to preserve some continuity). 6b1

Should one POD be able to invite a member of another POD to join it? If so how do you handle the resulting imballance in POD size (by "exchanging" members?)? 6b2

How should POD membership evolve in general? (The three month POD trial period will soon be up, and this is a very relevant question to consider at this time.) 6b3

Should night-shift employees (Ralph Prather is a specific example) be invited to join a POD? (It was generally

agreed that it would be unreasonable to REQUIRE this of employees who work non-standard hours, but we need to know whether most ARCers would want such employees to belong to a POD and, if not, whether a request to join a POD by such an employee should be denied.) 6b4

DCE 17-APR-72 14:47 10087

Discussion Log: 17 Apr 72, Bob Peters, SRI, on promoting cable TV utilization research at SRI, voting, teaching, shopping, etc.

Bob (Ext. 3030) is involved with Cable TV, in various ways. He is looking into the possibilities of SRI putting together a coordinated program toward developing techniques for harnessing the two-way video communication potential. Wonders what sort of relatedness we see to our work, and what our inerest might be in getting involed. 1

I tell him of our basic aim to work with the system developers of such systems, rather than with thei systems' development, and that if SRI did set up a developmental program in this area, we would like to have that development group be one of our Bootstrap Communnity participants (being one of a community of system developers who get various kinds of support from this participation). 2

Bob is trying, for instance, to bring to SRI some people from granting agencies, as a way to begin exploring the funding possibilities for SRI's getting into thi business. Would like to bring such people by AARC to show some of SRI's experince and developments in areas related to the problem. 3

That would be fine with me; I would like to support such need within the Institute. I would suggest, though, that someone like Dave Brown handle the people who thus might come through -- he is in sort of a good "middle" position, and it is highly likely that the system development part of any such program would (should) be done in his lab. 3a

DCE 17-APR-72 14:47 10087

Discussion Log: 17 Apr 72, Bob Peters, SRI, on promoting cable TV utilization research at SRI, voting, teaching, shopping, etc.

(J10087) 17-APR-72 14:47; Title: Author(s): Douglas C. Engelbart/DCE; Sub-Collections: SRI-ARC; Clerk: DCE;

DVN 17-APR-72 16:26 10088

1971 Report to Rome: revised schedule,outline, and procedures

THE NEXT STEPS IN PLANNING 1

This journal entry follows (10035,), disseminates changes made in the outline at the meeting on Wednesday, 12 April, spells out working procedures agreed upon for assembling the report, and provides more detailed schedules. 1a

MASTER SCHEDULE AND BROKENDOWN SCHEDULES 2

I have added to the master schedule (10035,:v) time for assembly and review of the parts and links to schedulejls for sections II, IV, V broken down one level finer in outline. The Section Schedules also appear below. On the schedule A means assembly, R means review, and XW means rework. 2a

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REVIEW 4

Reviewer: please consider the section you read for accuracy and appropriateness and discuss your thoughts with the author. 4a

AFTER REVIEW 5

The author make any changes agreed upon between you and the reviewer and tell me when the version in a documentation section file is agreeable to both. 5a

LINKS 6

Feel free to use links to other parts of the report -- an analyzer formatter program will replace them him citations in the printed version. It's ok to use links to online documents that are not part of the report, but do not base your argument on them. Many important readers will not be online. 6a

AUTHORSHIP 7

Our most recent report (8277,) named no author on the title page; for journal purposes the author was ARC. The next previous report, that to NASA dated February 8, 1969, named D.C. Engelbart and staff. Earlier reports, which had less of

the character of integrated team efforts, had up to three named authors. 7a

Dick Watson has strongly urged that the usage of the last two updates is too anonymous to ensure proper professional credit. 7b

We could list all of you who made an intellectual contribution to the research reports as authors of the complete report. Such is the practice in some fields such as high energy physics where papers often have ten to twenty authors. 7c

Perhaps it would be more meaningful to list the authors section by section. 7d

Please tell me your ideas. 7e

REFERENCES 8

Please pass references to offline documents, NIC or otherwise, to me. 8a

APPENDICES 9

The report may invovle many and bulky appendices. We plan to have separate appendices for each section. When your appendix is finished, please put it in the appropriate section file in <documentation> with links back and forth between the appendix and the text it supports. 9a

(Contents)(entry)OUTLINE
Link to master schedule (,S:BnDxbbbrr) 10

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Summary (DVN) <JCN> 10c

Background on ARC Pages =1 10c1

Structure of this report Pages =1 10c2

Summary of Content 1970 Report Pages =1 10c3

Summary of Content 1971 Report Pages =1 10c4

I Team Augmentation
Link to brokendown schedule (,Isc:BnDw)
Link to Documentation file (documentation,section-i,:xb) 10d

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Journal Catalogs	10d1b
Ident System	10d1c
Number System	10d1d
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Description Pages= 3	10d2b
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Split Screens (CHI)	10d4a2
Cross File Editing (CHI)	10d4a3
User Programs (HGL)	10d4a4
Output Processor	10d4a5
Control File	10d4a6
Dex (HGL)	10d4a7
TNLS (MFA /HGL)	10d4a8
.	10d4a9
.	10d4a10
.	10d4a11
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L10 (HGL) Pages =5	10d4b1
Tree Meta (HGL) Pages=10	10d4b2

SCHEDULE indx	Abs trct	Sum mary	SEC I	SEC II	SEC III	SEC IV	SEC V	Refs	Glos sary
			(,Isc)			(,IVsc)	(,Vsc)		
APRIL									
Week 3									
Monday		A	see	A	A	see	see		
Tues		A	brk	A	A	brk	brk		
Wednes		A	down	A	A	down	down		
Thurs		A		A	A				
Friday		A		A	A				

Week 4
Monday A A A A
Tues A A A A
Wednes A A A A
Thurs A A A A
Fri A A A A
A
MAY
Week 1
Mon A A R A A A
A
Tues A A R A A A
A
Wednes A A R A A A
A
Thurs A A R A A A
A
Friday A A R A A A
A
Week 2 Review ..staggered to avoid spot overload
Monday R R X R A R
A
Tues R R X R A R
A
Wednes X R X R R R
A
Thurs X R X R R X
A
Friday DUE R R X
A
Week 3 Rewrite reviewed sections
Monday DUE X X X X
R
Tues X X X DUE
R
Wednes X X X
X
Thurs X X DUE
X
Friday DUE DUE
DUE
Week 4
Monday ----------Begin FINAL
PRINTING/MASSAGE----------
Tues
Wednes
Thurs
Friday
JUNE

1971 Report to Rome: revised schedule,outline, and procedures

Week 1
Mon >>>>>>>>>>>>>>>Begin SRI EDITING AND APPROVAL<<<<<<<<<<<<<<
Tues
Wednes
Thurs
Friday
Week 2
Monday --------********DRAFT DUE IN MAIL@@@@@@@@@=========-----
Tues
Wednes
Thurs ----------COMPLETED REPORT (AS A FINISHED DRAFT) DUE IN ROME----------

SECTION I BROKENDOWN SCHEDULE

SCHEDULE	DSS	Hand book	BRS	NLS	ORG	IV	V
APRIL							
Week 3							
Monday	A	A	A	A	A		
Tues	A	A	A	A	A		
Wednes	A	A	A	A	A		
Thurs	A	A	A	A	A		
Friday	A	A	A	A	A		
Week 4							
Monday	A	R	A	A	A		
Tues	A	R	A	A	A		
Wednes	A	R	A	A	A		
Thurs	A	X	A	A	A		
Fri	A	X	A	A	A		
MAY							
Week 1							
Mon	R	X	A	A	A		
Tues	R	X	A	A	A		
Wednes	R	DUE	A	A	R		
Thurs	R		A	A	R		
Friday	R		A	A	R		
Week 2 Review ..staggered to avoid spot overload							
Monday	X		R	R	X		
Tues	X		R	R	X		
Wednes	X		R	R	DUE		
Thurs	X		R	R			
Friday	DUE		R	R			
Week 3 Rewrite reviewed sections							
Monday			X	X			
Tues			X	X			
Wednes			X	X			
Thurs			X	X			

```
Friday                    DUE   DUE
Week 4
Monday ++++++++++++++++++++Begin FINAL
PRINTING/MASSAGE---------------
Tues
Wednes
Thurs
Friday
JUNE
Week 1
Mon  >>>>>>>>>>>>>>>Begin SRI EDITING AND APPROVAL<<<<<<<<<<<<<<
Tues
Wednes
Thurs
Friday
Week 2
Monday --------********DRAFT DUE IN MAIL@@@@@@@@@==========-----
Tues
Wednes
Thurs  ----------COMPLETED REPORT (AS A FINISHED DRAFT) DUE IN
ROME---------------
SECTION IV BROKENDOWN SCHEDULE
SCHEDULE Hard  Soft
         ware  ware
..... ..... ..... ..... ..... ..... ..... ..... ..... ..... ..
.
APRIL
Week 3
Monday     A     A
Tues       A     A
Wednes     A     A
Thurs      A     A
Friday     A     A
Week 4
Monday     A     A
Tues       A     A
Wednes     A     A
Thurs      A     A
Fri        A     A
MAY
Week 1
Mon        A     R
Tues       A     R
Wednes     A     R
Thurs      A     R
Friday     A     R
Week 2 Review ..staggered to avoid spot overload
Monday     R     X
Tues       R     X
```

```
Wednes      R       X
Thurs       R       X
Friday      R     DUE
Week 3 Rewrite reviewed sections
Monday      X
Tues        X
Wednes      X
Thurs       X
Friday    DUE
Week 4
Monday ..................Begin FINAL
PRINTING/MASSAGE---------------
Tues
Wednes
Thurs
Friday
JUNE
Week 1
Mon  >>>>>>>>>>>>>>>Begin SRI EDITING AND APPROVAL<<<<<<<<<<<<<<
Tues
Wednes
Thurs
Friday
Week 2
Monday --------********DRAFT DUE IN MAIL@@@@@@@@@==========-----
Tues
Wednes
Thurs  ----------COMPLETED REPORT (AS A FINISHED DRAFT) DUE IN
ROME--------------
SECTION V BROKENDOWN SCHEDULE
SCHEDULE Pro  Boot
         ject  strp
....... ..... ..... ..... ..... ..... ..... ..... ..... ..... ..
.
APRIL
Week 3
Monday      A       A
Tues        A       A
Wednes      A       A
Thurs       A       A
Friday      A       A
Week 4
Monday      A       A
Tues        A       A
Wednes      A       A
Thurs       A       A
Fri         A       A
MAY
Week 1
```

1971 Report to Rome: revised schedule,outline, and procedures

```
Mon          R       A
Tues         R       A
Wednes       R       A
Thurs        R       A
Friday       R       A
Week 2 Review ..staggered to avoid spot overload
Monday       X       R
Tues         X       R
Wednes       X       R
Thurs        X       R
Friday     DUE       R
Week 3 Rewrite reviewed sections
Monday               X
Tues                 X
Wednes               X
Thurs                X
Friday             DUE
Week 4
Monday <<<<<<<<<<<<<<<<<<<<Begin FINAL
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Tues
Wednes
Thurs
Friday
JUNE
Week 1
Mon  >>>>>>>>>>>>>>>>Begin SRI EDITING AND APPROVAL<<<<<<<<<<<<<<<
Tues
Wednes
Thurs
Friday
Week 2
Monday --------********DRAFT DUE IN MAIL@@@@@@@@@==========-----
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DVN 17-APR-72 16:26 10088

1971 Report to Rome: revised schedule,outline, and procedures

(J10088) 17-APR-72 16:26; Title: Author(s): Dirk H. van Nouhuys/DVN; Distribution: James C. Norton, Marilyn F. Auerbach, Duane L. Stone, Charles H. Irby, Harvey G. Lehtman, Richard W. Watson, J. D. Hopper, Ed K. Van De Riet, Don I. Andrews, Donald C. Wallace, William S. Duvall, Dirk H. van Nouhuys/JCN MFA DLS(for your information) CHI HGL RWW JDH EKV DIA DCW WSD DVN; Sub-Collections: SRI-ARC; Clerk: DVN; Origin: <VANNOUHUYS>ROME71.NLS;37, 17-APR-72 16:14 DVN ; vannouhuys,dvn,#1)

<HJOURNAL>10088.NLS;1, 17-APR-72 18:33 XXX ; Title: Author(s): Dirk H. van Nouhuys/DVN; Distribution: James C. Norton, Marilyn F. Auerbach, Duane L. Stone, Charles H. Irby, Harvey G. Lehtman, Richard W. Watson, J. D. Hopper, Ed K. Van De Riet, Don I. Andrews, Donald C. Wallace, William S. Duvall, Dirk H. van Nouhuys/JCN MFA DLS(for your information) CHI HGL RWW JDH EKV DIA DCW WSD DVN; Sub-Collections: SRI-ARC; Clerk: DVN;
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Summary of Content 1971 Report Pages =1 10c4

I Team Augmentation
Link to brokendown schedule (,Isc:BnDW)
Link to Documentation file (documentation,section-i,:xb) 10d

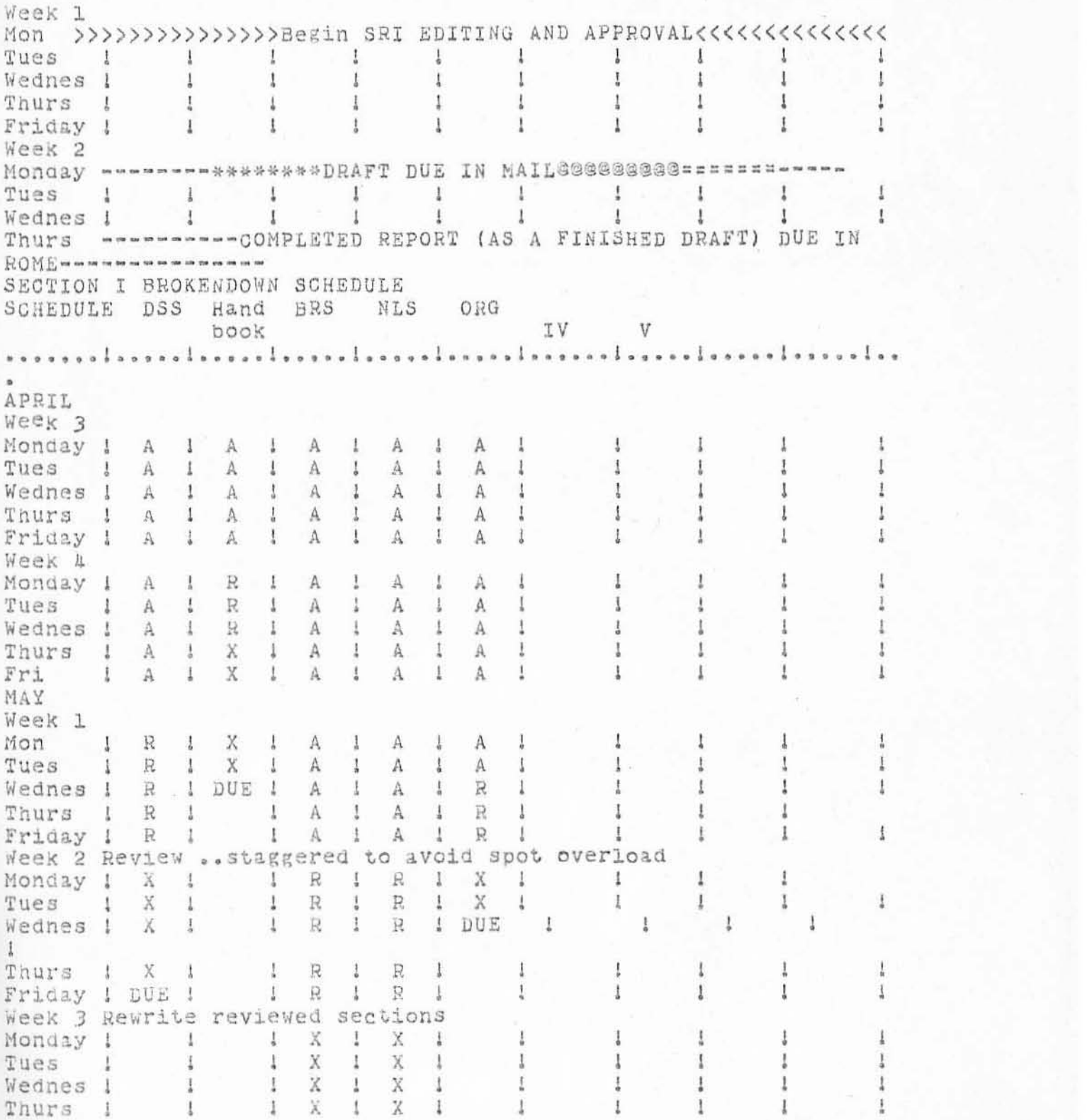
DSS (WSD) <JCN> Pages =10	10d1
Journal	10d1a
Journal Catalogs	10d1b
Ident System	10d1c
Number System	10d1d
Handbook (MFA) <JCN>	10d2
Contents Pages =30 as appendix	10d2a
Description Pages= 3	10d2b
BRS (JCN) <DVN>Pages= 5	10d3
Basic NLS(CHI) <JCN>	10d4
User Features (CHI)Pages =15	10d4a
Sort/Merge (JDH)	10d4a1
Split Screens (CHI)	10d4a2
Cross File Editing (CHI)	10d4a3
User Programs (HGL)	10d4a4
Output Processor	10d4a5
Control File	10d4a6
Dex (HGL)	10d4a7
TNLS (MFA /HGL)	10d4a8
.	10d4a9
.	10d4a10
.	10d4a11
Languages	10d4b
L10 (HGL) Pages =5	10d4b1
Tree Meta (HGL) Pages=10	10d4b2

SCHEDULE indx	Abs trct	Sum mary	SEC I	SEC II	SEC III	SEC IV	SEC V	Refs	Glos sary
			(,Isc)			(,IVsc)	(,Vsc)		
APRIL									
Week 3									
Monday		A	see	A	A	see	see		
Tues		A	brk	A	A	brk	brk		
Wednes		A	down	A	A	down	down		
Thurs		A		A	A				
Friday		A		A	A				

1971 Report to Rome: revised schedule,outline, and procedures

Week 4																
Monday			A			A		A						A		
Tues			A			A		A						A		
Wednes			A			A		A						A		
Thurs			A			A		A						A		
Fri			A			A		A						A		
A																
MAY																
Week 1																
Mon		A		A			R		A				A		A	
A																
Tues		A		A			R		A				A		A	
A																
Wednes		A		A			R		A				A		A	
A																
Thurs		A		A			R		A				A		A	
A																
Friday		A		A			R		A				A		A	
A																
Week 2 Review ..staggered to avoid spot overload																
Monday		R		R			X		R				A		R	
A																
Tues		R		R			X		R				A		R	
A																
Wednes		X		R			X		R				R		R	
A																
Thurs		X		R			X		R				R		X	
A																
Friday							DUE		R				R		X	
A																
Week 3 Rewrite reviewed sections																
Monday		DUE		X					X				X		X	
R																
Tues				X					X				X		DUE	
R																
Wednes				X					X				X			
X																
Thurs				X					X				DUE			
X																
Friday				DUE					DUE							
DUE																
Week 4																
Monday ←←←←←←←←←←←←←←←←←←←←Begin FINAL																
PRINTING/MASSAGE----------																
Tues																
Wednes																
Thurs																
Friday																
JUNE																

1971 Report to Rome: revised schedule,outline, and procedures



1971 Report to Rome: revised schedule,outline, and procedures

```
Friday !     !     ! DUE ! DUE !     !     !     !     !     !
Week 4
Monday <<<<<<<<<<<<<<<<<<<<<<Begin FINAL
PRINTING/MASSAGE---------------
Tues   !     !     !     !     !     !     !     !     !     !
Wednes !     !     !     !     !     !     !     !     !     !
Thurs  !     !     !     !     !     !     !     !     !     !
Friday !     !     !     !     !     !     !     !     !     !
JUNE
Week 1
Mon  >>>>>>>>>>>>>>>Begin SRI EDITING AND APPROVAL<<<<<<<<<<<<<<
Tues   !     !     !     !     !     !     !     !     !     !
Wednes !     !     !     !     !     !     !     !     !     !
Thurs  !     !     !     !     !     !     !     !     !     !
Friday !     !     !     !     !     !     !     !     !     !
Week 2
Monday ----------*********DRAFT DUE IN MAIL@@@@@@@@@@=========-----
Tues   !     !     !     !     !     !     !     !     !     !
Wednes !     !     !     !     !     !     !     !     !     !
Thurs  ----------COMPLETED REPORT (AS A FINISHED DRAFT) DUE IN
ROME---------------
SECTION IV BROKENDOWN SCHEDULE
SCHEDULE Hard  Soft
         ware  ware
.......!.....!.....!.....!.....!.....!.....!.....!.....!.....!..
.
APRIL
Week 3
Monday !  A  !  A  !     !     !     !     !     !     !     !
Tues   !  A  !  A  !     !     !     !     !     !     !     !
Wednes !  A  !  A  !     !     !     !     !     !     !     !
Thurs  !  A  !  A  !     !     !     !     !     !     !     !
Friday !  A  !  A  !     !     !     !     !     !     !     !
Week 4
Monday !  A  !  A  !     !     !     !     !     !     !     !
Tues   !  A  !  A  !     !     !     !     !     !     !     !
Wednes !  A  !  A  !     !     !     !     !     !     !     !
Thurs  !  A  !  A  !     !     !     !     !     !     !     !
Fri    !  A  !  A  !     !     !     !     !     !     !     !
MAY
Week 1
Mon    !  A  !  R  !     !     !     !     !     !     !     !
Tues   !  A  !  R  !     !     !     !     !     !     !     !
Wednes !  A  !  R  !     !     !     !     !     !     !     !
Thurs  !  A  !  R  !     !     !     !     !     !     !
Friday !  A  !  R  !     !     !     !     !     !     !     !
Week 2 Review ..staggered to avoid spot overload
Monday !  R  !  X  !     !     !     !     !     !     !
Tues   !  R  !  X  !     !     !     !     !     !     !     !
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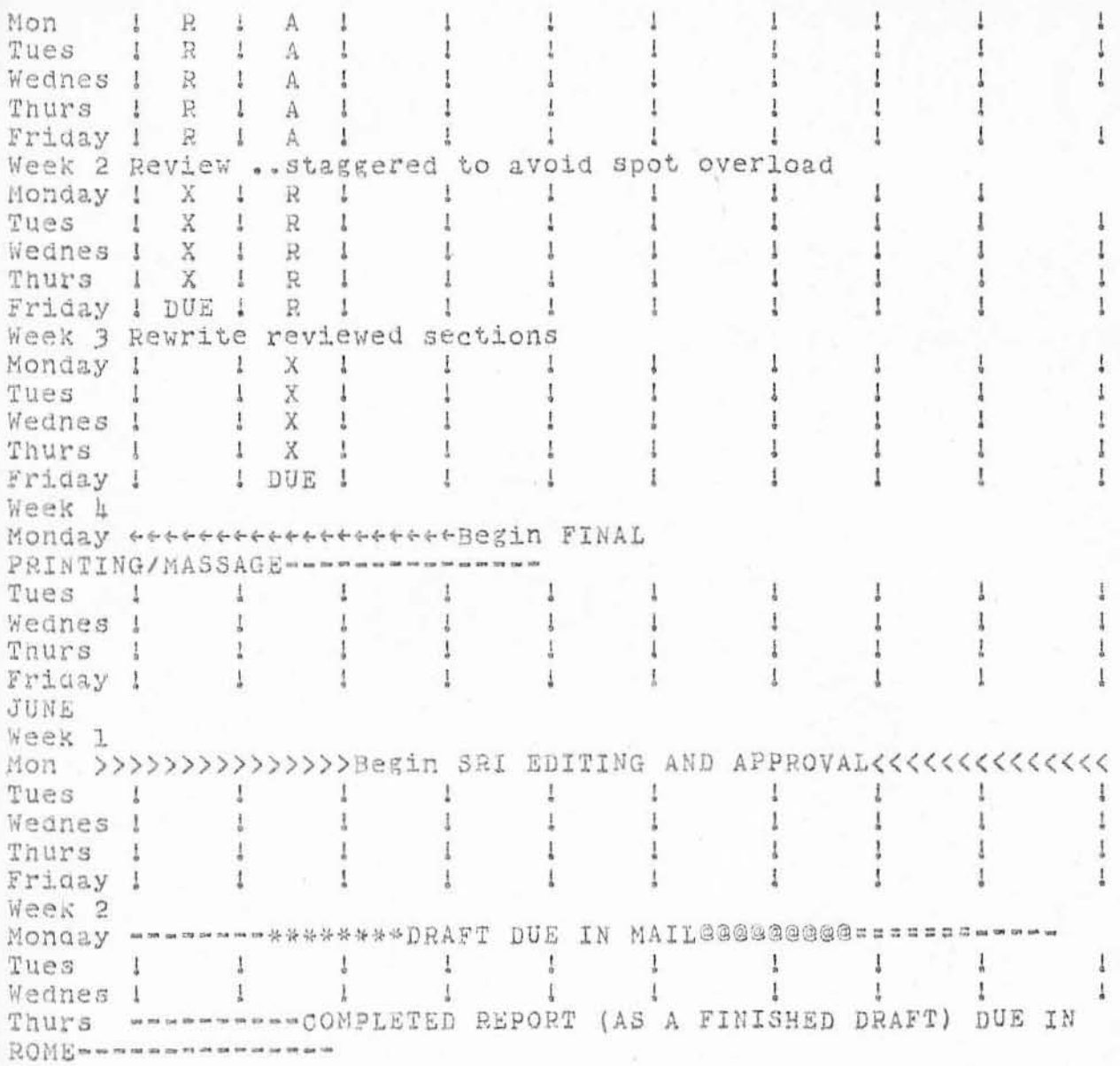
Wednes !  R  !  X  !     !     !     !     !     !     !     !
Thurs  !  R  !  X  !     !     !     !     !     !     !     !
Friday !  R  ! DUE !     !     !     !     !     !     !     !
Week 3 Rewrite reviewed sections
Monday !  X  !     !     !     !     !     !     !     !     !
Tues   !  X  !     !     !     !     !     !     !     !     !
Wednes !  X  !     !     !     !     !     !     !     !     !
Thurs  !  X  !     !     !     !     !     !     !     !     !
Friday ! DUE !     !     !     !     !     !     !     !     !
Week 4
Monday <<<<<<<<<<<<<<<<<<<<Begin FINAL
PRINTING/MASSAGE---------------
Tues   !     !     !     !     !     !     !     !     !     !
Wednes !     !     !     !     !     !     !     !     !     !
Thurs  !     !     !     !     !     !     !     !     !     !
Friday !     !     !     !     !     !     !     !     !     !
JUNE
Week 1
Mon  >>>>>>>>>>>>>>>Begin SRI EDITING AND APPROVAL<<<<<<<<<<<<<<
Tues   !     !     !     !     !     !     !     !     !     !
Wednes !     !     !     !     !     !     !     !     !     !
Thurs  !     !     !     !     !     !     !     !     !     !
Friday !     !     !     !     !     !     !     !     !     !
Week 2
Monday ----------********DRAFT DUE IN MAIL@@@@@@@@@@==========----
Tues   !     !     !     !     !     !     !     !     !     !
Wednes !     !     !     !     !     !     !     !     !     !
Thurs  ----------COMPLETED REPORT (AS A FINISHED DRAFT) DUE IN
ROME---------------
SECTION V BROKENDOWN SCHEDULE
SCHEDULE Pro  Boot
         ject  strp
.......!.....!.....!.....!.....!.....!.....!.....!.....!.....!..
.
APRIL
Week 3
Monday !  A  !  A  !     !     !     !     !     !     !     !
Tues   !  A  !  A  !     !     !     !     !     !     !     !
Wednes !  A  !  A  !     !     !     !     !     !     !     !
Thurs  !  A  !  A  !     !     !     !     !     !     !     !
Friday !  A  !  A  !     !     !     !     !     !     !     !
Week 4
Monday !  A  !  A  !     !     !     !     !     !     !     !
Tues   !  A  !  A  !     !     !     !     !     !     !     !
Wednes !  A  !  A  !     !     !     !     !     !     !     !
Thurs  !  A  !  A  !     !     !     !     !     !     !     !
Fri    !  A  !  A  !     !     !     !     !     !     !     !
MAY
Week 1
```

1971 Report to Rome: revised schedule,outline, and procedures



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Origin: <VANNOUHUYS>ROME71.NLS;37, 17-APR-72 16:14 DVN ; vannouhuys,dvn,#1)

HGL

DVN 17-APR-72 16:26 10088

1971 Report to Rome: revised schedule,outline, and procedures

THE NEXT STEPS IN PLANNING 1

This journal entry follows (10035,), disseminates changes made in the outline at the meeting on Wednesday, 12 April, spells out working procedures agreed upon for assembling the report, and provides more detailed schedules. 1a

MASTER SCHEDULE AND BROKENDOWN SCHEDULES 2

I have added to the master schedule (10035,:v) time for assembly and review of the parts and links to schedulejls for sections II, IV, V broken down one level finer in outline. The Section Schedules also appear below. On the schedule A means assembly, R means review, and XW means rework. 2a

WHAT TO DO WHEN WHAT YOU HAVE WRITTEN IS READY FOR REVIEW 3

The section file in <documentation> contains the corresponding part of the outline, e.g., (documentation, section-I,:w). When your piece is ready for review, replace the statement with your contribution as a branch and tell the reviewer(s) and me. 3a

REVIEW 4

Reviewer: please consider the section you read for accuracy and appropriateness and discuss your thoughts with the author. 4a

AFTER REVIEW 5

The author make any changes agreed upon between you and the reviewer and tell me when the version in a documentation section file is agreeable to both. 5a

LINKS 6

Feel free to use links to other parts of the report -- an analyzer formatter program will replace them him citations in the printed version. It's ok to use links to online documents that are not part of the report, but do not base your argument on them. Many important readers will not be online. 6a

AUTHORSHIP 7

Our most recent report (8277,) named no author on the title page; for journal purposes the author was ARC. The next previous report, that to NASA dated February 8, 1969, named D.C. Engelbart and staff. Earlier reports, which had less of

the character of integrated team efforts, had up to three named authors. 7a

Dick Watson has strongly urged that the usage of the last two updates is too anonymous to ensure proper professional credit. 7b

We could list all of you who made an intellectual contribution to the research reports as authors of the complete report. Such is the practice in some fields such as high energy physics where papers often have ten to twenty authors. 7c

Perhaps it would be more meaningful to list the authors section by section. 7d

Please tell me your ideas. 7e

REFERENCES 8

Please pass references to offline documents, NIC or otherwise, to me. 8a

APPENDICES 9

The report may invovle many and bulky appendices. We plan to have separate appendices for each section. When your appendix is finisned, please put it in the appropriate section file in <documentation> with links back and forth between the appendix and the text it supports. 9a

(entry)OUTLINE
Link to master schedule (,S:BnDxbbbrr) 10

Head Matter (MEJ) <DVN> Pages=5 10a

Abstract (DVN) <JCN> Pages =1 10b

Summary (DVN) <JCN> 10c

Background on ARC Pages =1 10c1

Structure of this report Pages =1 10c2

Summary of Content 1970 Report Pages =1 10c3

Summary of Content 1971 Report Pages =1 10c4

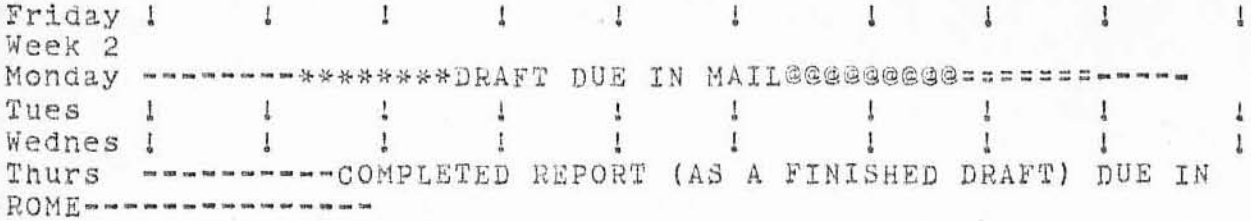
I Team Augmentation
Link to brokendown schedule (,Isc:BnDW)
Link to Documentation file (documentation,section-i,:xb) 10d

DSS (WSD) <JCN> Pages =10	10d1
Journal	10d1a
Journal Catalogs	10d1b
Ident System	10d1c
Number System	10d1d
Handbook (MFA) <JCN>	10d2
Contents Pages =30 as appendix	10d2a
Description Pages= 3	10d2b
BRS (JCN) <DVN>Pages= 5	10d3
Basic NLS(CHI) <JCN>	10d4
User Features (CHI)Pages =15	10d4a
Sort/Merge (JDH)	10d4a1
Split Screens (CHI)	10d4a2
Cross File Editing (CHI)	10d4a3
User Programs (HGL)	10d4a4
Output Processor	10d4a5
Control File	10d4a6
Dex (HGL)	10d4a7
TNLS (MFA (HGL)	10d4a8
.	10d4a9
.	10d4a10
.	10d4a11
Languages	10d4b
L10 (HGL) Pages =5	10d4b1
Tree Meta (HGL) Pages=10	10d4b2

1971 Report to Rome: revised schedule,outline, and procedures

SCHEDULE	Abs trct	Sum mary	SEC I	SEC II	SEC III	SEC IV	SEC V	Refs	Glos sary	indx
			(,Isc)			(,IVsc)	(,Vsc)			
APRIL										
Week 3										
Monday		A	see	A	A	see	see			
Tues		A	brk	A	A	brk	brk			
Wednes		A	down	A	A	down	down			
Thurs		A		A	A					
Friday		A		A	A					
Week 4										
Monday		A		A	A				A	
Tues		A		A	A				A	
Wednes		A		A	A				A	
Thurs		A		A	A				A	
Fri		A		A	A				A	A
MAY										
Week 1										
Mon	A	A		R	A			A	A	A
Tues	A	A		R	A			A	A	A
Wednes	A	A		R	A			A	A	A
Thurs	A	A		R	A			A	A	A
Friday	A	A		R	A			A	A	A
Week 2	Review ..staggered to avoid spot overload									
Monday	R	R		X	R			A	R	A
Tues	R	R		X	R			A	R	A
Wednes	X	R		X	R			R	R	A
Thurs	X	R		X	R			R	X	A
Friday				DUE	R			R	X	A
Week 3	Rewrite reviewed sections									
Monday	DUE	X			X			X	X	R
Tues		X			X			X	DUE	R
Wednes		X			X			X		X
Thurs		X			X			DUE		X
Friday		DUE			DUE					DUE
Week 4										
Monday	<<<<<<<<<<<<<<<<<<<<Begin FINAL PRINTING/MASSAGE----------									
Tues										
Wednes										
Thurs										
Friday										
JUNE										
Week 1										
Mon	>>>>>>>>>>>>>>>Begin SRI EDITING AND APPROVAL<<<<<<<<<<<<<<									
Tues										
Wednes										
Thurs										

1971 Report to Rome: revised schedule,outline, and procedures

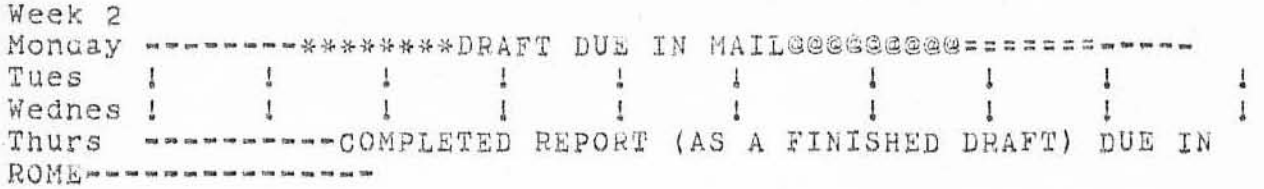


1971 Report to Rome: revised schedule,outline, and procedures

SECTION I BROKENDOWN SCHEDULE

SCHEDULE	DSS	Hand book	BRS	NLS	ORG	IV	V			
APRIL										
Week 3										
Monday	A	A	A	A	A					
Tues	A	A	A	A	A					
Wednes	A	A	A	A	A					
Thurs	A	A	A	A	A					
Friday	A	A	A	A	A					
Week 4										
Monday	A	R	A	A	A					
Tues	A	R	A	A	A					
Wednes	A	R	A	A	A					
Thurs	A	X	A	A	A					
Fri	A	X	A	A	A					
MAY										
Week 1										
Mon	R	X	A	A	A					
Tues	R	X	A	A	A					
Wednes	R	DUE	A	A	R					
Thurs	R		A	A	R					
Friday	R		A	A	R					
Week 2	Review ..staggered to avoid spot overload									
Monday	X		R	R	X					
Tues	X		R	R	X					
Wednes	X		R	R	DUE					
Thurs	X		R	R						
Friday	DUE		R	R						
Week 3	Rewrite reviewed sections									
Monday			X	X						
Tues			X	X						
Wednes			X	X						
Thurs			X	X						
Friday			DUE	DUE						
Week 4										
Monday	<<<<<<<<<<<<<<<<<<<<Begin FINAL PRINTING/MASSAGE----------									
Tues										
Wednes										
Thurs										
Friday										
JUNE										
Week 1										
Mon	>>>>>>>>>>>>>>>Begin SRI EDITING AND APPROVAL<<<<<<<<<<<<<<									
Tues										
Wednes										
Thurs										
Friday										

1971 Report to Rome: revised schedule,outline, and procedures



SECTION IV BROKENDOWN SCHEDULE

SCHEDULE	Hard ware	Soft ware								
APRIL										
Week 3										
Monday	A	A								
Tues	A	A								
Wednes	A	A								
Thurs	A	A								
Friday	A	A								
Week 4										
Monday	A	A								
Tues	A	A								
Wednes	A	A								
Thurs	A	A								
Fri	A	A								
MAY										
Week 1										
Mon	A	R								
Tues	A	R								
Wednes	A	R								
Thurs	A	R								
Friday	A	R								
Week 2	Review ..staggered to avoid spot overload									
Monday	R	X								
Tues	R	X								
Wednes	R	X								
Thurs	R	X								
Friday	R	DUE								
Week 3	Rewrite reviewed sections									
Monday	X									
Tues	X									
Wednes	X									
Thurs	X									
Friday	DUE									
Week 4										
Monday	<<<<<<<<<<<<<<<<<<<<Begin FINAL PRINTING/MASSAGE----------									
Tues										
Wednes										
Thurs										
Friday										
JUNE										
Week 1										
Mon	>>>>>>>>>>>>>>>Begin SRI EDITING AND APPROVAL<<<<<<<<<<<<<<									
Tues										
Wednes										
Thurs										
Friday										

1971 Report to Rome: revised schedule,outline, and procedures

```
Week 2
Monday ----------********DRAFT DUE IN MAIL@@@@@@@@@@==========
Tues   !       !       !       !       !       !       !       !       !       !
Wednes !       !       !       !       !       !       !       !       !       !
Thurs  ----------COMPLETED REPORT (AS A FINISHED DRAFT) DUE IN
ROME---------------- ,PES;
SECTION V BROKENDOWN SCHEDULE
SCHEDULE Pro  Boot
         ject  strp
.......!.....!.....!.....!.....!.....!.....!.....!.....!.....!.....!...
APRIL
Week 3
Monday !  A  !  A  !     !     !     !     !     !     !     !     !
Tues   !  A  !  A  !     !     !     !     !     !     !     !     !
Wednes !  A  !  A  !     !     !     !     !     !     !     !     !
Thurs  !  A  !  A  !     !     !     !     !     !     !     !     !
Friday !  A  !  A  !     !     !     !     !     !     !     !     !
Week 4
Monday !  A  !  A  !     !     !     !     !     !     !     !     !
Tues   !  A  !  A  !     !     !     !     !     !     !     !     !
Wednes !  A  !  A  !     !     !     !     !     !     !     !     !
Thurs  !  A  !  A  !     !     !     !     !     !     !     !     !
Fri    !  A  !  A  !     !     !     !     !     !     !     !     !
MAY
Week 1
Mon    !  R  !  A  !     !     !     !     !     !     !     !     !
Tues   !  R  !  A  !     !     !     !     !     !     !     !     !
Wednes !  R  !  A  !     !     !     !     !     !     !     !     !
Thurs  !  R  !  A  !     !     !     !     !     !     !     !
Friday !  R  !  A  !     !     !     !     !     !     !     !     !
Week 2 Review ..staggered to avoid spot overload
Monday !  X  !  R  !     !     !     !     !     !     !     !
Tues   !  X  !  R  !     !     !     !     !     !     !     !     !
Wednes !  X  !  R  !     !     !     !     !     !     !     !     !
Thurs  !  X  !  R  !     !     !     !     !     !     !     !     !
Friday ! DUE !  R  !     !     !     !     !     !     !     !     !
Week 3 Rewrite reviewed sections
Monday !     !  X  !     !     !     !     !     !     !     !     !
Tues   !     !  X  !     !     !     !     !     !     !     !     !
Wednes !     !  X  !     !     !     !     !     !     !     !     !
Thurs  !     !  X  !     !     !     !     !     !     !     !     !
Friday !     ! DUE !     !     !     !     !     !     !     !     !
Week 4
Monday <<<<<<<<<<<<<<<<<<<<<Begin FINAL PRINTING/MASSAGE--------------
Tues   !     !     !     !     !     !     !     !     !     !     !
Wednes !     !     !     !     !     !     !     !     !     !     !
Thurs  !     !     !     !     !     !     !     !     !     !     !
Friday !     !     !     !     !     !     !     !     !     !     !
JUNE
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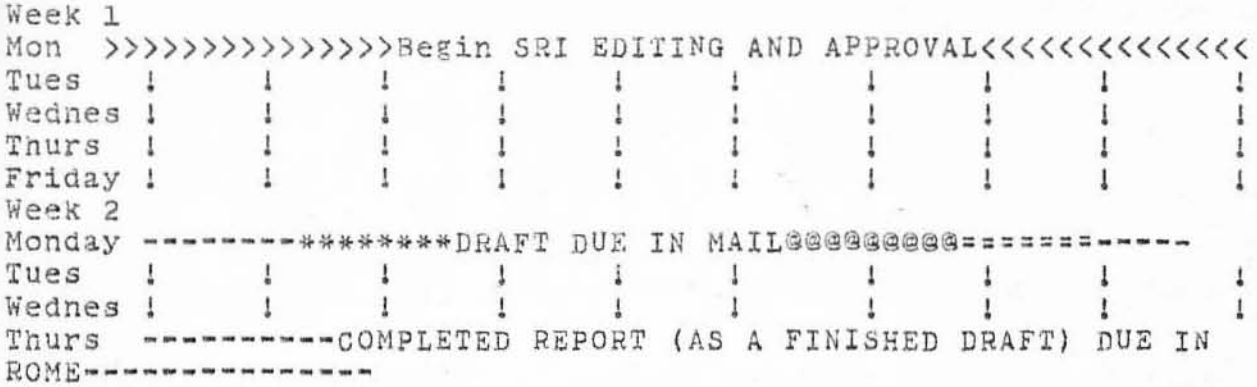
1971 Report to Rome: revised schedule,outline, and procedures



JCN 17-APR-72 17:02 10089

Notes on telephone call from Bill English of Xerox PARC: 4/13/72

1. MOUSE INTERVIEWS: 1

Truett Thatch will be at ARC 4/14 in the am to talk briefly with six or seven ARC users of the mouse and keyset about their reactions to the design of the present devices and to some configurations Xerox is working on. 1a

Truett did visit ARC 4/14, and performed the above interviews. 1a1

He saw JCN, HGL, MFA, JBN, and others. 1a2

2. CYBERNEX DISPLAYS 2

Xerox is ordering 32 display units from Cybernex to be delivered about October 1972 to Xerox PARC 2a

Bill's question is: Does ARC want to order some of the new displays too? Cybernex is interested in making some for us, probably (?) 2b

The terminals cost about $ 4,000 each. Also needed: controller (s?) 2c

ACTION: 2d

We should call Roger Bates at Cybernex to get further discussion of the costs, configurations, and timing if we are interested. 2d1

3. ADDITIONAL RP02 DISKPACKS FOR ARC FROM XEROX 3

Xerox is offering to add one or two RP02's to the ARC equipment configuration to provide more filespace, mainly due to the space needs that will be generated by the MPS project being carried on cooperatively by ARC and Xerox on the PDP-10. 3a

ACTION: 3b

ARC (delivery?) should figure costs and technical requirements to add two more RP02's to the system as fast as possible. 3b1

There are questions about how we would use the added capacity ... does the MPS project get guaranteed use of the extra packs? How can we do so? What other implications are there about Xerox's share of the cost of the system used in the development of MPS? 3b2

JCN 17-APR-72 17:02 10089

Notes on telephone call from Bill English of Xerox PARC: 4/13/72

(J10089) 17-APR-72 17:02; Title: Author(s): James C. Norton/JCN; Distribution: Douglas C. Engelbart, Charles H. Irby, William H. Paxton, James C. Norton/DCE(for action on 2 and 3) CHI WHP JCN; Sub-Collections: SRI-ARC; Clerk: JCN;
Origin: <NORTON>ENGLISH.NLS;1, 17-APR-72 16:55 JCN ; HJOURNAL="
JCN 4 MAY 72 5:10AM xxxx";

*** DRAFT *** Outline of the Operators' Objectives and Responsibilities

The main objective of the operators roles' is to insure that the computer facilities designed for both local and NET usage are available as scheduled. This objective is accomplished by continual monitoring of the state of the system, and performance of a number of daily duties, which are briefly outlined below. 1

The following areas are those which the operators are responsible for as of the present date. 2

1. Maint. of local system 2a

   a. Act as first shot trouble shooter for various system failures, attempting to coordinate activies of software and hardware personnel 2a1

      1. Bring system up from crash 2a1a

         a. Switch out of system any non-working device 2a1a1

         b. Check and repair (if neccessary) directory system 2a1a2

      2. Run diagnostics during day or off-hours 2a1b

   b. Collect statistics and format the UP-DOWN Chart 2a2

   c. Set DBUGSW at its appropriate setting (1 or 2 during day, and 0 during off-hours) 2a3

2. Maint. of NET 2b

   a. Periodically check status of NETSER, esp. 5 am - 6 pm (and take appropriate corrective measures when it fails) 2b1

      1. Cycle NETSER if TELNET fails) 2b1a

      2. If Step 1 fails, notify any NET users, and cycle the NET (NETON off, then on) 2b1b

      3. If Step 2 fails, notify appropriate personnel, and fix hardware and/or cycle the monitor 2b1c

   b. Coordinate hardware efforts concerning IMP (i.e. maintain contact with BBN) 2b2

3. Ride shotgun over file system 2c

   a. Retrieve files from dump and <ARCHIVE> tapes. 2c1

b. Archive files for users 2c2

c. Move files from one directory to another 2c3

d. Copy various files to DEC tape for shipment to other software groups 2c4

e. Insure that there is sufficient disk space (and run DELD if there is not) 2c5

f. Make first shot repairs and adjustments (like disk alloc. and passwords) to directory system 2c6

4. Journal System Maint. 2d

a. Insure that the Journal is available for submission from 5am until 6pm (by trying to submit a message), and notify apropriate personnel if BACKGROUND is in SNKERR, or submission test fails. 2d1

b. Run Journal Hardcopy Formatting job daily (and coordinate appropriate personnel if this fails) 2d2

c. Coordinate printing of Journal Hardcopy 2d3

d. Help WSD fix Journal when it is not available 2d4

5. Insure that a system dump is made after every workday 2e

a. Maintain sufficient number of blank tapes 2e1

b. Coordinate on-call personnel 2e2

6. Maintain various documents of System 2f

a. Update Monitor Listings whenever necessary (about once every week to ten days, whenever a new Monitor is brought up) 2f1

b. Maintain Dump Listings 2f2

c. Update PROCEDURES Manual whenever necessary (same time as Monitor Listings) 2f3

7. Provide user help and aid with various problems 2g

a. More definition will be forthcoming 2g1

*** DRAFT *** Outline of the Operators' Objectives and Responsibilities

(J10090) 17-APR-72 17:02; Title: Author(s): William R. Ferguson/WRF; Distribution: Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, John T. Melvin, Jeanne B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: WRF;
Origin: <FERGUSON>OPR-SCHED.NLS;10, 17-APR-72 16:58 WRF ; ID=WRF;
.HJOURNAL=" WRF 4 MAY 72 5:11AM xxxx";

Brief System Guide for the Baseline Programs

All executable code is contained in <NLS>BASELN. There are constants and variables declared in CONST and DATA. 1

As of this writing there are no known bugs in the Baseline programs. The only maintenance required is the addition and deletion of initials (of people or groups that may appear as workers and/or pushers of tasks) as people leave and join ARC. The strings containing the initials are in CONST. Also the arrays LWKINMNTH (last week in month) and LDAYINMNTH (last day in month) only pertain to 1972 and 73. 2

All variables in DATA are commented. Most of the variables are Baseline Parameters and are documented in the User Guide. 3

The programs in BASELN can be divided as follows: 4

Command Parsers (DNLS and TNLS) 5

The source code should be self-explanatory. 5a

Execution of Commands 6

The source code should be self-explanatory. 6a

Baseline Sequence Generator Programs 7

This program is exactly analogous to a User Sequence Generator Program. The only differences are that it need not be compiled by the user (it's already compiled in NLS) and it is instituted by the Goto Baseline Institude Sequence generator command rather than the Goto Program Institute program xxx as Sequence generator command. 7a

User sequence generator programs are fairly tricky to write so I won't attempt to explain how this program does what it does, but only what it does -- read the source code if you want to find out how. 7b

The program BSQG does three things: 7c

It provides a sequence of strings and/or statements to NLS's sequence generator. 7c1

This is easy, it merely uses NLS's sequence generator. 7c1a

If PERPERS is on, it runs through the file <MSR>BASEDATA once for each of the specified persons/ids. 7c2

PERPERS is one of the Baseline Parameters. When PERPERS

is on, then a view of BASEDATA is produced for each of the id's in the PEOPLE parameter. BSQG is used to append all these views into one continuous sequence. Each id requires a pass from the origin to the end of BASEDATA. 7c2a

If FIXLEV is on, then the statement levels of the things returned to NLS's sequence generator may be changed. 7c3

FIXLEV is a Baseline Parameter. 7c3a

If a sequence has levels missing, e.g., if SUBHED is OFF, there will be no level 3 statements, then Execute Assimilate doesn't do what you would like. FIXLEV fixes up the levels of the things returned so that there are never any levels missing and everything comes out the way you would like. 7c3b

Baseline Viewing Program 8

This is exactly analogous to a Content Analyzer/Reformatter program with the same exceptions as noted for the sequence generator program. It decides (on the basis of the current settings of the Baseline Parameters) which statements of BASEDATA are to be seen and in what format. 8a

I would suggest looking at the descriptions of the Baseline Parameters in the User Guide to see what this program is supposed to be doing. 8b

The only tricky part is in making up calendars (changing the numerical/symbolic dates in BASEDATA to strings of X's or ?'s or whatever) and getting the header and footer to line up with the strings. There's a lot of calculation to figure out how many spaces to put where. 8c

Baseline Checking Program 9

This is another Conan program. It thoroughly scans each statement in BASEDATA, checking as much as it can of the format and content. If anything wrong is found, a terse error message and the offending statement pass the Conan program. 9a

I would suggest looking at the possible error messages (which are documented elsewhere) to see what this program is supposed to be doing. 9b

BLP 18-APR-72 22:14 10091

Brief System Guide for the Baseline Programs

(J10091) 18-APR-72 22:14; Title: Author(s): Bruce L. Parsley/BLP; Distribution: James G. Mitchell, L. Peter Deutsch, Diane S. Kaye, Don I. Andrews, Walt Bass, William S. Duvall, Mary S. Church, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, John T. Melvin, Bruce L. Parsley, William H. Paxton/NPG; Sub-Collections: SRI-ARC NPG; Clerk: BLP; Origin: <PARSLEY>BLSG.NLS;3, 18-APR-72 22:12 BLP ;

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To:
Access Copy

10123

EHF 19-APR-72 5:53 10123

SPEAKEasy

(J10123) 19-APR-72 5:53; Title: Author(s): Ernest H. Forman/EHF; Distribution: A. D. (Buz) Owen, Robert L. Fink, Karl C. Kelley, Schuyler Stevenson, Charles Holland, Jeanne B. North, Charles Holland, George N. Petregal, Steve D. Crocker, Thomas F. Lawrence, John W. McConnell, John F. Heafner, Robert E. Long, Ari A. J. Ollikainen, James E. White, A. Wayne Hathaway, Dan L. Murphy, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Robert L. Sundberg, Joel M. Winett, Abhay K. Bhushan, Peggy M. Karp, Thomas N. Pyke, Abe S. Landsberg, B. Michael Wilber, James A. Moorer, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, Barry D. Wessler, John T. Melvin/NLG; Sub-Collections: NIC NLG; Clerk: EHF;

SPEAKEasy

SPEAKEASY is a system that provides scientists with easy access to the power of a modern computer by providing a highly modular library of routines that can be joined together into an operational program. The routines of the system resemble true mathematical operators. A problem is programmed by bring together the needed operators with a simple directive language. The language is easily learned since its form is similar to that of scientific mathematics.

SPEAKEASY was developed by the Argonne National Laboratory to serve the field of nuclear shell-model studies and has since become a generalized program. It is presently available on UCSB's 36075 thru their on-line- system. For additional information on SPEAKEASY and its use contact me or call SPEAKEASY's author Dr. Stan Cohen:

Physics Division
Argonne National Labs.
9700 South Cass Ave
Argonne, Ill.
Phone: 312-739-7711, ext 2857 or 2862

1

NLS 2

Primitive NLS Debugger >WSD JTM 2a

Requirements: 2a1

A source level debugger with capabilities to examine stack, data, fields of records, set break points and continue from them, etc. 2a1a

Parser and core routines to implement this debugger in NLS. 2a1b

OP FR80 Stuff >BLP? 2b

Requirements: 2b1

Do stuff like different character sizes, switch to grid coordinates, etc. 2b1a

Device Command >CHI 2c

Requirements: 2c1

Provide an Execute Device command that would enble a user to switch back and forth from DNLS and TNLS. 2c1a

DEX II >HGL DCE CHI WLB 2d

Requirements: 2d1

Allow user to specify many commands before any of them are executed. Would be primarily used from off-line. 2d1a

(Journal,6936,) 2d1b

Basic File System >JDH WHP 2e

Requirements: 2e1

Write and debug the primitives functions for the new NLS file system (property lists). 2e1a

File System Design >CHI WLB JDH 2f

Requirements: 2f1

1) Catalog file which allows 2f1a

Backlinks 2f1a1

Comments on both ends of links, and independent comments archive info -- interface with BSYS archive system 2f1a2

file comments 2f1a3

2) Allow NLS files to include portions of other NLS files 2f1b

implements set system capabilities 2f1b1

3) Design set definition language and set evaluation, etc. command language 2f1c

DNLS Address Options >CHI 2g

Requirements: 2g1

Make all TNLS statement address options available in DNLS. 2g1a

NLS Verification Driver >CHI 2h

Requirements: 2h1

Some way of automatically executing all of the DNLS and TNLS commands to see that they are there and that they work (to some degree anyway). 2h1a

Smarter Fast Create Display >CHI DSK? 2i

Requirements: 2i1

Rewrite sections of display support routines in NLS to accomplish: 2i1a

a) Selective updating for display areas representing files affected by structural edits. 2i1a1

b) Selective reformatting and display refreshing for statements affected by structural editing. 2i1a2

Dynamic User Program Buffer >WLB WHP 2j

Requirements: 2j1

Make the size of the buffer which holds user programs dynamic. Under user control. It will take space from the file pages. See WHP and BLP for implementation information. 2j1a

NET Coupling to NLS >JDH? WSD? CHI? HGL JTM 2k

Requirements: 2k1

Entry to NLS from foreign text systems. 2k1a

Mail delivery to ARC Printer. 2k1b

Subtasks: 2k2

Sequential File IO >CHI? 2k2a

Requirements: 2k2a1

Make it possible to do an output sequential followed by insert sequential (and vice versa) preserving initial structure and content. Define format of sequential file so that users of other editors can get their extant files into NLS files (hopefully with minimal effort on their part -- maybe a set of optional formats, although this does not seem desirable from out viewpoint). 2k2a1a

Buyer(s): 2k2a2

NIC, SEAS 2k2a2a

Costs: 2k2a3

2 man weeks. 2k2a3a

Journal Delivery Options >JDH WSD? 2k2b

Requirements: 2k2b1

Fix up elegant means of determining whether documents should delivered on- or off-line. 2k2b1a

Online Remote Delivery >JDH WSD? 2k2c

Requirements: 2k2c1

Be able to deliver Journal items to online files at the remote host of the addressee. 2k2c1a

Sub-Contracts: 2k2c2

(,Network'File'Transfer) 2k2c2a

DEX Over Net >HGL JTM 2k2d

Requirements: 2k2d1

Allow input with DEX over net from punched tape, sequential files from text editors such as TECO, etc. 2k2d1a

Jrnl Selective Dissement >WSD? JDH? 2k2e

Requirements: 2k2e1

Build a module to plug into the journal distribution mechanism that will selectively disseminate access copies to author(s), distribution, station collection(s) and disseminate items based on some crude interest basis to other sites. 2k2e1a

Jrnl Remote Hardcpy Dlvr >JDH? WSD? 2k2f

Requirements: 2k2f1

Use the Network Mailbox facility to deliver Journal items to be printed at the remote site of the addressee. 2k2f1a

Sub-Contracts: 2k2f2

(,Network'File'Transfer) 2k2f2a

NLS Execute Logout Command >DSK 2l

Requirements: 2l1

Execute Logout command in NLS. 2l1a

Journal Comment Command >WSD? JDH? CHI? CHI? 2m

Requirements: 2m1

A Journal Comment Command should be added to DNLS. Syntax 'E'J'C('M BUG flag ← true;/BUG flag ← False) TEXT CA 2m1a

Semantics: submits the inputted text, preceded by "comment on (LINK to statement or message): CR" as a Journal Message and distributes it to the identlist which received the original message/file 2m1b

This could be expanded to allow bugging a structure as an alternative to TEXT. If a message is being commented on, the

Journal number is bugged, otherwise the statement is bugged and the link (Journal, Journal number, statement number) is created. 2m1c

The initial text (up to a CR or to 72 chars will be used as a title. 2m1d

Calculator >NLS 2n

Requirements: 2n1

Reinstate the old Calculator, add graphics and ability to work on tabular data. 2n1a

Graphics >JDH? JTM? RWW 2o

Requirements: 2o1

Make a graphics package. May be intimately related to the calculator. 2o1a

May include ways to specify from typewriters drawings in TNLS which, when output through Output Processor, would create line printer drawings. 2o1b

File Property List Convert >JDH? 2p

Requirements: 2p1

A way to convert our present files to the new file way. 2p1a

Property Lists in NLS >JDH? 2q

Requirements: 2q1

Change NLS to use the new file system (property lists). 2q1a

NLS Written for MPS >WHP WLB? WSD? CHI HGL? JTM? JDH? JGM? LPD? 2r

Requirements: 2r1

Redesign, rewrite NLS to use facilities of MPS. 2r1a

Baseline Task Requirements as of 10 MAY 72 for: All

TENEX 3

SUPERWATCH Extensions >DIA 3a

Requirements: 3a1

A better WATCH program that displays statistics on screen. 3a1a

Evaluate RST File System >DCW KEV? RLD? 3b

Requirements: 3b1

Evaluate RST's new file system and decide whether to implement. 3b1a

Shared Page Manage Evaluate >DIA BBN 3c

Requirements: 3c1

TENEX didn't handle core management of shared pages very well. Don devised a better scheme. BBN modified that scheme. Don will look at BBN's scheme and see if will suit our purposes well enough. 3c1a

Crunch Working Set JSYS >DIA BBN 3d

Requirements: 3d1

Implement a JSYS to crunch your working set whenever a job feels it won't use the pages now in it. 3d1a

System Efficiency Study >DIA MDK 3e

Requirements: 3e1

Study measurements and plan system changes to increase efficiency and capacity of system. 3e1a

Increase Capacity Plan >DIA RWW CHI MDK 3f

Requirements: 3f1

Develop plan for increasing capacity -- considering things like more core, disk packs, etc. 3f1a

Literal Collection by Monitor >CHI DIA 3g

Requirements: 3g1

Have the monitor do literal collection and feedback without awakening the job (like a fancy immediate echo) with wakeup conditional on receiving one of a set of break characters or on recieving a certain number of characters. 3g1a

Sequential Display Area >CHI WSD 3h

Requirements: 3h1

Change Allocate Display Area JSYS to also allow allocation of a "Sequential" display area. A Sequential Display area is a generalization of tty simulation. Also change tty routines for tty simulation to use a seq. da. Add a JSYS to make a seq. da a copy of tty simulation. 3h1a

NET Measure >DIA JTM? 3i

Requirements: 3i1

Some measurement hooks needed to see what extra overhead is involved with Network users as opposed to local users. 3i1a

Subroutine File Study >CHI DCW? JTM KEV 3j

Requirements: 3j1

Feasibility study into possibility of implementing a simple subroutine-file mechanism in the file system, disregarding file-related capabilities which do not make sense for subroutine files. Sub-files would facilitate use of other subsystems (like telcom, Macro, Fail, etc) from NLS. Note: this also includes subsystems running on other Network Hosts. 3j1a

BSYS >DCW KEV? RLD? 3k

Requirements: 3k1

More things for the Backup SYStem. 3k1a

Subtasks: 3k2

Full Dump Restore >DCW KEV? 3k2a

Requirements: 3k2a1

Full dump/restore function. 3k2a1a

Complete checkout of full dump/restore. 3k2a1a1

Single Dump Restore >DCW KEV? 3k2b

Study Core Size >DIA 3l

Requirements: 3l1

We need some idea whether or not we are operating at any point in time at a bad point with respect to total core. We cannot simulate the effect of additional core, but we can try to determine if we are at a point sensitive to core size by running a load of standard users as described above against a system in which we can gradually logically remove pages of memory and then measure response and other parameters. 3l1a

User Disk Overlap JSYS >KEV DCW RLD? 3m

Requirements: 3m1

Write new JSYS so we can overlap disk operations with processing in user mode. 3m1a

Network File Transfer >JTM 3n

Requirements: 3n1

Be able to transfer files to and from other sites on the Network. 3n1a

Net Error Handling >DCW KEV? RLD? 3o

Requirements: 3o1

More and better error checking and recovery from errors in the Net stuff. 3o1a

Bug Selection In Monitor >CHI? 3p

Requirements: 3p1

Have the monitor do bug selection without awakening the job (like a fancy immediate echo). 3p1a

Improve Xcore Diagnostic >DCW KEV? RLD? 3q

Requirements: 3q1

Improvements to the present Xcore diagnostic. 3q1a

IMP Interface Diagnostic >EKV JTM? 3r

Requirements: 3r1

Write a diagnostic for our IMP interface hardware. 3r1a

NIC 4

Catalog Card System >RWW JBN DRC 4a

Requirements: 4a1

Design a means for producing cards for the NIC documents, cards to be sent to stations. 4a1a

Auto Transmittal Letter >JBN RWW 4b

Requirements: 4b1

Automatically generate weekly transmittal letter as a product of the Nic Catalog input. 4b1a

Data Management Needs >RWW 4c

Requirements: 4c1

Deciding what the data management needs of NIC are and seeing about haveing them satisfied. 4c1a

New Improved Netstat Command >JTM 4d

Requirements: 4d1

Design a new Network Status Command. 4d1a

Karp Categories >JBN 4e

Requirements: 4e1

Establish Karp categories for NIC documents, where not already established, code them, and enter information into catalog. 4e1a

NIC Operations Coordinator >RWW JCN DCE 4f

Requirements: 4f1

A person to coordinate NIC operations. 4f1a

DSS 5

Flexdoc >WSD 5a

Requirements: 5a1

A system to aid in the manipulation, protection, and coordination of documents in the formative state. 5a1a

See (Journal, 8137,1,). 5a1b

Net Access Copy Processor >WSD? JDH? 5b

Requirements: 5b1

This processor will take an access copy from the Journal and make copies for author(s) and receiver(s) station collections and for documents to groups it will send an access copy to those access collections of sites desiring to be on distribution for that group. 5b1a

Identification System Stage II >WSD 5c

Requirements: 5c1

The Identification System enables keeping information about all the people known to it -- like name, initials, account number, address. 5c1a

DSS Design >WSD 5d

Requirements: 5d1

Think and write about long term DSS stuff. 5d1a

Library'Catalogs 6

Catalog Project Plan >BAH DVN 6a

Requirements: 6a1

To make a project plan for updating the NIC Catalog in the future. The plan will be based on the procedures in my file, Recipe, and the flow chart Beau drew to go with it. It will include a detailed schedule, fine definitions of what each worker is doing, meetings, and provision for changing the plan as it goes along. 6a1a

Winter 72 NIC Catalog >DVN RWW JBN BER WLB CP MEJ BAH LLL 6b

Requirements: 6b1

A new set of catalogues of the NIC collection; similar in form to the present catalogue including many new entries. 6b1a

Catalog System >WLB RWW WHP HGL 6c

Requirements: 6c1

Design the Master Catalog System. 6c1a

Backlog NIC Docs Ident >JBN RWW MEJ 6d

Requirements: 6d1

Identify NIC documents among site docs held by ARC. 6d1a

MSR 7

Develop RADC ARC Baseline >JCN PXR 7a

Requirements: 7a1

RADC wants to do some Baseline kinds of things. 7a1a

Resource Accounting Design >JCN EKV RWW DCW 7b

Requirements: 7b1

Develop system for keeping track of how are our various resources are used. These include people time and productivity, computer system power, materials, dollars. 7b1a

Requirements from NIC: 7b1b

Catalog input 7b1b1

Duplication 7b1b2

Phone 7b1b3

Mailing 7b1b4

Training 7b1b5

System development 7b1b6

Computer operations 7b1b7

BRS Design >BLP JCN 7c

Requirements: 7c1

Ongoing design work and thinking about BRS. 7c1a

Roles Development >JCN DCE RWW EKV CHI 7d

Requirements: 7d1

Developing the internal organization of ARC and defining what kinds of roles there are to play. The idea is to design an organization and then implement it, considering the whole thing as an experiment. 7d1a

Documentation 8

Super Watch Doc >DIA 8a

Requirements: 8a1

Document the new Super Watch program. 8a1a

Document SRI JCIES >RLD DIA KEV CHI WSD 8b

Requirements: 8b1

Collect and/or create for JSYS Manual documentation of JCIES written at SRI. 8b1a

New TNLS Command Summary >MFA 8c

Requirements: 8c1

A summary of new TNLS Commands. 8c1a

Revise TNLS Ref Manual >MFA 8d

Requirements: 8d1

1) Fill out to make complete
2) Clean up glitches and other problems found in first release. 8d1a

DNLS User Guide >MFA 8e

Requirements: 8e1

A full-blown users' guide for NLS on TENEX. 8e1a

TNLS Primer >MFA 8f

Requirements: 8f1

Write a primer of basic TNLS functions suitable for introducing a typist to TNLS. 8f1a

Baseline System Document >BLP 8g

Requirements: 8g1

Write system documentation about the Baseline software. 8g1a

OP System Document >BLP WLB? 8h

Requirements: 8h1

Write system documentation about the Output Processor. 8h1a

TNLS User Workbooks Wave 2 >DVN 8i

Requirements: 8i1

Workbook kinds of things for teaching TNLS users. Intended for NIC Station Agents and others. 8i1a

Visitor Log System >JCN MFA 8j

Requirements: 8j1

Visitor log system design and implementation
See (9613,) for proposed design.
The procedures need documenting and put into use. 8j1a

RADC Final Report 8457 >DVN JCN MFA CHI WHP RWW WLB HGL WSD DCE DCW KEV BLP JBN 8k

Requirements: 8k1

Final Report for project 8457 (RADC/ARPA) 8k1a

Needs a plan, contributor assignments, sections written, integrated, edited, approved, reproduced. DVN is suggested for pusher to see that it falls together. 8k1a1

Draft is due at RADC 6-8-72 in clean, ready to print (unless changed) form. 8k1a2

TENEX System Guide Write >DIA JTM DCW 8l

Requirements: 8l1

Along with other measures of the TENEX Users' Group, develop documentation for TENEX. 8l1a

Subtasks: 8l2

TENEX Scheduler Document >DIA 8l2a

Requirements: 8l2a1

An explanation of how the scheduler works. 8l2a1a

NCP Document >JTM 8l2b

Requirements: 8l2b1

An explanation of how the NCP works. 8l2b1a

Telnet Document >JTM 8l2c

Requirements: 8l2c1

An explanation of how Telnet works. 8l2c1a

TENEX File System Doc >DCW 8l2d

Requirements: 8l2d1

Documentaion of the TENEX file system. 8l2d1a

TENEX Memory Manage Doc >DIA 8l2e

Requirements: 8l2e1

Another section of the TENEX documentation. 8l2e1a

NLS Documentation >CHI WHP 8m

Requirements: 8m1

1) overview of NLS -- how functional areas and procedures interact. 8m1a

2) description of levels of NLS 8m1b

3) standard format for procedure doc and make sure it is there. Processes to extract this. 8m1c

Document Sort Keys >DVN 8n

Requirements: 8n1

There are a number of L10 sort key making programs around in different people's directories useful for different purposes and valuable to many people if documented and available. 8n1a

Dump Procedure Doc >WRF 8q

Requirements: 8o1

Writeup full dump procedure. 8o1a

Miscellaneous 9

Tasker Upgrade >EKV 9a

Requirements: 9a1

Our display system needs improvement. Perhaps by tweaking and tuning and modifying our present equipment or perhaps even by getting a new display system. 9a1a

Hardware Documentation >EKV BAH 9b

Requirements: 9b1

Bring documentation on all our hardware up to date and make it complete. MEH and BAH will do documentation that serves hardware trouble-shooters. will do documentation that serves programmers. 9b1a

Control Environment >CHI DIA 9c

Requirements: 9c1

Set up so that the system can be run repeatedly under the same (controlled) load - a benchmark - so that good measurements can be taken. 9c1a

Hierarchy Orientation >DVN RWW JBN 9d

Requirements: 9d1

Through discussion and teaching aids to establish rough default notions of how the hierarchy of NLS should be used in entering text. 9d1a

PSST Procedure Development >JBN DRC HGL WLB BAH LLL BER MEJ DVN MFA 9e

Requirements: 9e1

Develop plans (and implement them) for PSST procedures - hiring, training, modes of operation. 9e1a

Video Tape Equip Study >HGL MEH??? 9f

Requirements: 9f1

Find relevant data on video tape recorder, camera system,

summarize, and present to operations and New Development people for consideration. We should aim toward a setup that will: 9f1a

-- allow both screen recording of text and "environmental" (people, things) views. Two cameras? for later mixing to produce one integrated tape for use in demos, etc. 9f1a1

-- be compatible with a projection TV under consideration (as another baseline task). -- JCN 9f1a2

ONR Annual Report 8622 >DCE JCN JBN??? 9g

Requirements: 9g1

Annual Report for project 8622 (ONR).
This needs writing and publishing (5-10 pages).
Due 5-15-72. 9g1a

Projection TV >EKV MEH JCN? 9h

Requirements: 9h1

1. Produce specifications for a workable Projection TV system that will: 9h1a

-- be used in ARC conference room. 6'x8' screen? larger? 9h1a1

-- be operated by users, not projection "experts". 9h1a2

-- be compatible with our displays. 9h1a3

-- have good resolution, stable projection. 9h1a4

-- other features to be sought out from CHI, DCE, JCN, DVN, and others. 9h1a5

2. Find potential suppliers of equipment that meets requirements. Costs, delivery times needed. 9h1b

Demonstration Training >JCN DVN MFA ??? 9i

Requirements: 9i1

ARC Demonstrations -- Training of ARC people, organizing of See (9615,) fro draft of this task need, requirements, plan. 9i1a

RADC Equip order >JCN MEH EKV 9j

Requirements: 9j1

Order IMLAC's and termicettes for RADC as per proposal ISU72-48 See (9249,) for details. 9j1a

Followup until approved, ordered, and delivered. 9j1b

Operations Development >EKV JCN DCW MDK 9k

Requirements: 9k1

Developing procedures and practices for providing service. 9k1a

MPS Development >WHP JGM LPD HGL 9l

Requirements: 9l1

Allow programmers to easily modify and debug large systems of programs by providing facilities for adding and replacing modules of the system and source language level debugging. 9l1a

Small Machine Study >CHI WHP 9m

Requirements: 9m1

Feasability study of use of small machine(s) to act as buffers between users and TENEX. The program running in this (these) small machine(s) would be the interactive segment of NLS (i.e., the users would interact with this program to specify a command), and the program running on the TEN would be the non-interactive file manipulation segment of NLS. 9m1a

We would probably want a simple operating system for the small machine(s), with no swapping and no file system. 9m1a1

User Program Techniques >WLB BAH DVN MFA? 9n

Requirements: 9n1

Helping Beau learn how to program. 9n1a

MPL Written in MPL >WHP LPD JGM 9o

Requirements: 9o1

Make MPL self-compiling by adding Tree Meta like facilities and rewriting compiler. 9o1a

Baseline Task Requirements as of 10 MAY 72 for: All

Recruiting >JCN CHI DCE RWW EKV ??? 9p

Requirements: 9p1

1 new hardware engineer -- EKV/JCN 9p1a

1 documentations specialist -- for RADC/ARC work -- JCN 9p1b

1 research analyst/programmer -- for RADC/PSO work -- JCN 9p1c

4? several senior professionals -- DCE 9p1d

2 System Programmers (4?) -- CHI 9p1e

NLS'Maintain 10

Rerun NLS Xref >WSD 10a

Requirements: 10a1

The "catalog" or cross-reference of subroutines is badly out of date. 10a1a

NLS Clean Up >CHI DSK NLS 10b

Requirements: 10b1

There are a number of things that should be done: Clearly define the boundaries between core routines, x routines, and user interaction (control) routines, delete most globals, break things into subroutines differently, break routines into files differently, rewrite IOEXEC, "prettify" the source code files, etc., etc., etc. 10b1a

Subtasks: 10b2

Finish Help >NLS 10b2a

Requirements: 10b2a1

The Help command is incomplete and sometimes erroneous. MFA has a list of some of its short comings. 10b2a1a

Jump Cntnt etc Cmnd Spec >NLS 10b2b

Requirements: 10b2b1

Eliminate need to type 'a after Jump to Name, Jump to Content, Jump to Word, etc. -- perhaps by letting one bug name register. 10b2b1a

Jump Feedback Stuff >NLS 10b2c

Requirements: 10b2c1

After a Jump to Return is completed, the up arrow in the command input line doesn't return -- KEV. 10b2c1a

In the first place, Jump Return and Ahead don't show an arrow under the CRL like every other NLS command -- BLP 10b2c1b

The bug mark should disappear (or change from an @ to an *) after the final CA in both Jump Link and Jump File Return -- KEV 10b2c1c

Conan Glitch >NLS 10c

Requirements: 10c1

When you have a content analyzer in force and type in a new pattern as lit, the system rejects it with a message like "no compiler input" unless it fits the pattern in force. That doesn't make sense because the new pattern is not part of the file. Should be fixed only if it's easy. -- DVN 10c1a

Debug Substitute Plex >NLS 10d

Requirements: 10d1

When you substitute an item which occurs in a few statements in a large file by substitute plex, it fails to make some of the substitutions. The feedback tells you the number of substitutions you actually made (i.e., a number lower than the actual occurrence of the string). -- DVN 10d1a

Create Display Problems >CHI DSK NLS 10e

Requirements: 10e1

A collection point for all bugs and glitches having to do with create display, bug selection, etc. 10e1a

Subtasks: 10e2

CD Tabs and Tabstops >DSK CHI? NLS 10e2a

Requirements: 10e2a1

If there are n regular characters in a statement and then a tab and there is a tabstop set to the n+1st column, then the tab character ought to be displayed in the n+1st column and the next character in the n+2nd column. 10e2a1a

Currentsly the first tab (column 8) can indeed occupy the 8th column and there can be a character in the 7th column. However any subsequent tabs cannot have a character in the column immediately preceeding the column of the tabstop. 10e2a1b

CD Gym Bug >DSK CHI? NLS 10e2b

Requirements: 10e2b1

Where G - (statement #s on rt)
y - (blank lines)
m - (statement #s on) 10e2b1a

Viewspecs are on, create display messes up - extra characters appear and bug selections are bad. Several horrible editing errors occurred because of this -- HGL. 10e2b1b

CR Bug Mark Glitch >DSK CHI? NLS 10e2c

Requirements: 10e2c1

When a statement ends with an EOL and the cursor is placed in the (blank) line below the EOL, a bug selection puts the bug mark in the blank line and gives the message, "illegal string designator" -- BLP. 10e2c1a

CD State Nums Right Bug >DSK CHI? NLS 10e2d

Requirements: 10e2d1

When statement numbers are to be displayed on the right and there is an EOL in the first line of the statement or blank lines are on, Create Display fucks up : extra characters appear and bug selections are bad -- BLP HGL. 10e2d1a

CD Large Char Tab Bug >DSK CHI? NLS 10e2e

Requirements: 10e2e1

If character size is set to 2 and there are tabs in a statement, Create Display does not break lines the right way the tail end of the line is displayed in the left margin -- BLP 10e2e1a

Tab Bug Selection Glitch >DSK CHI? NLS 10e2f

Requirements: 10e2f1

If there is more than one tab in a line 10e2f1a

the cursor is in the blank space after any tab but the first or the cursor is beyond the right end of the line 10e2f1a1

and a bug selection is attempted: 10e2f1a2

the bug mark is shown in the column after the tab or the last character in the line 10e2f1b

the character selected is the character after the tab or EOL or the character after the end of the statement (an error message results in the latter case) -- BLP. 10e2f1c

Frozen Bug Mark Glitch >DSK CHI? NLS 10e2g

Requirements: 10e2g1

When bug selecting a frozen statement, the bug mark is not always displayed -- BLP. 10e2g1a

File Alloc Exceed Glitches >NLS 10f

Requirements: 10f1

When a user exceeds his file space allocation:
NLS often crashes with a PUSHDOWN STACK OVERFLOW after an Execute Quit; the new file is sometimes left open, meaning you can't update to it any more, etc. -- BLP. 10f1a

RSTLIT CR Glitch >NLS 10g

Requirements: 10g1

When do an Insert Character and the character is a carriage return, the top line of the display does not get restored on completion of the command -- BLP. 10g1a

Change @ in Statement Numbers >NLS 10h

Requirements: 10h1

Should be able to address a statement number directly which contains an alphabetic zero (i.e., statement number 1B@) without the system bombing out to your NLS file. At present must approach such a statement indirectly through ↑ or LINE FEED. Cannot now do any work or editing on a statement with that kind of number. Striking the @ key on the TI terminal, regardless of where pointer is sitting, throws you out to your NLS file. -- MEJ 10h1a

Generalize Substitute >NLS 10i

Requirements: 10i1

Allow Substitute (Text/Word/Visible...). 10i1a

Marker Bugs and Glitches >NLS 10j

Requirements: 10j1

Something is freaky with Execute Marker List Show. I suspect it will list only markers that were created in this partial copy -- although the older ones will function as addresses. 10j1a

While we're about it, they might stay on the screen longer--DVN. 10j1b

Output file destroys markers. 10j1c

Execute marker lists show goes by much too fast -- it should stay until turned off by a CA. 10j1d

Modify Open File Glitch >NLS 10k

Requirements: 10k1

It is currently possible that two persons (or a person and the Journal) could both modify the same version of the same file and one of the sets of modifications would be lost. If a file is open, but not locked, another person (or process) could open it, modify it, and update it. Subsequently the person who had it open in the first place could do the same thing. 10k1a

The following solution is proposed: 10k1b

Whena PC is about to be created (first edit), check if there exists a higher version of the file. If so, issue a warning message. If an Output File is requested, there is no PC, and there exists a higher version of the file, issue a warning message -- WSD BLP. 10k1b1

Recovery from Bad File >NLS 10l

Requirements: 10l1

NLS must be able to go on after "bad file". Should be able to load another file -- WHP. 10l1a

Jump File Return To Char Pos >NLS 10m

Requirements: 10m1

In TNLS Jump File Return should restore the character position pointer as well as just getting you back to the previous statement -- DIA. 10m1a

Journal'Maintain 11

Journal Reenter Capability >JDH WSD? 11a

Requirements: 11a1

Allow the user to reenter the "submit" subcommand, preserving the parameters from the preceeding "submit". Useful in case user bombs out due to Journal systems errors. 11a1a

Journal Speedup Phase II >JDH WSD 11b

Requirements: 11b1

Speed up the Journal. 11b1a

JNLDEL Problem >NLS 11c

Requirements: 11c1

Solve the problem of people doing a Jump File Return to get to their initial file while in the meantime Journal Online Delivery has updated the file. 11c1a

One suggested way: 11c1b

Have JNLDEL set a bit in the FDB whenever it updates an initial file. 11c1b1

Jump File Return would then check that bit and if on, would display a warning message, e.g., "Journal has updated this file. There is a higher version." 11c1b2

Journal Number Bug >WSD JDH 11d

Requirements: 11d1

When submitting a message to the Journal, if you hit the wrong character when asked for "Number:", you get bombed out and lose all the effort you put into composing the message. Instead of getting bombed out of the Journal system, you should either: 11d1a

(1) Be asked repeatedly for "Number" until you give a correct response or 11d1a1

(2) Be given a chance to enter the number using a "Number" command ("Go won't work until you have). 11d1a2

I think that (1) is probably preferable -- WLB. 11d1b

Preassign Number Glitch >WSD JDH? 11e

Requirements: 11e1

!A (backspace character) doesn't work, apparently, to correct an incorrectly typed preassigned number -- BER. 11e1a

TENEX'Maintain 12

Disk Diagnostic Changes >DCW KEV? RLD? 12a

Requirements: 12a1

A bunch of things to do to improve the disk diagnostic. 12a1a

Subtasks: 12a2

Rdisk User Mode >DCW KEV? 12a2a

Requirements: 12a2a1

Make rdisk so if runs in user mode with restricted write capability. 12a2a1a

User Interface >DCW KEV? 12a2b

Requirements: 12a2b1

Redo so runnable by hardware troops without infinite knowledge of DDT -- primarily default to do the "right" thing and play question and answer game where practical. 12a2b1a

GTJFN Free Storage Bug >DCW KEV? RLD? 12b

Requirements: 12b1

gtjfn problem (Duvall) suspected free storage bug. 12b1a

JSB String Storage Bug >DCW KEV? RLD? 12c

Requirements: 12c1

This is the bugg that screws up Journal Hardcopy Distribution. 12c1a

Directory Smasher >DCW KEV? RLD? 12d

Requirements: 12d1

Directory smasher (believed related to Dumper Loop Bug). 12d1a

Cleanup Network Code >DCW KEV? RLD? 12e

Requirements: 12e1

Recode 24-36-24 bit word transformation. 12e1a

Network crash/recovery 12e1b

no bughlt's in network code 12e1b1

possible write "crash copy" and restart for net stuff 12e1b2

bughlt/bugchk analog for net 12e1b3

Refuse connection should be more informative. 12e1c

In Out Assembler File Spec >DCW KEV? RLD? JTM 12f

Requirements: 12f1

A specification for what Input Sequential and Output Assembler File commands ought to do. 12f1a

On Line Disk Diagnostics >DCW KEV? RLD? 12g

Requirements: 12g1

Make diagnostics that will run on-line (when the disk is not being used as a file storage device). 12g1a

User Change Password >DCW KEV? RLD? 12h

Requirements: 12h1

Allow a user to change his own TENEX password. 12h1a

Loader Glitch >JTM DCW KEV? RLD? 12i

Requirements: 12i1

Fix the loader so it does the right thing with the symbols when loading in the high segment. 12i1a

TENEX Users Group >DCW KEV? RLD? DIA JTM? 12j

Requirements: 12j1

Participation in the TENEX Users' Group. 12j1a

Bugck and Bughlt Watch >DCW KEV? RLD? 12k

Requirements: 12k1

Keeping an eye on bugcks and bughlts in order to spot troublesome areas. 12k1a

Ongoing Tasks 13

Journal Catalog >JCN BAH WSD 13a

Requirements: 13a1

Print and reproduce current Journal catalog/indices. 13a1a

Continue to update author and titleword monthly with weekly number index update including new entries. 13a1b

Enter catalogs/indices into Journal as produced. 13a1c

File hardcopy with access and DCE sets. 13a1d

NIC Evolution Plan >RWW 13b

Requirements: 13b1

Develop a plan for NIC's evolution and relationship to ARC and BC, its scope and mission. 13b1a

NET Operations >RWW JBN MFA DVN JTM BER JCP CP CBH EKV MEH MEJ 13c

Subtasks: 13c1

Folklore Maintenance Pub >MFA DVN? 13c1a

Requirements: 13c1a1

Folklore is extracted from <NLS>STATUS periodically to contain information for Network people not in the User Guide. 13c1a1a

NIC Repro and Distrib >JBN CP BER JCP 13c1b

Requirements: 13c1b1

Replaces reproduce Send NIC Docs moving to NET Operations. 13c1b1a

Help to Net SA s >JBN 13c1c

Requirements: 13c1c1

Rewording of task: Station Agent Help 13c1c1a

Help For Net Users >MFA 13c1d

Requirements: 13c1d1

Answering the phone that NET users call to ask questions about NLS, TENEX, etc. 13c1d1a

NIC Station Agent Ops >JBN CP 13c1e

Requirements: 13c1e1

Continuing work of the NIC Station Agent. 13c1e1a

NET ID Entry >JTM BER 13c1f

Requirements: 13c1f1

Getting new NET users' identification information into the system so they can log into us. 13c1f1a

NET Site Training >DVN RWW 13c1g

Requirements: 13c1g1

On-going site training. 13c1g1a

NIC Resource Locator >DVN 13c1h

Requirements: 13c1h1

Keep the NIC Resource Locator up-to-date. 13c1h1a

Station Agent Help >JBN 13c1i

Requirements: 13c1i1

Station Agent Manual 13c1i1a

Site visits 13c1i1b

Suggestions on storage circulation 13c1i1c

NIC Supply Inventory >JBN CP BER CBH 13c1j

Requirements: 13c2

Ongoing operations for the ARPA Network. 13c2a

DEX-1 Training >MFA HGL 13d

Requirements: 13d1

Train first PSST clerical staff in use of DEX-1 using DEX-1 manual. 13d1a

Library Catalogs Operations >JBN RWW MEJ BER CP LLL WLB PML 13e

Subtasks: 13e1

Cat Production Programs >WLB 13e1a

Requirements: 13e1a1

Maintenance of programs that produce catalogs, indices, and directories. 13e1a1a

Code Abstract NIC Docs >JBN BER 13e1b

Requirements: 13e1b1

Code, abstract, check coding, and proof new NIC documents. 13e1b1a

Code Abstrct Record RINS >JBN MEJ BER 13e1c

Requirements: 13e1c1

Non-NIC documents, including those presently held and new receipts, must be processed for the catalog and files. 13e1c1a

Enter NIC Docs >JBN BER PML 13e1d

Requirements: 13e1d1

Online and/or DEX entry and correction of of catalog entries for NIC documents. 13e1d1a

Identify NIC Docs >RWW JBN 13e1e

Requirements: 13e1e1

Search out references to documents desirable for NIC. 13e1e1a

Monitor Functional Docs >JBN CP 13e1f

Requirements: 13e1f1

Functional documents should be kept current by examination of their content and NIC-initiated changes in them. 13e1f1a

Obtain NIC Docs >JBN BER LLL 13e1g

Requirements: 13e1g1

Obtain ARPA reports and Karp biblio documents for collection. 13e1g1a

Buyer(s): 13e1g2

NIC 13e1g2a

Obtain RINS Documents >JBN LLL 13e1h

Requirements: 13e1h1

Obtain books, journals and documents for collection. 13e1h1a

Buyer(s): 13e1h2

NIC 13e1h2a

Weekly RINS Doc List >JBN BER 13e1i

Requirements: 13e1i1

ARC persons need of list of what's received. 13e1i1a

Upgrade Master Catalog >JBN MEJ 13e1j

Requirements: 13e1j1

To make corrections to citations in the Master Catalog, to conform with present data element conventions, making possible the production of full, accurate catalog listings. 13e1j1a

Requirements: 13e2

Updating catalogs and collections, etc. 13e2a

Statistics Gathering >DIA 13f

Requirements: 13f1

To support the above, we need adequate statistics gathering: 13f1a

(a) Of user characteristics, such as NLS command usage frequency, time between various operations such as command

specification and sub-command operation command input, bug selection, typing rate, etc. 13f1a1

(b) We also need to be able to define response time for our system and begin taking measurement of this. 13f1a2

(c) Of memory utilization. 13f1a3

(d) Possibly a better graphics "Watch"-type program to run online when the system seems slow or otherwise to see what is going on. 13f1a4

(e) Statistics on system overhead associated with running the Net need to be gathered. 13f1a5

Output Processor Maintain >WLB BLP 13g

Requirements: 13g1

Bug fixing, cleaning up, speeding up programs. 13g1a

Identification System Maintain >WSD JDH 13h

Requirements: 13h1

Bug fixing, cleaning up, speeding up programs. 13h1a

DEX Maintain >HGL 13i

Requirements: 13i1

Bug fixing, cleaning up, speeding up programs. 13i1a

NIC-WORK Directory Control >DVN WRF BAH 13j

Requirements: 13j1

Keep down the number of files and pages in NIC's directory. 13j1a

User Documentation Maintain >MFA JCN CP BER PML 13k

Requirements: 13k1

See (7703,). 13k1a

TENEX System Guide Maintain >DIA 13l

Requirements: 13l1

Keeping the TENEX System Guide up to date. 13l1a

Basedata Maintenance >BLP BER 13m

Requirements: 13m1

Keeping the planning information (MSR, BaseData,) up to date. 13m1a

Management And Coordination >DCE CHI EKV JCN RWW 13n

Requirements: 13n1

Management and coordinating roles. 13n1a

Accounting >JCN 13o

Requirements: 13o1

Keeping track of money, peoples' time, computer time, supplies used. 13o1a

Facility Operation >EKV MEJ DCW JCP KEV? RLD? 13p

Requirements: 13p1

Whatever it takes to keep things going. 13p1a

Hardware Maintenance >EKV MEH JR 13q

Subtasks: 13q1

Disk Reliability >EKV 13q1a

Requirements: 13q1a1

The disk sure causes a lot of problems. 13q1a1a

Mouse Button Bug >EKV 13q1b

Requirements: 13q1b1

The left mouse button at one of the consoles sends multiple characters when held down. 13q1b1a

Requirements: 13q2

Trouble-shooting, tweaking, and preventive hardware maintenance. 13q2a

Percolation >EKV CP DCW JCP 13r

Requirements: 13r1

Scheduling hardware use, doing dumps, handling tape library, getting supplies, etc. 13r1a

Schedule Service 13r1b

Keep standard schedule updated 13r1b1

Negotiate schedule changes 13r1b2

Receive all schedule change requests 13r1b2a

Check verbally before making last minute changes 13r1b2b

Negotiate PM scheduling with C.E.'s and our own hardware people. 13r1b2c

Negotiate Hardware & Software modification scheduling where the system is taken down or jeopardized and schedule special dumps if needed. 13r1b2d

Communicate Schedule Information 13r1b3

Keep schedule board updated 13r1b3a

Keep Answering Service updated 13r1b3b

Monitor answering service 13r1b3c

Inform Operations Software and/or Hardware personnel when they are going to be needed off hours and determine that need where possible. 13r1b3d

Check ahead on irregular of flaky activities (i.e., PM's, Dumps, etc.) where appropriate 13r1b4

Hardware Service 13r1c

Procurement 13r1c1

See that requests for consoles, terminals, acoustic couplers, etc., are satisfied. 13r1c1a

"Help" with TTY patch panel, console patch panel, etc. 13r1c1b

Trouble 13r1c2

Be responsible for the necessary communication related to trouble calls (We will get some bells and switches to help in this area soon) 13r1c2a

Notify user that he has been heard instantly. 13r1c2a1

Give user a practical answer (i.e., down until ??, get another console, you will be tuned shortly, I'm looking for MEH so wait a minute) 13r1c2a2

Communicate the problem to the right people and get an answer 13r1c2a3

Monitor and follow-up all trouble situations. Don't leave people or troubles in a neglected state. 13r1c2a4

Operating Instruction 13r1c3

Show people how to operate TV set controls, patch panels, printer, etc. on request. 13r1c3a

Software Service 13r1d

How-it-works help 13r1d1

Provide for instant you-have-been-heard response. 13r1d1a

Find an answer or an answerer as soon as practical. 13r1d1b

Provide follow-up. 13r1d1c

Trouble 13r1d2

Software Bug Management 13r1d2a

(I [EKV] don't know anything about managing this yet) 13r1d2a1

Crashes 13r1d2b

Keep users informed of status 13r1d2b1

Respond instantaneously with standard procedure 13r1d2b2

Record the wreckage parameters 13r1d2b2a

Perform start-up operation. 13r1d2b2b

Get help where needed. 13r1d2b2c

Information Service 13r1e

Mag tape manipulation 13r1e1

Punched Paper Tape Processing 13r1e2

Disc Dumping or other back-up system activity 13r1e3

Visitors >JCN ALL 13s

Requirements: 13s1

Taking care of visitors. 13s1a

Vacations >ALL 13t

Subtasks: 13t1

WHP Vacation >WHP 13t1a

CHI Vacation >CHI 13t1b

Requirements: 13t2

Place for keeping track of when people will be away on vacations. 13t2a

Needs'Possibilities 14

NLS NP >BLP NLS WSD JDH WHP HGL KEV JTM WLB CHI DIA 14a

Subtasks: 14a1

DNLS Linking >NLS 14a1a

Requirements: 14a1a1

The ability to link displays and imlacs when in DNLS so that two (or more) users see the same view. -- KEV 14a1a1a

Speedy OP >WLB BLP? 14a1b

Requirements: 14a1b1

Perform measurements on the Output Processor and then rewrite the important parts for speed. 14a1b1a

Dangerous Cmd Spec Chng >NLS 14a1c

Requirements: 14a1c1

Protected commands, requiring two CA's to execute: Unfortunately, being the impulsive persons we (I) are, it is too easy to hit the second CA by mistake. 14a1c1a

May I suggest that when a command prompts with a permission request ("really", "ok") the full word "yes" be required -- or at least "y". Something other than the character immediately preceding (CA). -- David Crocker. 14a1c1b

TNLS Prompting Change >NLS? 14a1d

Requirements: 14a1d1

Insert Command 14a1d1a

Break Command 14a1d1b

Append Command (perhaps) 14a1d1c

And other commands I may not yet know well enough: 14a1d1d

Use of 'at' in the echo, just prior to user entry of an

address implies action 'at' that address, rather than immediately following that address. 14a1d1d1

Echoing 'after' instead of 'at' will make the logic of the command coincide with the conventions of the English language, thereby helping users keep track of curser and command affects. -- David Crocker (DHC) 14a1d1e

Mouse Button Case Shift >KEV NLS? 14a1e

Requirements: 14a1e1

I propose the following:
If the CD button on the mouse is depressed and a keyboard character is struck it is the same as hitting a shift character on the keyboard. 14a1e1a

I also propose a new case shift -- (all three mouse buttons) which will be a control case for either the keyboard or the keyset. 14a1e1b

State Register >NLS? 14a1f

Requirements: 14a1f1

I propose a state register for Display NLS (this would be useful when learning NLS or when system is slow.) This state register would indicate what NLS is expecting (if anything) from the user, e.g., bug selection or literal typein or CA, etc., -- KEV 14a1f1a

NLS Exec Commands >NLS KEV? 14a1g

Requirements: 14a1g1

I propose that NLS incorporate the following exec commands: Dir, DEL, Expunge, Copy (Disk Files only), Rename, DSKSTAT. All of these would be fairly easy to implement and would provide user with ability to use mouse when doing file manipulations. 14a1g1a

OP Char Getting >BLP WLB 14a1h

Requirements: 14a1h1

Change the way the Output Processor gets its characters from NLS to a way similar to the compilers -- it's much faster. 14a1h1a

Jnum Journal Distribute >WSD? JDH? 14a1i

Requirements: 14a1i1

For Journal distribution: 14a1i1a

Let j-number(s) be acceptable in the distribution specification to indicate distribution to all who received the original document(s) indicated by the j-number(s). 14a1i1b

File Verify Messages >WHP NLS 14a1j

Requirements: 14a1j1

Have File Verify say what kind of error it finds. 14a1j1a

DEX Directory Sink >HGL KEV? 14a1k

Requirements: 14a1k1

Get a system similar to KEVs printer spooling program which will permit user to send requests to have files processed by DEX in background every X minutes. 14a1k1a

(Perhaps like WSDs NIC "tasks" file driver for compilations? I like KEVs better for this purpose.) 14a1k1b

Baseline New Task Cmmnd >BLP 14a1l

Requirements: 14a1l1

A command in the Baseline subsystem by means of which people can submit new tasks, bugs, etc. for later inclusion in Basedata. 14a1l1a

Entity Records >WHP 14a1m

Requirements: 14a1m1

Entitites in NLS represented by data structure. Edit routines interpret these in command execution. 14a1m1a

Edit X >WHP? 14a1n

Requirements: 14a1n1

Allow user to define a textual entity (by means of a CONAN

pattern or FIND statement or something) and then be able to perform all the normal textual editing on that entity. There should be two user defined entities: one selected by one bug select and another selected by two bug selections. 14a1n1a

Design: 14a1n2

There would be a command to compile the CONAN pattern/Find statement, and the code would be executed as an entity delimiter routine. 14a1n2a

DNLS Journal Command >JDH? WSD? 14a1o

Requirements: 14a1o1

Reinstate the Journal commands in DNLS. 14a1o1a

Command Backup >WHP? 14a1p

Requirements: 14a1p1

Allow user to undo one or more commands that have been executed. 14a1p1a

Costs: 14a1p2

1 man-week [CHI] 14a1p2a

Assembler Loader NLS >JTM? 14a1q

Requirements: 14a1q1

Allow NLS files to be input to the assembler similarly to L10. Allow access to the loader within NLS. 14a1q1a

Portrayal Generator >WLB CHI 14a1r

Requirements: 14a1r1

Make one program that performs all the current functions of Create Display, the Output Processor, TNLS Print command, and Quickprint. 14a1r1a

Smarter Fast Create Disp >CHI 14a1s

Requirements: 14a1s1

Make the fast Create Display smarter, e.g., it rather than the full Create Display could sometimes do the display after some structural editing. 14a1s1a

NLS Efficiency Measure >DIA? 14a1t

Requirements: 14a1t1

Take measurements on NLS to determine where the bottlenecks are. 14a1t1a

Peter and his interpreter could help here. 14a1t1b

Execute Deunlock >NLS 14a1u

Requirements: 14a1u1

A command that, if the file were in an unlocked state and a partial copy existed (but probaly was deleted), would undelete the partial copy, and mark the file as having a partial copy. In other words a command to undo do the effects of an Execute Unlock where there had been no intervening editing of the file. 14a1u1a

New File Command >NLS 14a1v

Requirements: 14a1v1

New File command: which will accept a file name, and create an empty file under that name. 14a1v1a

An approximate syntax might be (assuming Name Delimiter is moved to another slot, e.g. Execute Name Delimiter): 14a1v1a1

N[ew file name:] FILENAME CA [new/old] CA 14a1v1a1a

At the completion of the command, the user is left in his newly created file. 14a1v1a2

Ends Only Substitute >NLS 14a1w

Requirements: 14a1w1

The SRI editing program SCRIBE has a command like substitute which includes the following feature:
Deletion or replacement: Type the text to be removed. If it is a long segment, it may be shortened by typing only the

beginning and ending, joined by "...".
It sure would be nice if NLS substitute had a similar feature to save typing $CH. -- DVN 14a1w1a

Jump Display Return >NLS 14a1x

Requirements: 14a1x1

We should consider a new feature that would not like Jump File Return, but would restore previous (2-5?) Display States when split screen was in use. Default could be JFT in effect. -- JCN. 14a1x1a

Default Directories >NLS 14a1y

Requirements: 14a1y1

A list of default directories, supplied by each user for himself. When one types a link, or load file, if the file specified is not in his directory, then the list of default directories is used to look in other directories - MSC. 14a1y1a

Dsply Area Jump Ret Stck >NLS 14a1z

Requirements: 14a1z1

Would it be reasonable that when you create a second display area by Goto Display Area, it should inherit the link stack of the (a) previous area? - Hence you could jfr and get to a file you often want -- DVN. 14a1z1a

NLS Utility Stuff >NLS 14a1a*

Requirements: 14a1a*1

Make XXX or NLS a legal ID and have both runfiles and the TASK program use it. 14a1a*1a

Add Outproc (print using the Output Processor) and Load as operations for the TASK progrm. Load's operand would be the name of a RUNFILE. The Goto Exec command would be used -- BLP. 14a1a*1b

Change TNLS Address Spec >NLS 14a1aa

Requirements: 14a1aa1

Change TNLS address specification so that all selections (after the first) are relative to the previous selection, rather than relative to the CSP -- JGM, MFA, BLP. 14a1aa1a

Change Echo of Subs >NLS 14a1ab

Requirements: 14a1ab1

The grammar of most NLS commands is: verb noun argument. Substitute does not follow that grammar. It could if it went: (on the analogy of break and append which default the noun): 14a1ab1a

S[ubstitute text in] Statement CA ADDR CA
Branch
Plex
Group 14a1ab1a1

The change could go in at the time of Chuck's various proposed changes. 14a1ab1b

EXEC Commands in NLS >NLS
**14a1ac

Requirements: 14a1ac1

Put (some) EXEC commmands into NLS. 14a1ac1a

(see -- Journal, 6229) 14a1ac1b

Message Display >NLS 14a1ad

Requirements: 14a1ad1

When in Display NLS if an error occurs, rather than having flash on and off (before one has a chance to read it) display it until the first character after 5 seconds of displaying it is hit -- KEV. 14a1ad1a

Restre Standrd Viewspecs >NLS 14a1ae

Requirements: 14a1ae1

How does a command that restores the user to default viewspecs state grab you. (A terrific thing for people who louse up on viewspecs unwittingly) -- MFA. 14a1ae1a

Change Link Selection >NLS 14a1af

Requirements: 14a1af1

Change Jump to Link such that a bug selection searches from bug to right to find link if not found continue search at start of statement. 14a1af1a

Links Space Delimiters >NLS 14a1ag

Requirements: 14a1ag1

Spaces could be used as field delimiters in links. It would facilitate the use of the typed in Jump Link command -- particularly when the Load File command goes away. Commas would have a higher precedence, so that all existing links would still work. 14a1ag1a

Jump To Last Edit >NLS 14a1ah

Requirements: 14a1ah1

A command that jump to the statement last changed or inserted in the file. 14a1ah1a

Short Status Command >NLS 14a1ai

Requirements: 14a1ai1

An Execute Status Command that only told about lockedness, default link directory, and creation date. See (7931,). 14a1ai1a

Execute Status Display >NLS 14a1aj

Requirements: 14a1aj1

EXECUTE STATUS DISPLAY to show info about a window (lines, chars/line, char size, default dir, file loaded, ...) - LPD. 14a1aj1a

Preinsert Command >NLS 14a1ak

Requirements: 14a1ak1

Have a Preinsert rather than a Leftinsert command. It would then make sense for structural entities too - LPD. 14a1ak1a

Overwrite Command >NLS 14a1al

Requirements: 14a1al1

Like the Replace command except that the original copy of the thing used to replace is deleted. 14a1al1a

Create Display Fonts >NLS 14a1am

Requirements: 14a1am1

Underline, overbar, boldface, italics fonts in display nls -- requires some thought on implementation. 14a1am1a

Bug Literal Displays >NLS 14a1an

Requirements: 14a1an1

Facility for bug selecting things in the literal display area (and other special display areas). Could be used to delete files from directory listing, Baseline parameter specification, etc. 14a1an1a

Send Bug Select >NLS 14a1ao

Requirements: 14a1ao1

Allow a user to bug select the result of a Send -- at least for jump commands and possibly for structural editing. The result of selecting an a-string would be the same as selecting the current statement when the a-string was sent. 14a1ao1a

Buyer(s): 14a1ao2

(,Baseline'Tools) 14a1ao2a

Send Scroll >NLS 14a1ap

Requirements: 14a1ap1

In DNLS allow the user to see ALL the a-strings generated by a statement. 14a1ap1a

Yield Command >NLS 14a1aq

Requirements: 14a1aq1

I often find myself alternating two commands or one command with a variety of others. It would be very handy to be able with one or two finger movements to return to the previous command as you can return to a previous view or return from

the jump family. Since "y" is free, I suggest the name "yield command". I've chatted with Chuck about this -- DVN.
14a1aq1a

Exportable TNLS >NLS 14a1ar

Requirements: 14a1ar1

Stripped down TNLS that can run on any TENEX. Need to find where incompatible, i.e., own JSYS's, and reorganize files so that can load simple cut down TNLS with no special subsystems. 14a1ar1a

Q Asking NIC Locator >NLS 14a1as

Requirements: 14a1as1

A facility meant for a tyro NLS user that would ask him questions in order to see on-line doumentation files as opposed to the present method (the NIC Resource Locator) which requires some knowledge of NLS to use it. 14a1as1a

NLS Command Parser Out >NLS 14a1at

Requirements: 14a1at1

Move part or all of NLS's command parser/specification out of NLS -- like to an Imlac, remote site, etc. 14a1at1a

Signals across Stacks >NLS 14a1au

Requirements: 14a1au1

Currently Signals cannot be passed from a routine using a stack associated with a sequence to any routine on any other stack. 14a1au1a

Types of NLS Users >NLS 14a1av

Requirements: 14a1av1

The Identification file will say that each person is a kind of user and NLS will treat each type differently.
14a1av1a

RINS NP >JBN JCN RWW 14b

Requirements: 14b1

Research INtelligence System. 14b1a

Subtasks: 14b2

Cat Data Element Revise >JBN JCN RWW 14b2a

Requirements: 14b2a1

Present data element set too restricted; a more univeral one is needed. 14b2a1a

RINS Entry Conventions >JBN JCN 14b2b

Requirements: 14b2b1

Formal procedures for order, receipt, and processing of RINS (non-NIC particularly) materials needs documentation. 14b2b1a

TENEX NP >DCW DIA JTM WHP RWW KEV? RLD? 14c

Subtasks: 14c1

Autojob Controller >DIA DCW 14c1a

Schedular Mods NP >DIA 14c1b

Requirements: 14c1b1

Change the schedular so that each job cannot get more than x times 1/nth of CPU time where n is average number of jobs in the Go state and x is small. 14c1b1a

Bid Scheduling >DIA DCW? KEV? RLD? WHP RWW? 14c1c

Requirements: 14c1c1

Implement a scheduling algorithm for hardware resources that employs bidding for those resources by the users. BBN people may do it or help. 14c1c1a

Costs: 14c1c2

9 man-weeks [KEV] 14c1c2a

Net Overhead Statistics >DIA JTM? 14c1d

Requirements: 14c1d1

Collect statistics on the percentage of time (overhead) spent handling Net traffic 14c1d1a

Stand Alone Drum Diag >DCW KEV? RLD? 14c1e

Requirements: 14c1e1

Need stand allone capabilty - preferably same diagnostic. 14c1e1a

No More Room in PSB >DCW KEV? RLD? 14c1f

UPDL Too Small >DCW KEV? RLD? 14c1g

Requirements: 14c1g1

updl too small (consequence of no more room in PSB) 14c1g1a

Limited Number of JFNs >DCW KEV? RLD? 14c1h

Directory Size Too Small >DCW KEV? RLD? 14c1i

Requirements: 14c1i1

Solution: double directory or rst's "new" file system. 14c1i1a

Portrayal Generator NP >WLB BLP MFA 14d

Subtasks: 14d1

OP Singer COM >BLP 14d1a

Requirements: 14d1a1

Add the Linc-Singer MS-5000/6000 as another device to the Output Processor. 14d1a1a

Output Device QED >WLB BLP? 14d1b

Requirements: 14d1b1

Output Device QED doesn't work. -- Bruce 14d1b1a

OP Reference Guide >WLB 14d1c

Requirements: 14d1c1

Keeping the Output Processor Reference Guide up-to-date. 14d1c1a

Diddle OP >WLB BLP 14d1d

Requirements: 14d1d1

Change character input from NLS statements to use byte pointers. 14d1d1a

Change LSGCOL to use byte pointers to deposit characters. 14d1d1b

See if can rid of labels in LSGCOL. 14d1d1c

Make DLIBE readable. 14d1d1d

Combine OPEXEC and OPUTIL. 14d1d1e

Put all writable declarations (OPDATA, DLIBE, DVAL) together. 14d1d1f

IF expressions 14d1d1g

IgL -- Ignore Line 14d1d1h

LShow -- Line Show 14d1d1i

SVLC -- Statement Visible Line Count (for query only) 14d1d1j

Design OP User Aids >WLB MFA 14d1e

Requirements: 14d1e1

Design Output Processor user aids. 14d1e1a

Publication System >WLB? 14d1f

Requirements: 14d1f1

Automatic generation of tables of contents and various kinds of indices. 14d1f1a

OP Right Justification >WLB 14d1g

Requirements: 14d1g1

Get the Output processor to do "right justification" by means of inserting extra spaces between visibles. 14d1g1a

Hardware NP >EKV WLB? BLP? CHI? 14e

Subtasks: 14e1

Graphic Hardcopy Study >EKV? WLB? BLP? CHI? 14e1a

Requirements: 14e1a1

Look at developing an in-house facility for producing text/graphic hardcopy output. 14e1a1a

Bryant Disk Mods >EKV? 14e1b

Requirements: 14e1b1

Modifications to the Bryant disk controller to clean it up. 14e1b1a

Priority is low. It hasn't caused any problems yet. 14e1b1b

Costs: 14e1b2

1 man-week (RDB) 14e1b2a

Modify Keyboard >EKV 14e1c

Requirements: 14e1c1

Move rubout key and add a line feed key on display keyboards. 14e1c1a

Change Mouse >EKV? 14e1d

Requirements: 14e1d1

It has been suggested to redesign the mouse so that the command accept button is under the index finger and the other buttons are to the right of the CA button and probably on the side rather that the top of the mouse. 14e1d1a

Speech String >EKV? 14e1e

Requirements: 14e1e1

Allow a representation of speech to be part of an NLS node. 14e1e1a

Audio Feedback >EKV? 14e1f

Requirements: 14e1f1

Think about audio feedback for NLS users. 14e1f1a

Documentation NP >MFA DVN HGL DIA JTM JDH DCW KEV? RLD? 14f

Subtasks: 14f1

Diagnostic Documentation >DCW JTM JDH KEV? RLD? 14f1a

Requirements: 14f1a1

Write documentation describing all our diagnostics and how to use them. Also document such things as unit reference cells and command tables. 14f1a1a

Tree Meta Report >HGL DIA DVN 14f1b

Requirements: 14f1b1

Interim report plus: 14f1b1a

more work on the Program Environment section 14f1b1b

a detailed example 14f1b1c

more examples in the semantic section 14f1b1d

a section on bootstrapping compilers 14f1b1e

possibly a section on history 14f1b1f

Network User Guide >JTM? MFA? 14f1c

Requirements: 14f1c1

A document that tells ARC people how to use the Network -- Telnet, the Mailbox, file transfer, etc. -- BLP. 14f1c1a

TENEX Pager Document >DIA? JTM? 14f1d

Requirements: 14f1d1

An explanation of how the pager works. 14f1d1a

Audio Visual Presention >DVN? 14f1e

Requirements: 14f1e1

We may want to do a thing to replace and update the Movie presentation of ARC. 14f1e1a

Library Catalog NP >RWW WLB 14g

Subtasks: 14g1

Catalog Quality Control >RWW 14g1a

Requirements: 14g1a1

Catalog input quality control. 14g1a1a

Catalog Query System >RWW WLB 14g1b

Requirements: 14g1b1

The first pass at a way of on-line querying of our catalogs. 14g1b1a

Long Range NIC Problems >RWW 14h

Subtasks: 14h1

Microfilm Study >RWW 14h1a

Requirements: 14h1a1

We need to study reader copiers for use experimentally in ARC Journal System 14h1a1a

Fiche Production >RWW 14h1b

Requirements: 14h1b1

What service firms are in the area with FR80, etc. 14h1b1a

Fiche Reading >RWW 14h1c

Fiche Frame Jump >RWW 14h1d

Phototypesetting >RWW 14h1e

Collect Distribute Philo >RWW 14h1f

Requirements: 14h1f1

Collection and distribution philosophy. 14h1f1a

Card Catalog Management >JBN? WLB? ??? 14i

Requirements: 14i1

To help manage a card file (when for instance we are printing items out onto cards for easily updatable card catalogs). Like need to have a record in the computer of what items are in the card "deck", so new cards, or "card-pullout" directives, can automatically be printed when a change is made in the collection thus catalogued. 14i1a

Card and Label Print >RWW? JBN? ??? 14j

Requirements: 14j1

1. Find card and label stock. 14j1a

2. Decide, special NL Typewriter (TTY 37 would be find), or change for special output on our line printer. 14j1b

3. Output Processor addition so as to drive the printer to print on successive labels or cards appropriately. 14j1c

UCSB File Transfer Experiment >JTM 14k

Requirements: 14k1

Try a file transfer to UCSB to see how it works. 14k1a

CAI >RWW? 14l

Requirements: 14l1

Computer Aided Instruction. Provide some tools and perhaps systems along these lines. 14l1a

External Collaborator Coord >DCE JCN 14m

Requirements: 14m1

Coordinating our collaboration with non-ARC people. 14m1a

Baseline Task Requirements as of 10 MAY 72 for: All

(J10124) 20-APR-72 7:45; Title: Author(s): S.R.I. - Augmentation Research Center, James C. Norton/&SRI-ARC JCN; Distribution: Paul Rech, J. D. Hopper, Douglas C. Engelbart, William H. Paxton/PR JDH DCE WHP; Sub-Collections: SRI-ARC; Clerk: JCN;
Origin: <NORTON>BASETECH.NLS;1, 20-APR-72 7:42 JCN ;
;.DLD='@;

Fir POD Meeting, 18 April 1972

Fir Pod Notes, Meeting of April 18, 1972. Present: RWW, DCW, CP, JR, JFV, MEJ. Guest: DCE. 1

DCE had been invited to attend this Fir POD meeting as a guest. The suggestion was again made that DCE become a member of a POD and the invitation was extended to him to attend Fir POD whenever he has the opportunity and/or to become a fulltime and functioning member of Fir POD. 2

The dynamics of the group was noted to have changed a good deal by the presence of DCE, tending to become somewhat polarized into operating as a group vs. (or interacting with) Doug, rather than a group interacting within its own members, as had become true of Fir POD during the last few meetings. This was not nearly as pronounced as it is with PODCOM meetings (group vs. Doug), but the effects were definitely noticeable. The opinion was expressed that the group is strong enough to halt this polarization within a few meetings and absorb Doug into the group, to become just another member. This was already noticeable by the end of the meeting. 3

The following is only intended to convey some of the points made by DCE and Fir POD members in the course of the group discussion, not as a transcript of the interaction. 4

(1) DCE feels (has found through past experience) that an idea will be launched and, as time passes and people have been busy "doing their thing" on the project, DCE will suddenly find that the staff members have taken the original idea and changed it considerably and are busy building a structure into the project that was never intended to be there. He will discover that the project is heading (or has already arrived) in a direction that is not compatible with the original idea. Often, this incompatibility has been built into the very basic idea of the project and cannot be easily corrected. Obviously (to Doug), there was not a meeting of the minds (there was faulty communication) between Doug and the sttaff members in the construction and development of this project, although at the time DCE thought that there was complete understanding. This has in the past caused confusion and problems in the development of ARC toward Doug's often fuzzy ideas of ARC goals. 4a

(2) DCE has in the past had some experience with encounter groups and feels his interaction with these groups has helped him to understand himself better, to fully appreciate his attitudes and beliefs and integrate his thinking and opinions, and has helped him to communicate better with the world outside himself. 4b

(3) DCE has over the past several years had psychology consultants work with ARC and tried various other group-interaction methods, each of which showed some improvement for a time, but soon the situation seemed to deteriorate again, and lines of communication seemed to break down. 4c

(4) PODs are a natural evolution in the chain of attempts DCE has made to establish better lines of communication within ARC. (DCE split ARC into a balanced mixture in each POD, choosing the mebership of each POD very carefully -- see PODLAUNCH paper, .3a1 through .3a1b -- with a balance of membership in mind.) 4d

(5) DCE has been very surprised and rather disappointed in the negative reaction of ARC staff members to POD activity. He fully expected each of the PODs to set up, and carry through, group interaction activities, exploring with as much depth as they felt comfortable into what the shortcomings and weaknesses of the individual are as a member of the working team. RWW pointed out that there has been a lot of experimentation in small groups that we could bring in and that we should be aware of. 4e

(6) DCE felt that PODs were not created solely for enjoyment of "bull sessions", but were created to help alleviate the problems in interaction with each other and with DCE. 4f

(7) JFV stated that POD activity lacked criteria toward judging its effectiveness; that it is somewhat like a program with no input and no output. Also there is a lack of opportunity to learn by making mistakes. PODs are not meant to make suggestions, therefore cannot learn by doing. 4g

(8) DCW asked why DCE did not want to be a member of a POD and DCE stated that he was afraid that his presence might overbalance the direction the POD was going. RWW felt that DCE's presence as a member of a POD would make PODAC healthier and be good for DCE. 4h

(9) The opinion was given that DCE should let go of PODCOM and not exert so much control over its activities and should allow it to take more initiative. DCE stated that he wanted PODCOM to take initiative but reserved the perogative for veto. We pointed out to DCE that newcomers feel that they are being told to not take initiative. It was stated to DCE that he does seem inconsistent in telling people to take initiative and then refuse the action taken, or if not refusing, to seem worried. 4i

(10) It was pointed out that if PODs are supposed to be of value to the world, we should expect both positive and negative statements about what we are doing to be reported to the world as they naturally occur during the activity. 4j

(11) DCE stated that each POD should feel free to call on outside help from consultants, talks, lectures; that the POD members can do reading and searching for group interaction information on their own time outside office work; attend whatever lectures and/or classes or other means they might find to assist them in learning about encounter groups, T groups, and group dynamics, for the purpose of enhancing the POD work. He stated that SRI would foot the salary bill up to 20% but he hoped to keep it no higher than 10% of total salary time. 4k

(12) DCE feels that the group should be able to accomplish useful POD activity on their own, during the two hours per week assigned to POD activities, with occasional (agreed on with DCE in advance) consultants and/or lecturers, as the need is felt. It was pointed out that there are no professional psychologists, sociologists, or psychiatrists on the ARC staff, and that, while many of the ARC staff have had encounter group experience, none could possibly make the claim to be of professional quality, and none apparently wish to be responsible for the dynamics of such a group activity. DCW pointed out that individual reaction to such group working can be negative as well as positive, that there are dangers inherent in the use of group dynamics. DCE still felt that the group could handle the job themselves. 4l

(13) Areas of personal and organizational development that DCE feels need looking at for eacc of us is to understand our attitudes and beliefs about our working environment, things we are doing, things that are wrong (this sentence dictated by RWW). It was pointed out to DCE that each of us has our own personal development plans. 4m

(14) DCE also reiterated that he had no intention of stopping POD activity and that attendance was, as from the beginning of POD activity, a part of the ARC job function. He said that he expected POD activity would evolve and change as we learned more. He said that he really didn't know how PODs were going to develop; that teams of the future would involve some POD-like activities. He believes that complex situations of the future must be handled by teams, since they are too complicated to be handled by one individual. 4n

(15) DCE pointed out that it would be helpful to run POD

activities with prepared programs and presentation by the members. 4o

MEJ 20-APR-72 8:05 10125

Fir POD Meeting, 18 April 1972

(J10125) 20-APR-72 8:05; Title: Author(s): Mil E. Jernigan/MEJ; Distribution: James E. White, Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Cindy Page, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: MEJ;
Origin: <JERNIGAN>NOTES.NLS;1, 20-APR-72 7:59 MEJ ;

JDH 20-APR-72 8:18 10126

Gus Matzorkis' visit to ARC Friday 4/21

Gus is a consultant in "organizational development". Oak Pod has arranged the visit.

JDH 20-APR-72 8:18 10126

Gus Matzorkis' visit to ARC Friday 4/21

Oak Pod has arranged to have Gus Matzorkis visit ARC this Friday, 4/21. 1

We have arranged this visit to find out what goes on outside ARC under the name of "Organizational Development". 2

Gus has been working in organizational development for more than five years, independently as a consultant for the last two years. His last regular employment was with Sheldon Davis at TRW (see Innovation #25) and he continues to work with Davis. Recent frequent employers include the UCLA Institute of Public Affairs where he works in Police-Community Relations; and the Postal Service Management Institute where he works in a wide range of organizational development efforts. 3

He is active as a writer of social criticism (e.g. New Republic) and jazz criticism (e.g. Downbeat). 4

All ARC is invited to meet with Gus in the conference room from 10:30 'til noon. He will be available the rest of the day to meet with individuals or small groups. 5

JDH 20-APR-72 8:18 10126

Gus Matzorkis' visit to ARC Friday 4/21

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