

HELP Database Design

This document describes the overall structure of the HELP database, as agreed to by the DIRT group on 11-OCT-73.

HELP Database Design

HELP DATABASE DESIGN

1

This document describes the overall structure of the HELP database, as agreed to by the DIRT group on 11-Oct-73. The discussion is organized as follows:

1a

DATABASE STRUCTURE OVERVIEW

The FUNCTION Branch

The CONCEPTS Branch

The COMMANDS Branch

The LEXICON Branch

1a1

Related problems and solutions are described at the end of this document, under the headings:

1b

Search Algorithm

Recognition Modes

Syntax Notation

"Commands" File

Links

Data Base Errors

NLS Error Messages

1b1

DATABASE STRUCTURE OVERVIEW

2

The top-level branches are:

2a

1 HELP DATA BASE "TOP"

2a1

1a CONCEPTS

1b COMMANDS

1c FUNCTION

1d SYNTAX

1e EXAMPLE

2a1a

2 LEXICON

2a2

3 HELP DATA BASE "GENERAL INFO"

2a3

Notes:

2b

a) Kirk deserves credit for recommending we break the database into the function, syntax, and example branches. This permits SHOW commands that have particular simplicity and power (see examples below), when using stacked statement names.

2b1

b) Branches #1 and #3 won't be discussed in this document; they are related to Query's needs.

2b2

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In the CONCEPTS branch, discussions of the meaning, purpose, implications, etc, of all aspects of NLS are given.

2c

The link from an NLS command in the CONCEPTS branch goes to that command in the FUNCTION branch.

2c1

In the COMMANDS branch, NLS commands are listed under one (or sometimes more than one) categories of operations. These categories are user-oriented, not subsystem-oriented. This makes it easier for a user to determine the particular command needed to do an operation. (The categories we've decided upon are given below.)

2d

The link from an NLS command in the COMMANDS branch goes to that command in the SYNTAX branch.

2d1

In the FUNCTION, SYNTAX, and EXAMPLE branches, the NLS commands are organized by subsystem, and alphabetically within subsystem. This makes it easier to maintain this portion of the database, and to produce reference documents.

2e

One link from an NLS command in the FUNCTION branch goes to that command in the SYNTAX branch and one goes to the EXAMPLE branch. It depends on the location of the link. See description of the FUNCTION branch below.

2e1

In all the above-named branches, the overriding principle of organization has been to make it possible for the user to get directly to something he wants, in either of two ways:

2f

- 1) by walking down the tree, under the guidance of the HELP system;
- 2) by using stacked statement names.

2f1

Examples of the use of stacked statement names:

2g

```
SHOW SYNTAX INSERT WORD
SHOW EXAMPLE OUTPUT SEQUENTIAL
SHOW CREATE FILE
  (which would be equivalent to SHOW FUNCTION CREATE FILE)
SHOW NLS FILES
  (equivalent to SHOW CONCEPTS NLS FILES)
```

2g1

NOTES:

2h

- 1) The order in which the top level branches occurs is critical to the use of stacked statement names as exemplified above. Also, the Query search algorithm is critical to this usage.

2h1

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The search algorithm must always start at the top node and search all nodes at a given level before proceeding to search the next level. It must continue this search path for some number of levels (four, probably) and then switch to the standard NLS canonical search. (The canonical search entails searching through a branch to its end before taking the next branch at a given level.)

2h1a

2) The user who enters HELP via the "back-door" (i.e., via <control-q>) route will be placed in the FUNCTION branch at the statement or branch describing his current command.

2h2

3) The use of two different COMMANDS branches, one at the same level as CONCEPTS, one within the CONCEPTS branch itself, was done to treat experienced and inexperienced users differently:

2h3

It is anticipated that the experienced user will probably start his search at the higher level COMMANDS branch. He can select a category of command types, then find the command he wants in the menu list under this category. When he selects that command from the menu list, a link takes him to the SYNTAX branch for a brief description of the command he chooses.

2h3a

The inexperienced user is expected to start his search at the CONCEPTS branch. When he gets down to the COMMANDS branch within CONCEPTS, he will be given a menu of command categories (the same menu that the experienced user gets). But when he selects a command from the menu under one of the command categories in the CONCEPTS branch, a link will take him to the FUNCTION branch where a complete description is provided for the command he chose.

2h3b

The FUNCTION Branch

3

For each NLS verb (defined to be the first word of an NLS command), the organization of information in the FUNCTION Branch is as shown here. The use of statement names, suggested by HGL, re-introduces many duplicate statement names throughout the data base, but the advantage is that the user can stack statement names and say, for example, SHOW INSERT WORD SYNTAX.

3a

VERB <cr>

statement of the function of this verb

3a1

1 (SYNTAX) FOR ALL NOUNS ... ##(link to SYNTAX VERB)##

3a1a

2 (EXAMPLE) TYPICAL FOR ALL NOUNS ... ##(link to EXAMPLE VERB)##

3a1b

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- 3 (EFFECTS) FOR ALL NOUNS <cr>
statement of side-effects, implications, and
particular error-messages 3a1c
- 4 (ADDITIONAL) CONCEPTS
a list of other relevant statement names or stacked
statement names the user might wish to choose as the
object of a SHOW 3a1d
- 5 (NOUNS)
each NOUN that can be used with this verb is given in a
menu of named statements, the names of course being the
nouns. Each named statement has a link to the VERB of
that particular verb-noun combination, and possibly other
explanatory info: 3a1e
- NOUN ... ##(FUNCTION VERB)## 3a1e1

NOTE:

The user who enters HELP via the "back-door" (i.e., via
<control-q>) route will be placed in the FUNCTION branch at the
statement describing his current command. 3b1

The CONCEPTS Branch 4

In the CONCEPTS branch, the substructure in each category is
designed to give the user a verbal description of the overall
purpose, meaning, implications, etc., of any named concept he
chooses. It also gives a menued list of other topics directly
bearing on the concept, and a "show also" list of related named
topics. 4a

The organization of the CONCEPTS branch statements are given at
the end of this document. 4b

The COMMANDS Branch 5

In the COMMANDS Branch, the NLS commands are organized by
categories. Just the names of the commands in each category are
given, with a link to that statement in the SYNTAX branch that
describes the syntax of that command. No, or very little, text is
given (we may want to use Show Also where it seems useful). 5a

The command categories for the COMMANDS branch are given at the
end of this document. 5b

The LEXICON Branch 6

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The LEXICON branch is something the user will probably never see explicitly. Its purpose is two-fold:

6a

- 1) To contain synonyms, alternate spellings, etc. for named statements (there would be a link off to the statement that we anticipate the user meant). Examples:

6a1

```
file = files  ##(NLS FILES)##
command = commands
NLSCCommand = NLSCCommands
updating = modification
dialog = dialogue
catalog = catalogue
text-entity = string
etc.
```

6a1a

- 2) To force certain statement names to be at a higher level than the search algorithm would find them at, if the database structure were followed by the search algorithm.

6a2

This is particularly true of certain acronyms and keywords which turn out to be duplicate statement names, and which we want the user to get when he types "show". The search algorithm described elsewhere in this document would not pick up the correct statement (the keyword definition, for example) unless these statement names were at a high enough level. Examples:

6a2a

```
word
character
text
statement
group
etc.
```

6a2a1

OTHER RELATED PROBLEMS

7

Search Algorithm

7a

The search algorithm must start its search for the first name in a list of stacked names at the top level, searching all the nodes at that level, then proceeding to the next level and searching all the nodes at that level, etc, through about four levels.

7a1

Then it should switch to the NLS canonical search algorithm, searching the first branch at level five all the way to its end, then the second branch at level five, etc.

7a2

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We can refer to this combined search algorithm as a "hybrid" search algorithm.

7a3

This hybrid search algorithm applies only to the FIRST name in a stacked statement name list. The canonical search algorithm is used to search for the second and subsequent names, starting in the branch that the hybrid algorithm selected for the first name.

7a3a

The previous proposal to search the context stacks before doing any other searching will not work for the HELP system.

7a4

EKM has pointed out that it might be wise to search the CURRENT context stack before using the hybrid algorithm. This would have the advantage of letting the user select a named statement from the most recent menu he has seen. Kirk has pointed out that the user could do this if he selected menu items by number, rather than name. No decision has been made.

7a4a

Recognition Modes

7b

How should the HELP system tell the user about the different command recognition schemes? The answer is not trivial; it requires a lot of work. Alternate possibilities are:

7b1

a table of commands, and what it takes to get recognition in each mode --- expert, anticipatory, and demand;

7b1a

a branch in the FUNCTION branch giving the recognition mode info at the deepest level necessary --- for example, at the WORD statement for INSERT WORD;

7b1b

an indication in the SYNTAX branch of which commands can be recognized by the expert mode scheme.

7b1c

Before resolving this, there is a need to resolve certain other issues with respect to the recognition schemes:

7b2

1) Is "space" the best choice of "escape" character to use in expert mode? What about "period" instead of "space"?

7b2a

2) Is "expert" mode really defined in a way that is to our overall best advantage?

7b2b

3) Should we establish a rule that every command keyword must be recognizable by its first three letters? (This would force us to be careful in our choice of future command

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keywords, as well as force us to change one of the keywords RECEIVE and RECORD, and one of the words RESET and RESTORE.)

7b2c

Syntax Notation

7c

We decided not to provide separate "simple" and "full" syntax in the HELP system. The reason is it doesn't seem worth it, after one considers this:

7c1

a) The vast majority of distinctions between simple and full syntax derive from the use of the acronyms "source" and "content". We are going to do away with these acronyms by placing the alternatives right in the syntax expression (thereby making an exception to one of our earlier rules against expressing alternatives in the syntax statement), as shown:

7c1a

TYPEIN / [ADDRESS] instead of CONTENT
ADDRESS / [TYPEIN] instead of SOURCE

7c1a1

b) The rest of the cases (about ten commands) can be divided into two main classes, those where "DIROPT" occurs, and those where "FILTERS" occurs.

7c1b

DIROPT ... these commands will carry a footnote essentially telling the user to SHOW DIROPT.

7c1b1

FILTERS ... these four commands --- copy, move, transpose, and delete --- will include the local acronym FILTER (rather than VIEWSPECS), FILTER being defined as the viewspecs a b c d e g h l w i j k (NOTE: this applies only when the noun is a structure-entity, not a text-entity).

7c1b2

We decided not to use acronyms for sets of nouns, but rather to spell out separate instances of each command. For example,

7c2

separate syntax statements for each of these:

7c2a

Output Printer
Output Quickprint
Output Journal
Output COM

7c2a1

instead of a single syntax statement such as this:

7c2b

Output DEVICE
DEVICE = Printer / Quickprint / Journal / COM

7c2b1

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The exceptions to the proscription against noun acronyms are STRING and STRUCTURE, because of the number of commands involved.

7c2c

"Commands" File

7d

There are several errors in the "commands" file. JMB is putting together a list of these, which DVN and MDK will review before asking NDM to make changes.

7d1

Links

7e

HELP system links will use stacked statement name to avoid ambiguities. This puts a burden on the database maintainer to check all references to a given statement, especially references via links that use stacked statement names, before breaking up a branch or changing the name of a statement.

7e1

Data Base Errors

7f

We need a branch in the HELP data base named "error", to help the user when he gets a data base error. The branch could contain a message or messages that the user could get when he is told, for example, that a NAME IS NOT FOUND. The message might be something like: "check your spelling. Also try alternate forms of the words." or whatever seems appropriate.

7f1

There could be one such message for each different type of system error message. The HELP system itself would simply tell the user something like "NAME NOT FOUND. SHOW ERROR FOR MORE INFO".

7f2

Admittedly this idea needs more discussion; it is recorded here to initiate thinking about it.

7f3

NLS Error Messages

7g

NLS error messages are notoriously obscure. We could help the user by providing explanations of the error messages in the HELP data base.

7g1

Some "local" error message explanations ... those particular to a command, such as the "illegal entity" message you get when you try to delete a statement that has substructure ... can be described under the "effects" of a particular command.

7g1a

More global error messages ... such as "bad file", "system

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error", etc ... could at least be documented as to what the user can do about it (like <control-c>, reset, nls).

7g1b

How this might be handled is not clear at this time, but we need to begin thinking about it.

7g2

COMMAND CATEGORIES in "COMMANDS" BRANCH

8

(inserting) new text

8a

(insert STRING)

8a1

(insert STRUCTURE)

8a2

(insert journal) submission form %%

8a3

(editing) text

8b

(append) STRING

8b1

(copy STRING)

8b2

(delete STRING)

8b3

(edit) statement

8b4

(move STRING)

8b5

(replace STRING)

8b6

(reset case) mode

8b7

(set case ENTITY)

8b8

(set case mode)

8b9

(substitute)

8b10

(transpose ENTITY)

8b11

Show also (structure-editing)

8b12

(structure-editing)

8c

(append) STRUCTURE

8c1

(break) statement

8c2

(copy STRUCTURE)

8c3

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(copy archived) directory	8c4
(copy directory)	8c5
(copy sequential) file	8c6
(delete STRUCTURE)	8c7
(merge)	8c8
(move STRUCTURE)	8c9
(replace STRUCTURE)	8c10
(sort)	8c11
(transpose STRUCTURE)	8c12
Show also (editing) text	8c13
(addressing) features commands	8d
(delete marker)	8d1
(editor delete all) markers	8d2
(mark)	8d3
(period) %%	8d4
(renumber) SIDs	8d5
(reset name) delimiters	8d6
(set name) delimiters	8d7
(show file marker) list %%	8d8
(show name) delimiters %%	8d9
(slash) %%	8d10
(tab)	8d11
(viewing) text	8e
(backslash) %%	8e1
(jump) TNLS	8e2

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(linefeed) DNLS & TNLS %%	8e3
(print) %%	8e4
(reset filter) %%	8e5
(reset viewspecs)	8e6
(set filter) %%	8e7
(set viewspecs)	8e8
(show viewspecs) %%	8e9
(tab)	8e10
(uparrow) DNLS & TNLS %%	8e11
Show also (load) file, [& all jump commands which load files]	8e12
(display) features	8f
(clear) window	8f1
(connect display) %%	8f2
(freeze) statement	8f3
(jump) DNLS	8f4
(linefeed) DNLS %%	8f5
(move boundary)	8f6
(receive) connection %%	8f7
(release all) frozen statements	8f8
(release frozen) statement	8f9
(reset TTY) window	8f10
(reset character) size	8f11
(set TTY) window	8f12
(set character) size	8f13
(split) window	8f14

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(uparrow) DNLS %%	8f15
(hardcopy) output	8g
(backslash) %%	8g1
(linefeed) TNLS %%	8g2
(output com)	8g3
(output journal) quickprint	8g4
(output printer)	8g5
(output quickprint)	8g6
(output remote) printer	8g7
(output terminal)	8g8
(print) %%	8g9
(reset filter) %%	8g10
(set filter) %%	8g11
(uparrow) TNLS %%	8g12
(handling) files	8h
(copy file)	8h1
(create) file	8h2
(delete file)	8h3
(delete modifications)	8h4
(editor load) file	8h5
(move file)	8h6
(output assembler)	8h7
(output sequential)	8h8
(protect) file	8h9
(reset temporary) modifications	8h10

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(restore modifications)	8h11
(set temporary) modifications	8h12
(show file modification) status %%	8h13
(show file status) %%	8h14
(terminate temporary) modifications	8h15
(undelete file)	8h16
(update)	8h17
(verify) file	8h18
(archiving) files	8i
(archive) file	8i1
(delete archived) file	8i2
(expunge archived) directory	8i3
(reset archive) requests	8i4
(restore archived) file	8i5
(undelete archived) file	8i6
(directories) of files	8j
(connect directory)	8j1
(expunge directory)	8j2
(reset link) default	8j3
(set link) default	8j4
(show file link) default %%	8j5
(show disk) space %%	8j6
(trim) directory	8j7
(status) commands	8k
(show archived) directory	8k1

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(show directory)	8k2
(show disk) space %%	8k3
(show name) delimiters %%	8k4
(show viewspecs) %%	8k5
The following are file status commands:	8k6
(show file link) default %%	8k7
(show file marker) list %%	8k8
(show file modification) status %%	8k9
(show file return) ring	8k10
(show file size)	8k11
(show file status) %%	8k12
These 3 commands show the status of your Control Marker:	8k13
(backslash) %%	8k14
(period) %%	8k15
(slash) %%	8k16
This is a command in the programs subsystem:	8k17
(programs show) status of buffer %%	8k18
(commandmodes) commands	8l
(reset feedback) mode	8l1
(reset prompt)	8l2
(reset recognition) mode	8l3
(set feedback) mode	8l4
(set prompt)	8l5
(set recognition) mode	8l6
(recording) sessions	8m

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(playback) session	8m1
(record ON)	8m2
(record STOP)	8m3
(terminate recording) session	8m4
(system) & subsystem manipulation commands	8n
(goto) SUBSYSTEM %%	8n1
(execute) SUBSYSTEM %%	8n2
(quit SUBSYSTEM) %%	8n3
(quit NLS) %%	8n4
(logout)	8n5
(set NDDT)	8n6
(reset NDDT)	8n7
(terminals)	8o
(connect TTY)	8o1
(connect display) DNLS %%	8o2
(disconnect) terminals	8o3
(receive) connection--DNLS %%	8o4
(semicolon)	8o5
(simulate) terminal type	8o6
(journal) commands	8p
(insert journal) submission form %%	8p1
[\$ all subsystem commands]	8p2
(HELP) commands	8q
(programs) commands	8r
(assemble) file	8r1

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(compile file)	8r2
(compile L10) user program	8r3
(compile content) analyzer pattern	8r4
(programs delete all) buffer programs	8r5
(delete last) buffer program	8r6
(deinstitute) PROGRAM	8r7
(execute) SUBSYSTEM %%	8r8
(goto) SUBSYSTEM %%	8r9
(institute) program	8r10
(programs load) REL file	8r11
(quit NLS) %%	8r12
(quit SUBSYSTEM) %%	8r13
(run) program	8r14
(programs reset) buffer	8r15
(programs set) buffer	8r16
(programs show) status of buffer %%	8r17
(format-control) commands	8s
(calculator) commands	8t

ORGANIZATION OF "CONCEPTS" BRANCH

9

NOTE: The substructure under the capitalized statement names below is incomplete here. The information in (userguides, help, concepts) is basically to be used for this substructure, with some minor additions indicated below in lower case.

9a

CONCEPTS

9b

ENTERING SYSTEMS

9b1

login
ident

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password	
accounts	
initial file	
see also: tenex, nls	9b1a
HELP	9b2
TENEX	9b3
commands	
files	9b3a
NIC	9b4
journal ... ##(NLS JOURNAL)##	9b4a
NLS	9b5
commands	
journal	
number	
identification subsystem	
files	9b5a
NLSCOMMANDS ... ##(NLS COMMANDS)##	9b6
TERMINALS	9b7
PROGRAMMING	9b8
JOURNAL ##(NLS JOURNAL)##	9b9
FILES	9b10
txt vs nls files	
structure	
archiving	
links	9b10a
READING FILES	9b11
addressing	
viewspecs	
loading	
jump to link	
files ##(NLS FILES)##	
format-control	9b11a
WRITING FILES	9b12

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hardcopy
viewspecs
control-markers
txt vs nls files
files ... ##(NLS FILES)##

9b12a

HARDCOPY OUTPUT

9b13

viewspecs
control-markers
output processor
output com
output quickprint
output remote
output terminal
see also: format control

9b13a

DIALOGUE

9b14

journal ... ##(NLS JOURNAL)##
sndmsg
linking between terminals
shared screens

9b14a

PRIVACY PROVISIONS

9b15

file protection
passwords

9b15a

19634 Distribution

Elizabeth K. Michael, Richard W. Watson, Elizabeth J. (Jake) Feinler,
Harvey G. Lehtman, Kirk E. Kelley, Laura E. Gould, N. Dean Meyer,
Jeanne M. Beck, Charles F. Dornbush, Dirk H. Van Nouhuys, Michael D.
Kudlick, Diane S. Kaye, James C. Norton, Kirk E. Kelley, Harvey G.
Lehtman, Elizabeth J. (Jake) Feinler, Jeanne B. North, Michael D.
Kudlick, Charles H. Irby, Richard W. Watson,

HELP Database Design

(J19634) 12-OCT-73 09:59; Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /DIRT NIC-QUERY RWW; Sub-Collections: SRI-ARC DIRT
NIC-QUERY; Clerk: MDK;
Origin: <KUDLICK>HELPDB.NLS;9, 12-OCT-73 09:50 MDK ;

THE SHADOW

THE WEED OF CRIME BEARS BITTER FRUIT, MARGO.....

1

THE SHADOW KNOWS

2

..... SO SAYS LAMONT SHADOWSKEEDEEBOOMBOOM.....

3

HA, HA ,HA,HA,HA,HA,HA,HA,HA,HA,

4

HA,HA,HA,HA,HA,HA,HA,HA,HA,HA,HA,

5

HA, HAAAAAAAAAAAAAAAAAAAAAAAAAAAA

6

19635 Distribution
Bertha A. Rousseau,

THE SHADOW

(J19635) 12-OCT-73 11:18; Title: Author(s): Gary L. Bockweg/GLB;
Distribution: /BAR2; Sub-Collections: NIC; Clerk: GLB;
Origin: <ARPA>MEMO.NLS;1, 12-OCT-73 11:14 GLB ;

Visit Log: 12 Oct 73, Dr. Yutaka Kuwahara, of Hitachi Central Research Laboratory

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1

Prior contact: He visited us in Feb. 72. Norton requested permission from Steve Crocker to send network-protocol documents to Kuwahara in (8757,).

1a

Dr. Kuwahara noticed an article in the Japanese Computer Weekly (6 Aug 73) describing some of the features at ARC, including two photographs. He was initially interested in learning about the "home product" sort of possibility of our developments.

2

I explained that it was probably too early in both the market and product domains to consider this; rather, in our minds, we would suggest that Hitachi consider when it as an organization should explore the use of such techniques within its own organization.

3

It wouldn't be until after this sort of application proves to have economic payoff that the home-use would -- meanwhile, Hitachi would better learn about the applicability and value when used within industrial-business operations, since there probably would be an outside market there quite a while before there is a significant home-products market.

3a

He described briefly about Hitachi's General Research Lab, giving me a colorful descriptive pamphlet (put into XDOC, see -- 18857,). The Lab is located in Kokubunji, 16 miles from Tokyo. Of the ten specific Lab-activity areas portrayed, one is on Computers (hardware and software), and one on Communication and Information Data Processing -- with a picture of children at "CAI terminals" that seem to display photo rear-projections on screen (too detailed to be likely from computer graphics) as well as computer output (one child holding a light pen) and audio too (wearing earphones).

4

We sat in front of my DNLS console to work out these visit-log notes and to demonstrate some of our computer tools. Included retrieval of the citation of his previous visit, looking at recent Journal citations in my "in basket," scanning over the NLS source code, jumping on links, view setting. Provided a realistic taste for editing in developing the text here.

5

I briefly described the Utility plan. Examples of stages an organization such as Hitachi might go through if it became interested

Visit Log: 12 Oct 73, Dr. Yutaka Kuwahara, of Hitachi Central
Research Laboratory

in exploring the applicability of these techniques within its own
organization:

6

Stage 1: Get several of its own staff quite familiar with what
facility and potential applicability is available. Right now we
offer only a "subscription" to the Utility for this purpose. Hope
within six months or so to have intermediate service as follows:

6a

First new stage (0.1): individuals may pay a fee to come here
for a week of solid learning and experience, and

6a1

Second new stage (0.2): the client can arrange for short-term
installation of a terminal on his own site (e.g. by the month,
at appropriately higher rate than monthly cost under
longer-term subscription).

6a2

Stage 2: If deemed worthwhile, plan for a trial application
within its organizaion. Here, Utility resources could be arranged
to support this applica;ation, or at some point the organization
could consider installing its own hardware facility within which
our application software could run, exclusively applied to his
work. (We might contract to install and maintain such.)

6b

[Added after he left.]

6c

Stage 3: Larger-scale application, and possible involvement
of their own staff in analysis and development work of a
general nature toward knowledge-workshop systems; consider the
benefits of collaborating with an on-line community of similar
explorers linked to the Workshop Utility.

6c1

Stage 4, for organizations in a business where products and
services of this Knowledge-Workshop nature have feasibility for
them to consider selling: Directed studies and developments of
products and services done as internal, proprietary work, not
shared.

6c2

Here, they may choose to use Utility-provided workshop
tools to help with their study and development. As long as
their products aren't identical copies of ours, they are
welcome to harness as many of the concepts and techniques as
they wish.

6c2a

NOTE: Special problems, that we haven't had to address yet, as
to how an organization in Japan could connect to the Utility
service, or otherwise obtain the equivaent service in some
reasonable way.

6d

Visit Log: 12 Oct 73, Dr. Yutaka Kuwahara, of Hitachi Central
Research Laboratory

His question: Consider the transfer to their facility, to a
HITAC (equivalent to an IBM 370). What sort of transfer problem
-- cost, maintainability, etc.?

6e

Explain briefly about bootstrap compiler (current L10 and
future MPL), and the provisions in our future plans for transfer
of our system into other operating environments (with
maintenance and updating services available so if they choose,
their system can track the updating of ours).

6e1

He mentioned that they have been working on compiler
compilers, too (see page 12 of XDOC -- 18857,). Still trying
to get them to provide more efficient compilers. Seems as
though they could become interested in these compiler-writing
techniques in themselves. I outlined the notion of a
collaborative community of groups who are trying to augment the
knowledge workshop in which a team of software engineers could
work -- something we are hoping to see evolve and to
participate in.

6e2

He will get in touch with us later, perhaps, to arrange a visit for
some of the people from the Lab in Japan.

7

Gave him the following ARC documentation:

8

D. C. Engelbart, AUGMENTING HUMAN INTELLECT: A CONCEPTUAL
FRAMEWORK, SRI Project AFOSR-3223, October 1962 (XDOC -- 3906)

8a

D. C. Engelbart and W. K. English. "A Research Center for
Augmenting Human Intellect", AFIPS Proceedings, Fall Joint
Computer Conference, 1968, Washington, D.C. (XDOC -- 3954.)

8b

Augmentation Research Center, ONLINE TEAM ENVIRONMENT: NETWORK
INFORMATION CENTER and COMPUTER AUGMENTED TEAM INTERACTION, Final
Report on project RADC-TR-72-232, June 1972 (Journal -- 13041,)

8c

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

8d

J. B. North, EXPERIMENTAL DEVELOPMENT OF A SMALL
COMPUTER-AUGMENTED INFORMATION SYSTEM, Annual Report on ONR
project N00014-70-C-0302, April 1973 (Journal -- 16508,)

8e

J. C. Norton, R. W. Watson, NETWORK INFORMATION CENTER AND
AUGMENTED KNOWLEDGE WORKSHOP DEVELOPMENT, Technical Proposal to
ARPA/IPTO, August 1973 (Journal -- 18368,)

8f

19636 Distribution

James C. Norton, Richard W. Watson, Bonnar Cox, David R. Brown,
Jeanne M. Leavitt,

Visit Log: 12 Oct 73, Dr. Yutaka Kuwahara, of Hitachi Central
Research Laboratory

(J19636) 12-OCT-73 12:13; Title: Author(s): Douglas C. Engelbart/DCE
; Distribution: /jcn rww bc drb jml (Jeanne, forward a copy to Bill
Royce in SRI Tokyo Office -- SRI courier system for this?? -- also, a
copy to Kuwahara) ; Sub-Collections: SRI-ARC; Clerk: DCE ;

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In the process of judgement (Figure 2) Stake employs both empirical and ideal criteria against which the target program is compared. One should note that the comparison and the criteria may take the form of written, objective measures or personal, subjective assumptions. In either case the objectivity of the evaluation is relaxed somewhat from that of Tyler, and its validity and reliability depend to a great extent on the universality of the criteria being used. Since individuals tend to see things differently, validity and reliability can only be increased by training the evaluators to think alike. This may well result in the negation of the whole purpose for using expert evaluators since their similarities in terms of getting a true picture of the program.

1

Scriven (1967) provides a slightly different view of the evaluation process. He would have the evaluator weight the various hypothetical outcomes (criteria, goals) against which the observed performance would be compared. Glass (1969) calls this a composit-goal model. He would also put a great deal of weight on the justification of the data-gathering instrument (measuring instrument) and use the information as part of the in-put into the evaluation process. Essentially what he is doing is saying that the evaluator should be aware of all the information he is using in the evaluation process and be able to assess the value of each piece of information. He has not changed the nature of the evaluation process nor its place in relation to the decision-making process. Rather he would have the evaluator put different values on the criteria and goals of a program to try and arrive at a more complete assessment of the worth of a program.

2

The evaluation model from the Center for the Study of Evaluation (Klein, Feustermacher and Alkin 1969) is very similar to the general evaluation model explicated above. Their difference lies in the detail with which they present the steps involved in various types of evaluation. They are quite concerned that one be aware of the context in which each step takes place. Thus they expand the awareness factors of Scriven to include that of context. They would make sure that all these factors are explicated when reporting the evaluation information to the decision-makers. It becomes apparent that as evaluation process when relegated to individual experts, they try to make as many of the variables operating in this process as overt as possible. This does not alleviate the subjectivity of the evaluation process, but it does allow the decision-maker to see some of the variables operating in this process.

3

Provus (1969) emphasizes another aspect of the evaluation process in his discrepancy Model. He indicates that when one has established his criteria, developed his measuring instruments and compared the performance with the criteria, he should look at the discrepancies existing between the criteris (standards) and the

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performance to determine the weakness of the program. The alleviation of these weaknesses may then bring about the desired results. An iterative process can be established in which one makes the necessary changes to strengthen the program prior to each performance. Thus evaluation becomes a tool for change in ongoing programs rather than just input for a final decision.

4

The final model to be considered is the CIPP model of Stufflebeam (1971).

5

It is based on the following eight premises:

6

0d

7

1. Since the purpose of evaluation is to provide information for decision-making, it is necessary to know the decisions to be served.

7a

2. For evaluation to be relevant to decision-making, the evaluator must be oriented to the decisions to be served and function within this orientation.

7b

3. A valid evaluation model should be grounded in sound conceptualizations of the different change settings (homeostatic, incremental, and neombilistic) and models (synoptic, disjointed incremental, and planned change) to be served.

7c

4. Different types of decisions (planning, structuring, implennementing, and recycling) require different types of evaluation designs, and a generalizable and efficient evaluation model should be conceptualized accordingly.

7d

5. While different evaluation designs vary in content, a single set of generalizable steps (delineating, obtaining, andd providing) can be followed.

7e

6. To answer questions posed by decision makers, designs for evaluation studies should satisfy criteria of scientific adequacy (internal and external validity, reliability, and objectivity), of practical utility (relevance, importance, scope, credibility, timeliness, and pervasiveness) and of prudential worth efficiency.

7f

7. Decision-making is comprised of four states (awareness, desingn , choice, and action) that potentially require evaluative information: thus, the relationship between evaluation and decision-making is symbiotic.

7g

8. Evaluation designs must be flexible and capable of meeting changing decision-making requirements.

7h

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is

7i

These premises sum up quite well the various approaches to evaluation. One point that should be made clear is that the general model for evaluation has not changed, i.e. determine criteria, develop a measuring instrument, and compare performance with criteria; only the approaches to each of these three broad steps have been altered. The evaluation designs of which Stufflebeam speaks are not models but explications of various steps in the evaluation process. Thus, we have one set of criteria for training, another for efficiency, and another for effect. Evaluation design then, has to do with pin-pointing the specific variables thought to be the most important in any given situation. In a sense it is similar to the weightings called for by Scriven.

8

It is clear from the above material that evaluation theory has moved away from the objective type of thinking in terms of behavioral objectiveness and psychometric measurements to a broader subjective type of evaluation involving the expert judge, with perhaps some reliance on psychometric measurements, who tries to explicate why he evaluated as he did. We have seen a steady push for complete awareness of all the variables involved in the process. However, very little has been said about interjudge reliability. If a panel of judges is used, should they agree on the value weightings of each variable involved or should they each try to explicate their own value system when presenting the evaluation information to the decision maker? Certainly there are problems built into the training of judges to think alike. Their combined evaluation is then no better than that of a single evaluator. On the other hand the disparate evaluations of several judges may leave the decision-making in an untenable position. This dilemma must be resolved.

9

Putting aside individual differences for a moment, however, we may summarize the general steps one must take in any given evaluation task. In the body of this report we will speak to the specific tasks confronting RADC and explicate some of the steps necessary to effective evaluation. The basic model seems to be:

10

1. Delimit the decision-making area to be served.
2. Develop the criteria for your evaluation.
3. Establish the measuring instruments.
4. Collect the data.
5. Compare the results with the criteria.

10a

10b

10c

10d

10e

Each step has several underlying assumptions and may be

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accomplished by pursuing several smaller steps. Step 1 stems directly from the structure of the organization involved in the decision-making process, the goals of that organization, and the nature of the problem being considered. Step 2 involves the careful delineation of all the variables involved in the decision-making process and may take the form of a check list with variable weightings given to the items. It may establish ideal goals or they may be operational. Step 3 may be totally psychometric, partially, or totally without psychometric measures. It may be the perspective ability of expert judges, the consensus of a panel, or the opinion of a manager. Step 4, is dependent upon the measuring instrument of Step 3 but must be as complete and error free as possible. Step 5 involves the analysis of why the criteria were not met, if not, or what produced the extra benefit if the results were to establish the worth of the project.

11

REFERENCES

12

1. Alkins, MC, "Evaluation Theory Development," EVALUATION COMMENT, 1969, 2(1), 2-7.

13

Bannister, D. (Ed.) PERSPECTIVES in PERSONAL CONSTRUCT THEORY, London: Academic Press, 1970.

14

3. Glass, G.V., "The Growth of Evaluation Methodology", Research Paper #27, Boulder, Colorado: Laboratory of Educational Research, University of Colorado, 1969 (Mimeo)

15

4. Provus, MM., "Evaluation of Ongoing Programs in the Public School System," in R.W. Tyler (Ed), EDUCATIONAL EVALUATION: New Roles, New Means, the 68th Yearbook of the National Society for the Study of Education, Part II, Chicago: National Society for the Study of Education, 1969.

16

5. Scrivin, M. "The Methodology of Evaluation", in R. E. Stake (ED), CURRICULUM EVALUATION, American Educational Research Association Monograph Series on Evaluation. #1, Chicago: Rand McNally, 1967.

17

6. Stake, R.E., "The Countenance of Educational Evaluation", Oteachers College record, 1967. #68, 523-540.

18

7. -----, Objectives, Priorities and Other Judgement Data, "Review of Educational Research, 1970, #40, 181-212.. -----, "Objectives, Priorities and other Judgement Data, "Review of Educational Research 1970, #40, 181-212.

19

8. Stufflebeam, D. L., et. al., Educational Evaluation and Decision-Making in Education. Itasca, Ill.: Peacock, 1971.

20

Borden's Report-Status of AHI Implementation

9. Tyler, R. W., "General Statement on Evaluation", Journal of Educational Research, 1942, #35, 492-501.

117 E. Mc Cormick

State College, Pa.

September 24, 1973

Dr. E. Kennedy

RADC/ISIM

Griffiss AFB, NY

Dear Ed:

Here is the report. I am sorry it is so late, but I had to wait until we finished Jim's technical report before I could tie mine all together. I still didn't get the number of his report. (Maybe it doesn't have one yet.)

Cordially,

George A. Borden

Consultant

ABSTRACT

Implementing and Evaluating the AHI system:

A Review and Suggestions

George A. Borden

The evaluating of Phase I of the implementation of the AHI system at RADC is completed. The general results, both positive and negative, will be reviewed and suggestions made as to how Phase II may be implemented with fewer problems and better results. An approach to evaluation in general and Phase II in particular will be discussed.

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Consultant's Final Report Sept. 1973 George A. Borden 41

STATUS OF IMPLEMENTATION- 42

The first phase of the implementation of the AHI system at the RADC has been completed and an indepth technical report has been written by Captain James Bair with my assistance (see Appendix A). This phase consisted of bringing one section up on the AHI system and evaluating the effect of the system on the individual user, the group, and the orgaizational communication. A general summary of this evaluation follows: 43

1. In the preliminary study using two groups (summer 1972) it was found that total manhours for creating a document was reduced significantly by using the AHI system. Furthermore, the time required to rewrite a document to incorporate requested changes was also significantly less. This decrease in time had no adverse affect on the quality of the document as it still reflected the style and competence of the author. 43a

2. The initial oppositions to the system were overcome with time. Some of the specific problems found were as follows: 43b

a. All employees do not type and a feeling that they should not have to learn how to tupe because that was the secretary's job seemed to pervade the group. 43b1

b. Many of the employees felt forced to use the system. 43b2

c. The necessity to learn and use a command language interferes with creativity. 43b3

d. The psychological problem of moving from creating with pen to creating with typewriter. 43b4

e. The structuring of the verbal input was neither understood nor accepted. 43b5

f. The unreliability of the system interferred with work schedules. 43b6

3. All of these problems seemed to disappear as the user became more proficient on the system. Work schedules and habits were changed to accomodate the system, and the passage of time seemed to be sufficient to alleviate the psychological problems. However, some specific problems are cited below and their solutions given in the discussion. 43c

4. The system is continuing to increase its desirability with the

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addition of various packages, such as, a form generator and a claucator, and a simpler command language.

43d

5. As was expected it was found that the more one uses the system the more favorably disposed toward it he is. The sample was not large enough and the type of testing allowed was not sufficient to ascertain conclusively whether this is because he had a favorabl attitude toward technological advances such as AHI before becoming a user or whether this developed as a result of using the system.

43e

6. Although there were some who did not use the communication devices the system offers until after the proficiency exercise, it was found that there was an increase in communication among users. This was true of vertical communication within the organization as well as communication with users outside the organization.

43f

7. The proficiency exercise indicated that it was the intensity of use not the length of time one was up on the system that made him an adequate user.

43g

8. It seems that the use of the AHI system had not been "sold" sufficiently to make it a desirable acquisition for some individuals.

43h

a. It seemed to take an inordinate amount of time for some users to see the usefulness of the system in their particular endeavors.

43h1

b. Its use as an intraorganizational communication vehicle was not readily accepted.

43h2

9. There is a general feeling that the initial training of the users was not as good as it could have been.

43i

a. In the proficiency exercise some users used a very limited number of different commands to edit the paragraph.

43i1

b. Some of the users did not know how to use the communication language of the AHI system.

43i2

44

DISCUSSION:

There were many beneficial effects of the implementation of the AHI system. Communication between team members increased, report writing became more efficient, changes in reports were accomplished in less time with less manpower (womanpower), and a number of problems with the system and its implementation were encountered and solutions proposed. However, since this report is focused primarily on the extension of the present study into ehte implementation of the

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AHU(system on a branch level(PhaseII). It is the problems encountered in Phase I that are being emphasized. The following section will give some concrete suggestions for overcoming some of the problems encountered in PHASEI.

45

Every organization has its "way of doing things". This includes its organizational structure, its communication structure, and its psychological climate. The psychological climate develops out of the interaction of the people who work there with the constraints imposed by the organizational and communication structure. A new employee only stays with an organization if he finds these aspects of the organization to his liking. When an organization is restructured or new people move in and change the status quo, old employees usually find it difficult to accept the changes. The more drastic the change the more it is resisted.

46

The implementation of the AHI system at the RADC resulted in a major change from the status quo. Here was a communication system that was supposed to facilitate the everyday work of each employee as well as make a major change in the communication processes within the organization. Employees were not given the opportunity to accept or reject it - they were told to use it.

47

One never knows how well he has prepared people for a change in structure until the change has been made. In the present case the preparation seemed adequate but not sufficient to alleviate many of the fears and negative expectations of some of the employees. Thus it must be said that more attention needs to be paid to the indoctrination stage of implementation. Since the employees did not choose this system, they must be sold on it.

48

This phase of the implementation of the AHI system saw the first attempts at training users in this system. The first time around is usually a time of learning for the instructor as well as the pupils. This was the case at RADC. Many problems were encountered and as they were not solved in the training sessions they had to be taken care of on an individual basis later. This took more time from the work time of those knowledgeable in AHI and added to the frustration of the users. It also decreased the breadth and depth of their knowledge of the system. This was not discovered until the proficiency exercise was taken and these limitations were observed.

49

Another difficulty that has been observed is that the intensity of use is not consistent among users nor over time. This is posed as a difficulty because it was shown that intensity is very closely tied in with proficiency and attitude toward the system. In future implementation efforts some way should be found to establish a minimum amount of time on the system.

50

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This, of course, cannot be trivial exercises, but must be an integral part of the communication structure of the organization. Some suggestions will be made as to how this may be accomplished in the next section.

51

One of the major problems in implementing the AHI system is the unreliability of the computer system. Since it is a very complex system involving thousands of miles of telephone lines and several computers, a knowledgeable computer person would not become alarmed by the down time and systems failure. However, when the system is sold to perspective users as an efficient means for creating written documents and communicating within the organization, they should also be psychologically set to accept the inconvenience of computer failure. An initial user of the system because of it. Negative feelings generated by the unreliability of the computer are intensified by the nonavailability of usable terminals and/or personal assistance in use of the command language. For an effective implementation these problems must be dealt with.

52

One other problem must be considered before leaving this section of the report. It was found that some of the opposition to AHI was on the level of "who does what job". Evidently there is some concern over whether a man should do the typing on a terminal when that is what women are hired for. It is understandable that those who do not know touch typing would be opposed to the mandatory use of this system. However, if one understands the potential of the AHI system he will see the necessity of making the terminal part of his creative processes. This realization can only come from thorough indoctrination and intense usage.

53

SPECIFIC SUGGESTIONS for PHASE II:

54

Most of the problems encountered in Phase I have been identified and dealt with successfully. However, most of them can be eliminated from Phase II if proper precautions are observed. One of the major requirements for a smooth implementation is the vigorous involvement of management. This entails constructively planning for and carrying out the administration and communication procedures necessary to this implementation. These include:

55

1. Establishing a communication system using AHI as the vehicle, including perhaps some means of insuring privacy of files, non-interruption by the linking procedure, and procedures for "signing" documents that need management approval.

55a

2. The establishment of a crew to direct and oversee the implementation of AHI with specific job classifications for each member. These include:

55b

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a. A full time trainer to assist, maintain, document and introduce changes in the command language. Recommended procedures and techniques for editing, communicating, etc. should be taught and reinforced.

55b1

b. A hardware troubleshooter for the printer, Imlacs, TTYs, etc. to keep all hardware in working condition. Should be a user as well as computer knowledgeable.

55b2

c. A project engineer to take care of funding paperwork, ordering equipment, etc. and generally overseeing the project.

55b3

d. An evaluator - analyst to run tests, set up experiments and document the whole experience. Since this is a first attempt to implement AHI in a working environment the thorough documentation is very important.

55b4

e. One of the above positions should be charged with overseeing the integration of the rest of the crew and keeping the pressure on to continue the project. This person would also be the most likely one to present briefings on the system.

55b5

3. Management planning on hardware needs, including terminal types, quantities and locations, and adequate printing facilities. It is suggested that managers have CRT type terminals with paging capabilities rather than hard copy generators such as EXECUPORTS. The work force should be abundant enough to insure ready accessibility.

55c

4. It is also evident that efficient implementation requires tact and persistence.

55d

The new users must be sold on the system and then be required to use it a minimum amount each day. This is the only way one can assure a uniform development in the users and hence an efficient use of the system. This means that the organizational communication structure should have some constant built in to create a minimum of one hour terminal use per week. This could be accomplished in the following way.

55e

a. Mailbag: Every user must sign in the first thing in the morning to see what messages are there and one other time during the day to record what mail (communiques) he has received that day (a diary).

55e1

WEEKLY FEEDBACK ON SYSTEM: This should include the following:

55e2

(1). Availability - terminal, network, printer.

55e2a

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- (2). Assistance - needed, available. 55e2b
- (3). Insights - use of new procedures or hardware - availability. 55e2c
- (4). Evaluation - effectiveness of system in daily work and in organizational communication. 55e2d
- (5). Psychological variables - individuals feelings about the system and its use at RADC. 55e2e

Management must take a firm hand in planning and requiring usage of the system. 55f

A second area of concern for an efficient implementation of AHI is the effective training of new users. To accomplish this the organization must be completely dedicated to the training experience. This entails making sure the new users are well indoctrinated into the need for and benefits of the AHI system; for if they have the necessary motivation to learn the system they will have little difficulty in overcoming some of the obstacles that will arise. The involvement of the organization can also be shown by giving released time for the users to be trained on the system. If they are released from their company duties for the necessary training time, they will be able to spend sufficient time in practice and experimentation to become thoroughly saturated with the workings of the system. 55g

There are other precautions that should be taken to insure effective training of new users. A training manual should be written (perhaps as a programmed learning text). With proper indexing this manual might also serve as a reference for trouble shooting as the user continues to learn the system after the training session. Just as important as training manuals is the assurance that the system will be available to the user. This means that SRI must guarantee a sufficient number of user spaces, and IDs and RADC must supply enough terminals to allow each user adequate access to the system. 55h

Given the above consideration, the following is a possible training schedule. It requires the commitment of four (4) hours a day for a week of all trainees. Each four hour day would be divided into two two-hour sessions which could both be in the morning when the system is more likely to be available or split in any way that was convenient to the organization. In any case the first session would be for instructions and the second for practice. 55i

A POSSIBLE TRAINING SCHEDULE 55j

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Session	Activity	55k
1 Inst.	Introduction of system as language manipulator. Log On - Log Off procedures, create & store file, structural hierarchy of storage (up - down) and the insertion commands.	55l
1 Prac.	-	55m
1 Prac.	Create a document with at least 2 entries on each of 4 levels. Some entries should have more than one sentence.	55n
2 Inst.	All editing commands - indicate the major use of each.	55o
2 Prac.	Edit the document created in session one using all of the different editing procedures at least once.	55p
3 Inst.	All of the commands for manipulating files (both interfile and intrafile).	55q
3 Prac.	Take the files of two or three other users and combine them with your own into a document of some sort.	55r
4 Inst.	The journal system, link and send message. These should be explained in light of the use within the organizational setting at RADC.	55s
4 Prac.	Go through the exercise of reporting as suggested earlier in this report (page 7 Weekly Feedback on system).	55t
5 Inst.	By this time the instructor should know the individual users and their particular requirements of the system. The different needs of the users should be explored and the features of the system pertinent to each expounded upon.	55u
5 Prac.	Do the proficiency exercise.	55v
There are any number of other approaches that could be taken to the training of new users. The above is given only to illustrate one possible approach. The crucial aspects are the completeness of the instruction, the time for practice and tying the system into the users needs and the organization's procedures.		55w
CONSIDERATIONS FOR THE EVALUATION OF PHASE II		55x
To evaluate a process one must know where decisions can and are being made (see Appendix B). There are three main areas of		55y

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decision-making regarding the implementation of AHI at RADC.
These are:

55z

1. The training of personnel to be users of the AHI system.
For example:

55z1

a. What are the best teaching methods?

55z1a

b. How long does it take to become an adequate user?

55z1b

c. What type of terminals are most effective for specific types of users?

55z1c

d. Should each user have his own terminal?

55z1d

e. Can all types of work be done on the AHI system?

55z1e

2. The economic impact of AHI on the Organization. For example:

55z2

a. Has the quantity of work changed?

55z2a

b. Has the quality of work changed?

55z2b

c. Has organizational communication changed?

55z2c

d. What is the real cost of implementing AHI?

55z2d

e. What are the benefits of implementing AHI?

55z2e

3. The psychological impact of AHI on the individual, for example:

55z3

a. Does it effect the morale of the employees?

55z3a

b. Has it changed their interpersonnal communication habits?

55z3b

c. Is it an invasion of privacy in their work space?

55z3c

d. Is it a dehumanizing influence?

55z3d

d. How does it change their work habits?

55z3e

of [fo] each fo these areas many questions must be answered (the above examples are only illustrative). To answer the questions raised one must determine what criteria are important to each of the specific areas.

55a@

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CRITERIA FOR EVALUATION:

55aa

It will be impossible to delimit all of the criteria related to each of the decision areas mentioned above. Many of these criteria will only become visible when the goals for the implementation of AHI at RADC have been identified and its working structure understood. However, there are some general guidelines that we may consider as an approach to this phase of the evaluation process. The explicit criteria will undoubtedly be peculiar to each evaluation situation depending on the type of research or development taking place, the group affected, and the specific purpose for the evaluation. All of these factors make it essential that the evaluator realize that the process of evaluation must remain open, dynamic and systemic.

55ab

In general one of the criteria for evaluating information pertinent to decisions in areas 1 & 2 above should be policy statements about established goals and/or behavior which are expected of all members of the organization. If these are clearly delimited the incoming information can be assessed in light of these criteria.

55ac

The policy criteria for decisions in area #3 are more general in nature, but it would appear that the development of these policy statements would be a prime consideration in the implementation of AHI. Without them there is no direction nor structure for the realization of any of the purpose for which AHI has been implemented.

55ad

55ae

A second type of criteria that must be developed is that of objectives. Again these may be considered on two levels. For the decision in area 3 one might leave the objectives on a rather abstract level but less abstract than the policy statements relating to goals and ideals. They may be operationalized but probably would not be. On the other hand the objectives for decisions in areas 1 & 2 must be spelled out very clearly in operational terms. Without this there is no way to determine the extent to which the program has been successful. Although some types of activities need a great deal of latitude within which to operate, they still must tie their operations to some observable objectives.

55af

A third type of criteria is that of impact or effect. Again, in the case of decisions in area 1 these criteria may be rather abstract and may be subset of the objectives mentioned above. If they are stated in broad abstract terms, it should be done in such a way that they are reducible to observable phenomena in the case

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of decisions in areas 2 & 3. In this type of criteria especially, there must be some means of measuring the results, e.g., questionnaires, psychometric tests, etc. A host of variables must be considered when developing these criteria including situation, target group, permanence, confounding variables, etc. These types of criteria are extremely important to the evaluation of the effectiveness and efficiency of the program.

55ag

A fourth type of criteria is that having to do with quality. These criteria operate on many levels, e.g., quality of management, design, products, objectives, etc. In the hard sciences the quality of a product can be specified in terms of precise mechanical measurements. This is not often the case in organizational communication. When it is, it should be used to best advantage. Usually, however, quality criteria are specified in terms that are amenable only to psychological or impressionistic measurements. Nevertheless, a good measure for quality control is necessary for an effective evaluation program. The criteria for this evaluation need to be specified very clearly with specific activities in mind.

55ah

Very closely related to the criteria for the evaluation of quality is a fifth type of criteria; that for the evaluation of worth. The worth of any type of activity is usually assumed when the activity is undertaken. Yet, seldom do we specify the underlying assumptions which generate this feeling. If we do we may find that our value structure is not in line with accepted norms. Is the implementation of AHI worth the problems it fosters

55ai

A sixth type of criteria is that of efficiency. These criteria will be of special interest to those making decisions involving the expenditures of time, money, energy, etc. These types of decisions are affected by results in areas 1 & 3 but are pinpointed in area 2. Therefore criteria for assessment of efficient operations must be included in each of these areas. A clear delineation of the priorities involved in each of these areas. A clear delineation of the priorities involved in establishing a definition for efficiency for each type of activity within the organization is necessary. Without this there can be no reliability in the evaluation process. A major factor here is the circumstances surrounding the activity.

55aj

The seventh type of criteria is that having to do with the past record of the branch, section, group or investigator doing the activity under consideration. The criteria which specifies how one is to compare present behavior with past behavior is very crucial to the evaluation of the AHI system. This is true for all three decision areas. Thus these types of criteria should form a subset of the criteria developed for each of the decision areas.

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We tend not to remember many of the important aspects of individual behaviors within an organization until reminded of them by specific criteria. Thus, the historical criteria should not be left out of our evaluation process.

55ak

MEASUREMENT TOOLS:

55al

To compare the results of the implementation of AHI with the criteria for their evaluation it is necessary to collect various types of information about these results. The tools used to collect these data are an integral part of the evaluation process. It is at this point that we must consider the problems of reliability, validity, relevance, credibility, etc. If we do not use acceptable, reliable tools we cannot expect the results to be acceptable, reliable evaluation. This seems like an obvious statement, yet we find that in reality we are not usually as concerned with the tools for evaluation as we are with the results. To get legitimate results we must have the proper tools.

55am

There are four basic tools for the collection of the necessary information. These are the questionnaire for surveys, the psychometric process of basic research, the subjective perceptions of researchers and subjects, and the statistical methods used to analyze these data. Any one or all of these tools may be used to collect data for any of the three decision areas mentioned above. In the process, however, we should be aware of the problems and assumptions basic to each tool. The old adage "figures never lie", "but liars sometimes figure" should be kept in mind. Even in the most straight forward calculation dealing with questionnaires one may find that how one asks a question or what specific aspect of the result is being counted makes a significant difference in the information collected. Thus, in questionnaire data, one must be sure he understands what it is he is collecting.

55an

In psychometric methods the difficulties are even greater. The underlying assumptions to these methods may completely negate any information they pretend to supply. Tools such as the semantic differential, paired comparisons and the statistical methods used to analyze them are dependent upon mathematical assumptions that are essential to their validity. When these assumptions are violated the resulting data becomes meaningless. The rigor with which one collects and analyses data must be of the highest level if we are to maintain credibility.

55ao

Much of the data collected depends on the perceptual abilities of the observer. We know that our perceptions depend on our past experience, the situation we are in, and our psychological set. This being the case, there is good reason for disagreement between expert observers. The question one has to

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answer is, what is behind this disagreement? Differing points of view may be the strength of a measuring instrument. Yet, to make it useful there must be some way to reconcile the differences. Thus, observers should explicate the bases for their perceptions so the information they supply can be coordinated. Since most of the decision areas require data from personal observation, this becomes a very important part of the evaluation process.

55ap

THE COLLECTION OF DATA:

55aq

To evaluate the implementation of AHI one must have information about the activities within the organization to compare with the criteria established by which the evaluation will be made. Given the appropriate tools he must also have the appropriate mechanisms by which to collect the data. Probably the most frequently used method is that of expert observers. This is true because it usually falls to the managers to do this evaluation. When only one observer is used, one only needs to worry about his credibility, for he is using his perceptive abilities as the tools for collecting the data. We should know, or he should indicate what his expert bias is. If two or more observers are used, then we must know the biases of each or have them arrive at a consensus. Usually when expert observers are used they do not just report raw data, but rather do the evaluation also and report the evaluation. Thus, they become the collector and evaluator and data collector and evaluator are separated it is sometimes easier to pinpoint the source of disagreement if there is such.

55ar

This separation is more clearly seen when the other forms of data collection are used. For example, if one requests reports from a section or group with which he will evaluate that unit, it is clear that the writer of the report is the supplier of the information. The evaluator then reads this report and compares the information contained in it with the criteria he has established by which he can evaluate the program or project. The same is true for survey techniques and statistical summaries. In each of these the collector may not be the evaluator.

55as

In all of these methods, i.e. survey techniques, statistical summaries, reports, written by individuals, groups or outside sources, and expert observers, the variables influencing the collection of the data must be explicated. Each one of these methods may play an important role in the evaluation necessary for any of the three decision areas. In each case some measure of reliability and validity must accompany the data.

55at

55au

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COMPARE THE DATA WITH THE CRITERIA:

55av

The conclusion of the evaluation process is the comparison of the collected data with the criteria established for that evaluation. When this is done it should be presented in such a way that the reader of the evaluation will know; (1) how the findings differ from the criteria, (2) what the salient variables are, (3) the level of confidence at which the evaluator worked,. Knowing these data the decision - maker can have some assurance that he is making a valid decision.

55aw

As we mentioned above, the evaluator is often the same person as the observer and so may never explicate fully the data by which he makes his evaluation. This is unfortunate and the combined role of collector and evaluator should be used cautiously. Expert judges may be used as collectors also, they must indicate what information they collected and used to make their evaluation. Expert judges are commonly obtained from outside both the decision-making unit and the organization being evaluated.

55ax

There are other procedures that may be followed to accomplish the evaluation task. One may use in-house evaluators, contract with outside evaluation specialists, or use outside specialists with an inside monitor. It would appear that if an organization wanted to keep on top of what its money is buying, it would have to use the latter method. To accomplish any kind of continuity at all, an agency must have someone on its staff who has followed the project through its various phases and is completely familiar with the entire program. The only way he can do this effectively is to be in on the evaluation of it. At the same time, it is not a good idea to do all the evaluating in-house lest you become enamored with your own success and lose the objectivity of an outsider evaluator.

55ay

55az

CONCLUSIONS:

55ba

The foregoing thoughts on evaluation are rather abstract but were made so purposefully so the ideas could be applied to any area of decision-making necessary at RADC. The examples should help to show how each of these principles should be applied to a specific area. When the general model is followed, it is necessary that the evaluator operationalize each step in his own terms if he expects to function effectively.

55ba

55bb

APPENDIX A

55bc

Borden's Report-Status of AHI Implementation

Before his discharge from the Air Force, Captain James Bair submitted a technical report detailing all of the procedures and the results of the implementation of the AHI system at RADC. This report covered the entire first phase of the evaluation of AHI as an organizational communication unit. For a more indepth report of the evaluation of this phase the reader should see Technical Report #

55bd

APPENDIX B

55be

RATIONALE for EVALUATION

55bf

Evaluation is a very pragmatic process, i.e., its occurrence is mandated by the existence of decision-making situations. Personal construct theory (Bannister 1970) tells us that whenever a person makes a decision, he does so by choosing between alternative values which he feels are germane to the subject under consideration. Further, the evaluation underlying a decision are dependent upon the juxtaposition of all available information with some criteria -- either ideal or real. If the available information agrees with the criteria, the evaluation is positive; if it does not, the evaluation is negative. The delimitations of the criteria for evaluation is the major problem for the evaluator. To do this, he must have a structure within which he can function.

55bg

To establish an evaluation structure we must first determine the set of possible structures. Evaluation processes have been investigated heavily in recent years. Like most other abstract knowledge, the models developed to describe this process differ primarily in the variable names and/or the vantage point from which the process is viewed. However, a brief review of some of the major models may prove enlightening to the present effort.

55bh

55bi

THEORETICAL APPROACH TO EVALUATION

55bj

Most of the research in evaluation has been done in connection with our educational system. As early as 1930, models for evaluation were being prepared (Tyler 1942). Tyler's model for curriculum evaluation consisted of six major steps which are very much applicable to evaluation in general. They are as follows:

55bk

1. Formulate objectives.
2. Classify objectives.

55bk1

55bk2

Borden's Report-Status of AHI Implementation

3. Define objectives in behavioral terms. 55bk3
4. Suggest situations in which achievement of objectives will be shown. 55bk4
5. Develop or select appraisal techniques (standardized tests, questionnaires, etc.). 55bk5
6. Gather and interpret performance data. 55bk6

By defining the objectives in behavioral terms (step 3), the evaluator established an observable criteria against which the observed performance (step 6) could be measured. If it agreed with or exceeded the criteria, the curriculum was successful. If not, it failed. This model can be modified to fit many other situations, for essentially it is saying develop the criteria, establish the measuring instrument, and use it to compare the outcome with the criteria. 55bl

The School Accreditation Model, in use in the 1940's, lists several objectives, but does not attempt to develop behavioral criteria for them, nor does it establish a measuring instrument. Rather it relies on the expertise of the evaluator. In other words, it allows each evaluator to use his own ideal as the criteria and his perceptions as the measuring instrument. As a result the validity and reliability of the evaluations may be suspect. One has to have faith in the subjective impressions of the evaluator. Most of the present day evaluations resemble this model though they may try to objectify some of the steps taken. 55bm

Robert Stake (1967, 1970) presents two models by which he differentiates between the processing of descriptive data and judgment data. Evaluation takes place at many levels of the decision-making process. Therefore, it is necessary to be aware of the various phases through which this process evolves. The descriptive processes may be schematized as in Figure 1. The intended antecedents are the assumed state of the target group or situation; the logical contingencies are the relationships one assumes exists between the three phases of the process, and the intended outcomes are the performances one submits will be the results of the intrusion of the product/process being considered. Evaluations are then made by comparing the intended with the observed (degree of congruency) and the logical with the empirical relationships. 55bn

is 55bo

pb.34af 55bp

19637 Distribution

Rocco F. Iuorno, Roger B. Panara, Duane L. Stone, Frank J. Tomaini,
Joe P. Cavano, David L. Daughtry,

Borden's Report-Status of AHI Implementation

(J19637) 12-OCT-73 12:26; Title: Author(s): Edmund J. Kennedy/EJK;
Distribution: /RFI RBP DLS FJT JPC DLD2; Sub-Collections: RADDC; Clerk:
EJK;
Origin: <KENNEDY>BORDEN.NLS;1, 12-OCT-73 11:55 EJK ;

Converting RUNOFF files to NLS files

A program which copies TENEX RUNOFF files into NLS files was just added to the User Programs Library. All RUNOFF codes (except INDEX and PRINT INDEX) should be handled properly. Statement breaks are caused by the codes which execute a BREAK, and the level of each statement is determined by the current left margin in the RUNOFF file. The program is called "INRUN". To use it, use the following NLS commands:

- Goto Programs Reset CA
- Goto Programs Buffer 6 CA
- Goto Programs Get INRUN CA
- Goto Programs Execute INRUN CA

Questions and complaints should be directed to Dean Meyer (NDM) at SRI-ARC.

19638 Distribution

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Converting RUNOFF files to NLS files

(J19638) 12-OCT-73 16:40; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /SRI-ARC TU; Sub-Collections: SRI-ARC TU; Clerk: NDM;

Fixed Recognition, Prompts, and Herald in the Revised Command Language.

On Friday October 12 MDK, CDF, CHI, DVN, RWW, and JHB met to discuss issues surrounding recognition and prompting in the new command language.

1

FIXED RECOGNITION MODE

2

We agreed that ARC would try very hard to choose keyword so that three letters would continue to suffice for recognition.

2a

We accepted MDK's suggestion of a new recognition mode, fixed mode, which would be exactly like anticipatory mode except that it would require three letters of each keyword and only three letters.

2b

CHI tentatively suggested that the space in expert mode transfer the user into fixed mode rather than anticipatory.

2c

PROMPTS

3

We accepted the prompt K: for keywords as described in (journal,19369,).

3a

HERALD

4

We accepted two herald modes:

4a

An asterisk as herald in all subsystems,

4a1

Multilevel subsystems like ident will stack asterisk.

4a1a

A mnemonic herald for each subsystem consisting of the first three characters of its name followed by a space.

4a2

We acknowledged the necessity of two subsystem status commands in the supervisor: one which tells you the subsystem you are in and one which lists your subsystem stack.

4b

AUTOMATIC CONTROL OF FEEDBACK OPTIONS

5

We acknowledged that if the many feedback options now available to the user were to help her instead of hinder her, she must be able to arrange for them to be set up automatically to her specifications when she enters NLS, rather than by her issuing commands by hand. We agreed that this matter took high priority in bringing up the revised command language.

5a

JMB points out that if the feedback control remains under

Fixed Recognition, Prompts, and Herald in the Revised Command Language.

control of commands, probably could not set your self up within the time of elog.

5a1

19639 Distribution

Elizabeth K. Michael, Richard W. Watson, Elizabeth J. (Jake) Feinler,
Harvey G. Lehtman, Kirk E. Kelley, Laura E. Gould, N. Dean Meyer,
Jeanne M. Beck, Charles F. Dornbush, Dirk H. Van Nouhuys, Michael D.
Kudlick, Diane S. Kaye, James C. Norton,

Fixed Recognition, Prompts, and Herald in the Revised Command
Language.

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Origin: <VANNOUHUYS>WRECKOGNITION.NLS;2, 12-OCT-73 16:54 DVN ;

13 OCT 73

DVN 12-OCT-73 17:48 19640

Augmentation Research Center

STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFOR

PRIMER AND SCENARIO FOR USING TNLS

1

NLS is an online interactive computer system that has facilities to let you do almost everything you need with text: compose it; edit it; send it to (and receive it from) other persons; file it in one or more categories; cite and easily obtain documents; search for documents by author and subject; search in documents by word or phrase; and print in practically any format.

1a

This primer attempts to demonstrate a very basic subset of the full NLS command repertoire via a TNLS scenario (TNLS is the typewriter version of NLS). The example chosen for the scenario is very common to NLS usage - writing a memo, editing it, and distributing it to other persons. Although this scenario performs a specific function, we add notes at each step which generalize the operation. Given this scenario as a model, the inexperienced user should be able to perform any of the operations described here and refer to the full NLS documentation for more information about the system.

1b

Throughout this scenario, we spell out the sequence of keyes you strike to make something happen and separately what will appear on your terminal in response. Keyes that do not print, such as carriage return, altmode (called "escape" on some terminals), and control characters, are named inside angle brackets, e.g. <CR>, <ALT>, and <control-C>. Information printed by the system is shown in a special, slanted typeface.

1c

YOU CAN GET HELP IN TNLS FROM THE SYSTEM BY TYPING A QUESTION MARK "?" or "<control-q>".

1d

? will show you the next possible steps in a command.

1d1

<control-q> will take you to a simple system for asking questions about NLS.

1d2

1. To identify yourself to the TENEX system at SRI-ARC if you

1e

@login<cr>guest<cr>arc<cr><cr>

1e1

"@" signals that TENEX is waiting for the user to give a command; "CR" is the Return or Carriage Return key on your

1e1a

You should see:

1e2

```
@login
(USER):guest
(PASSWORD):
(ACCOUNT #):
JOB # TTY # DATE DATE
@
```

1e2a

The special identifiers (guest, arc) are used by persons unknown to the system; once you are established as a user, you will have your own identifier.

2. To enter the TNLS system:

1f

If you type:

nls <CR>

You should see:

```
@nls
Edi K:
```

1f1

When you enter NLS, it prints the header of its editing subsystem, "Edi".

1f1a

3. Since you are going to write a memo, you will need an empty file (or workspace) in which to put it. You give the file a name so that you can call it back in future NLS sessions.

1g

If you type:

cr<ALT>f<ALT>memo<CR>

You should see:

```
Edi K:create K:file T:memo
Edi K:
```

1g1

Where NLS expects a keyword that names a step in a command, it prompts you with K:, where it expects you to type in some text, it prompts you with T:.

1g1a

The first one, two, or three characters are enough to identify a keyword. Then if you type altmode (escape on some terminals) the system will complete the word for you. Extra letters before the altmode don't matter. These

examples show a user who types altmode as soon as she can.

1g1b

You now have a new and empty file named MEMO. Filenames may be any sequence of letters and digits beginning with a letter.

1g1c

If you leave the system without finishing your work, you can retrieve it (or any other stored file) in TNLS by using a similar command, Load File.

1g1d

If you type:

loa<ALT>f<ALT>memo<CR>

You should see

Edi K:load K:file F:memo

Edi K:

4. Now that you have created MEMO, the system has already inserted some information at the file's beginning or at statement 0. Statement 0 identifies MEMO to NLS and is virtually unused by you except to cite the beginning of the file. To see the statement you are at currently, i.e., statement 0, type: .

1h

The response will be:

Edi K:

<GUEST>MEMO.NLS;1, date time ARGC;

1h1

5. You begin writing your memo by inserting a statement into the file MEMO starting after statement 0. Statements are comparable to paragraphs of text with appropriate spacing at the ends of lines automatically supplied by the system.

1i

If you type:

1i1

i<ALT>s<ALT>0<cr><cr>Contradictions have been alledged in our description of the elephant.<cr>

1i1a

You should see:

1i2

Edi K:insert K:statement A:0

L:

T:Contradictions have been alledged in our description of the elephant.

Edi K:

1i2a

As in Step 3 you are prompted for specific types of

input, in this case "A:" asks you for an address, "T:" for typein, and "L:" for an optional element not covered in this primer.

After this command is executed, the statement "Contradictions have been..." is inserted after statement 0, i.e., at the beginning of the file, and assigned the statement number 2.

6. Since statement numbers are invaluable for keeping track of what statements are where, you will want to see them as you work on your file.

1j

If you type:

set<ALT>v<ALT>m<cr>

You should see:

Edi k:set k:viewspecsV:m

Edi k:

1j1

This command accepts codes that control the "view" you have of your memo; m makes the sytem number statements.

1j1a

7. As you enter statements into the file, you will periodically want to check how the memo looks as you go along. You can look at all or part of your file by printing it. To see only the statement you are at currently:

1k

Edi k:

1 Contradictions have been alledged in our description of the elephant.

1k1

Later on when there are more statements in your file you can see more by using the Print command, described in step 13.

1k1a

8. Step 5 showed you how to enter one statement; more commonly, you will want to enter several statements, one after the other. Instead of repeating the Insert Statement command for each new statement, you can terminate the command with the character <control-e> which tells the system to complete the current command insert a statement at the next place. In this way, you can enter any number of statements, terminating all but the last with an "<control-e>" and the last with a "<cr>".

To add (after statement 1) three more statements to your file, completing the rough draft of your memo.

11

If you type:

i<ALT>s<ALT>1 <CR> <CR>The review meeting will be at 3:00
<control-e><cr>Only wise, blind men should
attend.<control-e> <cr>A recurcive redefinition plan should
imerge.<cr>

111

You should see:

Edi k:insert K:statement after A:
L:

T: The review meeting will be at 3:00
L:

T: Only wise, blind men should attend.
L:

T: A recurcive redefinition plan should imerge.
Edi K:

112

9. You have now completed a rough draft of your memo and want to check it for completeness, typing errors, etc. To review the content of the file you use the Print command. The Print command shown in Step 10 starts printing from the current statement to the end of the file, so you should first return to the beginning of the file before you use it. (Other versions of the Print command are described below). The command for moving to the first statement you wrote (statement 1) is:

1m

If you type:

j<ALT>i<CR>

1m1

You should see:

Edi k:jump to A:1
Edi k:

1m2

You can similarly "jump" to any statement in the file .

1m2a

9. You have now completed a rough draft of your memo and want to check it for completeness, typing errors, etc. To review the content of the file you use the Print command. The Print command shown in Step 10 starts printing from the current

statement to the end of the file, so you should first return to the beginning of the file before you use it. (Other versions of the Print command are described below). The command for moving to the first statement you wrote (statement 1) is:

1n

10. You can now print the entire content of your memo:

1o

If you type:
p<ALT><cr>

1o1

You should see:
Edi K:print

1o2

1 Contradictions have been alledged in our description of the elephant.

2 The review meeting will be at 3:00

3 Only wise, blind men should attend.

4 A recurcive redefinition plan should imerge.

1o3

11. Now you might decide that statement 3 is superfluous. To delete statement 3:

1p

If you type:
d<ALT>s<ALT>3<cr><cr>

1p1

You should see:
Edi K:delete statement at 3 A:

OK?

Edi :K:

1p2

12. You may also decide to add text to the end of statement 2. To do so you use a command virtually identical to the insert statement command.

1q

If you type:
i<ALT>t<ALT>2 ><CR> in the project room.<CR>

You should see:

Edi K:insert K:text after A: 2 >

T: in the project room.

Edi K:

1q1

The significant difference in this command from the version you used to insert statements is that you specify where in the statement you want the text to be inserted.

The space followed by symbol ">" after the statement number tells the system to insert the text at the end of that statement.

1q1a

">" is a convenient way to point to the end of a statement. However, if you want to insert text elsewhere in the statement you must specify exactly where. The easiest way to do this is to cite the place of insertion by content. Thus instead of using ">" you might have specified "[3:00]" with identical results. Note that the specific intrastatement location follows the statement number and is separated from it by a space. TNLS "reads" addresses from left to right.

1q1b

13. Look at statement 2 to check your addition:

1r

Edi K:

2 The review meeting will be at 3:00 in the project room.

1r1

14. At this point you are ready to check your file for minor errors. Print it again as you did in Steps 9 and 10:

1s

To move back to your first statement, if you type:

J<ALT>I<CR>

It should look like:

Edi K:jump to 1

Edi K:

1s1

To print, if you type:

p<ALT><CR>

You should see:

Edi K:print

1s2

1 Contradictions have been alledged in our description of the elephant.

2 The review meeting will be at 3:00 in the project room.

3 A recursive redefinition plan should imerge.

1s3

Note that when you deleted the old statment 3, the system promoted the remaining statements and renumbered them.

1s3a

15. The most convenient way to correct the kinds of typographical errors found in this memo is by the Substitute Text command. This command asks you for the correct text and

then the text you want replaced (or substituted for). You may specify only one change or several without repeating the command. Statement 3 contains two misspellings:

1t

If you type:

s<ALT>t<ALT>sive<CR>cive<CR>neme<CR>ime<CR>y3<CR>

You should see:

Edi K:substitute K:text

NEW T: sive

FOR OLD T:cive

FINISHED? no

New Text T: eme

FOR OLD T: ime

FINISHED? Yes IN STATEMENT A: 3

NUMBER OF SUBSTITUTIONS = 2

Edi K

1t1

Use this command cautiously. You must eliminate ambiguities and avoid causing the system to make substitutions that you don't want. For example in the first substitution if you had specified "e" for "i" instead of "eme" for "ime", the system would have changed ALL occurrences of the the letter "i". Make the text string unique to avoid surprises.

1t1a

16. Check statement 3:

1u

Edi K:

1u1

3 A recursive redefinition plan should emerge.

1u2

17. The memo is finished and you want to make a fresh copy of your file.

1v

If you type:

Edi u<ALT><cr>

You should see:

Edi K:update file <cr>

1v1

18. A very abbreviated Journal session is shown here to enable you to send MEMO to a specific distribution list. NLS has a very sophisticated system for sending, distributing, cataloging, indexing, and storing documents (files). However,

most of these steps are done automatically (and invisibly) for you through the Journal system.

1w

If you type:

g<ALT>j<alt><CR>

You should see:

Edi K: Goto K: Journa

Jou K:

If you type:

s<alt>f<ALT><CR>

You should see:

Jou K: Submit File at A:

Jou K:

1w1

If you type:

t<ALT>Elephant Meeting<CR>

You should see:

Jou K: TitleT: Elephant Meeting

Jou K:

1w2

If you type:

d<ALT>jhb jmb<CR>

You should see:

Jou K: Distribution: I: jhb I: jmb

If you type:

g<alt><CR>

You should see:

Jou K: Go?

JOURNAL SYSTEM IN PROGRESS

COMPLETED

Edi

1w3

The user IDENTs (the same kind of IDENT you specified in step 1) indicate personnel at the NIC. This list may be any length and multiple IDENTs must be separated by spaces or commas.

1w3a

When the Journal completes processing, it automatically returns you to the TNLS command level when it prompts the TNLS ready signal "Edi".

1w3b

20. The file you just created in NLS has been submitted to the Journal, and a copy has been made for cataloging and future reference purposes. It is not necessary (although permissible) for you to maintain your duplicate version of the file. To delete the file, if you type:

d<alt>f<alt>memo<CR><CR>

You should see

edi K: Delete K:File

OK?

Edi K:

1x

21. Your work session is over and you leave the system:
If you type:

1y

lo<CR>

1y1

You should see:

1z

Edi K: logout

1z1

YOUR TNLS COMMAND VOCABULARY AT THIS POINT AND SOME EASY
EXTENSIONS TO IT

2

File Manipulation Commands

2a

Create File - creates a new file

2a1

Update File - makes a fresh copy of the file

2a2

Load File - calls up a previously saved file

2a3

Creating Text

2b

Insert Statement

2b1

Insert Text

2b2

Try Insert Word - the text you type is inserted after the
word you specify and a system-supplied space is
automatically inserted before your text.

2b2a

Editing

2c

Delete statement

2c1

Try Delete Group - it enables you to delete sets of
statements and requires that you specify the beginning
and end of the sequential group of statements you want
deleted.

2c1a

Try Delete Text - it requires that you specify the beginning and ending locations of the text you want deleted.

2c1b

Try Delete Word - you only have to specify one location anywhere in the word you want deleted and spaces, periods, commas, etc. are handled appropriately.

2c1c

Substitute Statement

2c2

Try Substitute Group - it requires that you specify the first and last statements in the group but enables you to edit multiple statements with one command.

2c2a

Moving Around In The File

2d

jump to A: ADDRESS<CR> - moves you to the address specified by ADDRESS.

2d1

The ways you have learned to address are:

2d1a

whole statements by number's;

within statements by ">" for end of statement, and by content "[text]", which searches for text in the remainder of the file and if found moves you to the last character of the text you specify.

Try ";text;" to limit the content search to one statement.

Seeing Your File

2e

- prints the current statement

2e1

Try <LF> to print the next statement (<LF> is the Line Feed or LF key on your terminal.

2e1a

Print - prints from your current statement to the end of the file.

2e2

Try Print Statement - it is similar to the " " command used in Step 6 except that it allows you to specify the address of the (single) statement to be printed and (optionally) certain viewcontrol codes such as the one you used in Step 5 to see statement numbers's.

2e2a

Sending Your File To Other Persons	2f
Execute Journal Submit File	2f1
Title - gives your item a title	2f1a
Distribution - specifies to whom the item will be sent	2f1b
Entering/Leaving NLS and TENEX	2g
Login - accesses the TENEX system	2g1
NLS - accesses NLS from Tenex	2g2

ARC PRIMER

SRI-ARC

19640 Distribution

N. Dean Meyer, Charles F. Dornbush, James H. Bair,

ARC PRIMER

DVN 12-OCT-73 17:48 19640
13 OCT 73

(J19640) 12-OCT-73 17:48; Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /NDM(you can start on this) CFD(mostly to debug COM, but
you might glance at th examples) JHB(fyi); Sub-Collections: SRI-ARC;
Clerk: DVN;
Origin: <VANNOUHUYS>NEW[RIM.NLS;2, 12-OCT-73 17:41 DVN ;

MCS-8 assembler request

Carnegie-Mellon is also interested in obtaining the assembler and simulator for the MCS-8 microcomputer. If you got any results from your request of 6-Feb-73, please contact Howard Wactlar (Ident=HDW) at CMU-10, or by sending FTP mail to S300HW09@CMU-10A (host #78).

1

HDW 13-OCT-73 06:29 19641

MCS-8 assembler request

(J19641) 13-OCT-73 06:29; Title: Author(s): Howard D. Wactlar/HDW;
Distribution: /RFB; Sub-Collections: NIC; Clerk: HDW;

19641 Distribution
Roland F. Bryan,

content analyzer hassles -- a first encounter

Dean -- I have been trying to use content analyzer, with some unfortunate problems:

- 1) Documentation does not state that keywords, such as NP (for non-printing chars) must be in upper-cas, yet it seems they must;
- 2) apparently, parentheses must be used heavily for parser to understand what to do;
- 3) Documentation does not cite error messages, leaving user up creek, if he doesn't immediately know what is wrong.
- 4) My reference for all this is in (ucla-nmc,dhc,content:g) which I still can't get to work. I am getting "SYSTEM ERROR: EOF READ LINE 0 +0" with a printout of the last part of the line.
- 5) HELP!!!

DHC 13-OCT-73 11:24 19642

content analyzer hassles -- a first encounter

(J19642) 13-OCT-73 11:24; Title: Author(s): David H. Crocker/DHC;
Distribution: /NDM; Sub-Collections: NIC; Clerk: DHC;

19642 Distribution
N. Dean Meyer,

Dirk -- that last msg was for Dean. I mistyped.

1

(J19643) 13-OCT-73 11:32; Title: Author(s): David H. Crocker/DHC;
Distribution: /DVN; Sub-Collections: NIC; Clerk: DHC;

19643 Distribution
Dirk H. Van Nouhuys,

resolution

I just got it to work. Simple problem. It merely needed TWO
semi-colons at the end of the statment!!

1

resolution

(J19644) 13-OCT-73 11:32; Title: Author(s): David H. Crocker/DHC;
Distribution: /DVN; Sub-Collections: NIC; Clerk: DHC;

19644 Distribution
Dirk H. Van Nouhuys,

resolution

I just got it to wark. Simple problem. It merely needed TWO
semi-colons at the end of the statment!!

1

resolution

(J19645) 13-OCT-73 11:33; Title: Author(s): David H. Crocker/DHC;
Distribution: /NDM; Sub-Collections: NIC; Clerk: DHC;

19645 Distribution
N. Dean Meyer,

Reply to 18408 on forthcoming changes to NLS command language.

Charles: (10408,1:w) covers just about everything I've even considered complaining about in NLS for the whole time I've used it. These few comments:

1

It might be nice to have, perhaps optionally, the (from), (to), F:, and L: prompts in DNLS.

1a

Whatever happened to the permanent and just-for-the-next-word shift characters?

1b

Perhaps left-delimiter and right-delimiter should also be user-setable characters.

1c

Reply to 18408 on forthcoming changes to NLS command language.

(J19646) 13-OCT-73 12:09; Title: Author(s): A. D. (Buz) Owen/ADO;
Distribution: /CHI; Sub-Collections: NIC; Clerk: ADO;

ACK

This is to acknowledge the receipt of Abhay's message. I have no comments.

Regards,

Alex McKenzie

1

ACK

(J19647) 13-OCT-73 12:41; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /KTP AKB JEW RHT AWH; Sub-Collections: NIC; Clerk: AAM;

19647 Distribution

Kenneth T. Pogran, Abhay K. Bhushan, James E. (Jim) White, Robert H. Thomas, A. Wayne Hathaway,

Two Grumbles

- 1) Today I tried to do an "Update" in NLS. It threw away my partial copy but screwed up the file badly (giving me a diagnostic message "Bad File type CA" or something like that). Fortunately, not too much was lost, but I will be afraid to do another "Update till I hear that this is fixed.
- 2) I've logged in several times today as user "mckenzie". Starting at about 1312 PDT the system started asking for my ident, even though it always knew it from my username previously. Is this a new "feature"?

Alex McKenzie

1

Two Grumbles

(J19648) 13-OCT-73 13:28; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /BUGS BGS; Sub-Collections: NIC BUGS; Clerk: AAM;

t55500415 write-up October 1973

OBJECTIVE

1

The main objective of this effort is to perform testing of the WWMCCS Operating System on the Honeywell 635 machine and to provide whatever assistance WWMCCS site users may require in the area of Data Management System (WWDMS) performance. The jobs levied on RADC are usually of a one-time nature. Secondary to the main objective, the Information Processing Branch is investigating the Integrated Data Store (IDS) extension to the COBOL Language as a Manage Information System tool. A pilot project is being conducted wherein a IDS data base design has been implemented on the H635 and reflects the management activities of the Information Sciences division. This pilot project serves as a vehicle for better understanding the resource requirements necessary when implementing large Data Management Systems in highly mobile data environments.

1a

APPROACH

2

The basic approach has involved several RADC engineers who continually study and attempt to run the WWMCCS Operating System on the H635 computer. RADC receives a copy of each WWMCCS software release as frequently as other WWMCCS users. The process of loading the system and attempting to reconcile the H635 and WWMCCS O/S differences is repeated for each release. The result of our efforts to run the WWMCCS operating system on the 600 series Honeywell computer will enable other non-WWMCCS sites who have 600 computers to at least run the software and benefit from WWMCCS innovations.

2a

PROGRESS

3

IDS investigations. RADC/ISI has been able to define, create, and load a pilot data base for the Information Sciences division. This effort has enabled us to be one of the few places in the services where there is a knowledge of what the Honeywell Integrated Data Store can offer a potential user.

3a

WWMCCS Support. RADC has loaded the Joint Technical Support Activities release number 3.0 on the Honeywell 635 (RADC facility). Compatibility problems were recognized due to the software design that usually requires a 6000 series Honeywell computer. The system was executed on the H635 in the Batch mode only. Time-sharing and Direct-access users were not able to access the system because of WWMCCS software and the DN355 incompatibility. Later versions of the WWMCCS software packages will be run on RADC's computer to test for compatibility and hopefully to resolve the problems.

3b

t55500415 write-up October 1973

(J19649) 13-OCT-73 18:17; Title: Author(s): William P. Bethke/WPB;
Distribution: /RBP; Sub-Collections: RADC; Clerk: WPB;
Origin: <BETHKE>T55500415.NLS;1, 4-OCT-73 14:20 WPB ;

19649 Distribution
Roger B. Panara,

Thanks for doing the dex tapes. Everything looks good this time. I got your message finally (in triplicate with slight variations). What is TEC.? More of what with less of what? Bits are sets of two equally probable mutually impossible alternatives. Life is the process of maximizing bits controlled.

1

(J19650) 13-OCT-73 20:31; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /MAB2; Sub-Collections: SRI-ARC; Clerk: KIRK;

towards PW

Marcia: I would appreciate your changing PAW2 to PW. I think idents formed from initials are fine, until you have to share them. The reason I asked if you could delete the entire entry was because when you changed some idents for me before, the result was 2 extra group entries with 1 member each. Since PAW2 won't have authored anything, or recieved things, etc., I would be glad to start over instead. I'm still convinced this was caused by a machine error, probably the keyboard in my terminal. Thanks...Buz

1

towards PW

(J19651) 14-OCT-73 13:11; Title: Author(s): A. D. (Buz) Owen/ADO;
Distribution: /MLK; Sub-Collections: NIC; Clerk: ADO;

(Sunday) Dirk,
Is it true that, in the Command Summary, you & Chuck decided to use
TYPEIN rather than CONTENT for "directory", as you told me you meant
fr "file"? I am revising the document with this assumption.--Jeanne

1

(J19652) 14-OCT-73 16:32; Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /DVN; Sub-Collections: SRI-ARC; Clerk: JMB;

macro access

Jim - Macro is in <subsys> which net users aren't allowed to access.
Can't user Copy cmd either. suggestion?

/Dave

1

macro access

(J19653) 14-OCT-73 17:15; Title: Author(s): David H. Crocker/DHC;
Distribution: /JEW; Sub-Collections: NIC; Clerk: DHC;

more

FOR THAT MATTER, WHAT DO I NEED TO KNOW special about using macro at
the Nic. Should output Assembler be done with any special viewspecs,
etc.? /d

1

more

(J19654) 14-OCT-73 17:36; Title: Author(s): David H. Crocker/DHC;
Distribution: /JEW; Sub-Collections: NIC; Clerk: DHC;

One Less Grumble

Please ignore grumble number 2 of NIC 19648, since it isn't happening today. Did I catch you in the middle of a system change?
Alex McKenzie

1

19656 Distribution

Bgs Bugs, Bgs Bugs, Diane S. Kaye, Harvey G. Lehtman, Charles H.
Irby.

1

1a

One Less Grumble

(J19656) 15-OCT-73 05:52; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /BGS BUGS; Sub-Collections: NIC BUGS; Clerk: AAM;

mailing address change

Please change your mailing address for me to:

Jonathan B. Postel
The MITRE Corporation
Mail Stop W185
Westgate Research Park
McLean, Virginia 22101

I have been following MERITS progress through the design notes and find very interesting the sequence of problems and solutions. While many of the situations are similar to issues that have come up in the arpanet, MERITS situations are most often cast in a different perspective due to some of the basic design differences. In any case i do read the memos and appreciate receiving them.

thank you

--jon.

1

19657 Distribution
E. M. Aupperle,

1
1a

mailing address change

(J19657) 15-OCT-73 06:04; Title: Author(s): Jonathan B. Postel/JBP;
Distribution: /EMA; Sub-Collections: NIC; Clerk: JBP;

Thoughts on DCA's Network Plans

Hello, this is to let you know that i am now at MITRE Corporation in McLean. Also i have some thoughts on the DCA effort in computer-communications networks.

1

Upon reflecting on the conversations i had with dr. painter and the people at reston, and the little bit of information i have about the world wide military command and control system (wwmccs) work being done at MITRE i have serious concerns about the DCA effort in computer-communications networks.

2

As a sort of global comment, i received a strong impression that "DCA will do things its own way" and that the "not invented here" syndrome was prevalent. At reston i felt that while it might be interesting to work on protocols in dr helm's group, there had been a number of basic decisions made that i would have to work around. Another point was the apparent lack of strong inteeraction with arpanet or other similar projects.

3

First there are two bugaboos that seem to cloud everyones perception of the issues: security and priority.

4

The security matter is not trivial but does not require fundamentally different hardware/software that that used in the arpanet, it does require additional software and hardware.

4a

The priority concern arises out of the current communications system where delivery times are measured in 10's of minutes to many hours, in an arpa-like net communications delivery times will be less that 1 second. Thus the differences between priority and non-priority message delay will be insignificant. However there may be a place for priority in the combined computer-communications system, and that is in the computers. If a computer is heavily used it may be appropiate to have it give better service to the more important tasks/people. one case might be in the program that enters messages into the communications sub-network.

4b

I am also concernd about the work on the prototype wwmccs intercomputer network (pwin) primarily because it does appear to have the possibility of growing into the real system.

5

i think that the arpa technology is good enough and is continually subject to improvment so that pwin should use it exactly. any change that would cause software to be written to perform the same functions as are already present in the arpanet is not only a duplication of effort but is also very likely to be a setback in the application of current technology and may very well result in programs becomming frozen at that stage.

5a

Thoughts on DCA's Network Plans

one point that concerns me very much (because it is a symptom of a larger problem) is the fact that the software used in the interface message processors (imp) is frozen as of november 1972. this is an indication that pwin is out of touch with the arpanet and intends to go it alone.

5b

the interface to the host computers in pwin and the software being written for it are also of concern. it appears that the interface hardware is substantially larger than is necessary. the software is also different than the arpa software in subtle but crucial ways, and larger than average.

5c

a question that occurs to me is "how difficult is it to convert the wwmccs machines to machines that can run the Multics system?" Multics runs on honeywellll 645 or 6180 computers. Multics at MIT is on the arpanet and has reliable and now reasonably efficient network software.

5c1

it is possible that the current wwmccs operating system (gc0s) could be run as a subsystem on Multics.

5c1a

it is possible that Multics offers advantages in the security aspect since a significant goal of the Multics designers was to provide users of Multics a flexiable way of controlled sharing of data and programs. the word controlled is underlined.

5c1b

i would be happy to discuss these or other topics with you more.

6

sincerely
--jon postel.

6a

19658 Distribution
Estil V. Hoversten,

1
1a

Thoughts on DCA's Network Plans

(J19658) 15-OCT-73 06:55; Title: Author(s): Jonathan B. Postel/JBP;
Distribution: /EVH; Sub-Collections: NIC; Clerk: JBP;

BETHKE INITIALS FILE SAVED

(Tickler)

(author) Journal documents authored

WPB 13-OCT-73 18:17 19649
 t55500415 write-up October 1973
 Location: (LJOURNAL, 19649, 1:w)
 *****Note: Author Copy*****

WPB 17-SEP-73 07:46 19107

Message: The persons listed below are recommended to attend the Honeywell course 6330 (GCOS analysis) at Mclean Va on Nov 5th thru Nov 16th. They are suggested due to their prior experience with GCOS. It is anticipated that these individuals will serve as instructors/trainers for other ISI personnel involved in WWMCCS tasks: Primary 1. Trad, David F. 2. Liuzzi, Raymond
 Alternates 1. Mark, Donald 2. Cavano, Joseph signed Capt Daughtry / 17 Sept 73
 *****Note: Author Copy*****

WPB 17-SEP-73 07:27 19105

Location: (JJOURNAL, 19105, 1:w)
 *****Note: Author Copy*****

WPB 14-SEP-73 06:05 19074
 WWMCCS Training/630 course

Message: Of ten qualified people notified to attend meeting to discuss volunteers to attend 630 course (6000 GCOS analysis) at Mclean on November 5th only three (3) showed. They were Calicchia, Mark, and Mclean. I will submit the names of two people most likely to be heavily involved with WWMCCS for the course at a later date.. by Monday at the latest....Capt Daughtry.
 *****Note: Author Copy*****

WPB 14-SEP-73 05:58 19073
 WWMCCS Training

Message: The Honeywell course 620 (6000 system software) along with other pre-requisites is a "must" before anyone is accepted to the 630 course (6000 GCOS analysis). 620 is a five day course. At least, 630 should be taken by members of the WWMCCS study group. Therefore, I propose that a 620 course be set up here at RADC for the following personnel and any other interested party in RADC. Attendance must be "required". The

BETHKE INITIALS FILE SAVED

people are: Rzepka, Daughtry, Robinson, Vanalstine, Lamonica, Dinitto, Vito, Mott. Otherwise, we must arrange for individual attendance at some WWMCCS sponsored course where TDY is necessary.....Dave Daughtry.

*****Note: Author Copy*****

2e

WPB 13-SEP-73 14:12 19063

Message: Major Vargosko, project officer for the WWMCCS ADP users Group conference, has arranged for twin cc accommodations at the ARVA motel 26 thru no, 24 thru 26 Sept Wash DC for d. Daughtry and one other (d. Robinson). Conference agenda has been sent to all on WWMCCS mailing list.

*****Note: Author Copy*****

2f

(contents) This file contains the following branches which can be accessed by name when enclosed in parenthesis:

3

(Tickler), (author), (contents), (jlinks), (Journal), (haveread), (meetings), (trips), (briefings), (reports), (staffmeet), (minutes), (history), (IS briefs), (r&t selection of the month), (tpo) technology planning objectives, (lab director's report), (annual accomplishment report), (RADG history), (tcp's) technology coordinating papers, (taa's) technology area annexes, (tod's) technology objective documents, (TN's) Technology Needs, (rn's) research needs, (POC's), (RAD's), (misc.) miscellaneous write-ups, (projects), (tasks), (efforts), (user) statistics,

3a

(jlinks)

4

(Journal) Journal documents (most recent first)

5

(haveread) Journal documents I have acknowledged

6

TFL 26-SEP-73 07:39 19306

427m and wwmccs

Location: (JJOURNAL, 19306, 1:w)

6a

EJK 25-SEP-73 13:20 19298

RADCMIS

Message: I have received various messages and info on files from several people involved in the radcmis plan. I offer no comment at this time since I have a lot of reading and thinking to do. I do think that any routine correspondence on this topic should be sent to everyone concerned. This includes fjt & jlm. Private

BETHKE INITIALS FILE SAVED

correspondence is of course encouraged, but results of caucuses etc. should be made available to all of us. I suggest another meeting on 28 Sep at 1000, in your office this time. Items for an agenda should be submitted to the <stone>radcmis file which is open. Hopefully this meeting will provide additional guidance to reduce anxiety levels.

*****Note: For D.Daughtry*****

6b

Comments: this is notes from a meet or presentation made by F Allen thought they might be of some interest

6b1

FJT 25-SEP-73 12:03 19296

Letter from Commander on Center Computer Support

Location: (JJOURNAL, 19296, 1:w)

*****Note: for Dave Aaughtry*****

6c

FJT 25-SEP-73 11:24 19293

WPB Blast

Location: (JJOURNAL, 19293, 1:w)

6d

FJT 25-SEP-73 05:35 19280

tickler for week of 24 sep - 5 Oct

Location: (JJOURNAL, 19280, 1:w)

6e

AAM 24-SEP-73 06:20 19262

Scheduled Software Release

Message: This is a reminder that Network Software Maintenance is scheduled between the hours of 0700 and 0900 (Eastern Time) on Tuesday, 25 September 1973. Although software releases are checked out as much as possible in the BBN test cell, there are sometimes problems of scale which are not detected until after a release; hence there is a small but finite possibility that the software will be troublesome for a few hours after the scheduled release.

Sincerely,

Alex McKenzie (for the Network Control Center)

6f

Comments: Have a ball!!

6f1

FJT 21-SEP-73 08:05 19178

Tickler - 24 Sep - 5 Oct (2 week time period)

BETHKE INITIALS FILE SAVED

Location: (JJOURNAL, 19178, 1:w)

6g

JLM 21-SEP-73 07:16 19176

iproject admin

Location: (JJOURNAL, 19176, 1:w)

6h

FJT 20-SEP-73 13:23 19143

tickler - 24 Sep - 5 Oct (2 week layout)

Location: (JJOURNAL, 19143, 1:w)

6i

Comments: this report is from e. laforge for capt. daugerty

6il

AAM 17-SEP-73 05:52 19104

Scheduled Software Release

Message: This is a reminder that Network Software Maintenance is scheduled between the hours of 0700 and 0900 (Eastern Time) on Tuesday, 18 September 1973. Although software releases are checked out as much as possible in the BBN test cell, there are sometimes problems of scale which are not detected until after a release; hence there is a small but finite possibility that the software will be troublesome for a few hours after the scheduled release.

Sincerely,

Alex McKenzie (for the Network Control Center)

6j

WRF 14-SEP-73 08:44 19078

Monitor Work for Next Few Weeks

Message: For the next few weeks, Jim Blum and I will be working on assembling and testing the TENEX monitor for the Tymshare utility. Our work is going to require some amount of system downtime. I realize that this may pose an inconvenience to some of you, but please bear with us. In an attempt to allow you to arrange your schedules, I will keep the UP-DOWN schedule current. If you have any large jobs which will require the system at night, feel free to tell me, and we will negotiate the schedule.

6k

DLS 13-SEP-73 09:30 19057

Access to On-Line Userguides

Location: (JJOURNAL, 19057, 1:w)

6l

FJT 12-SEP-73 07:28 18992

BETHKE INITIALS FILE SAVED

tickler - Sorry but more info
Location: (JJOURNAL, 18992, 1:w)

6m

Comments: For Mac..and anyone else who might be
interested..There are a lot of goodies in the system you might
want to read about/try.

6ml

FJT 12-SEP-73 06:35 18989
tickler for week of 17 Sep 73
Location: (JJOURNAL, 18989, 1:w)

6n

JLM 11-SEP-73 18:23 18987
Location: (JJOURNAL, 18987, 1:w)

6o

Comments: man i have finally got this to a few people i quit

6ol

EJK 7-SEP-73 13:17 18942
Primer
Location: (JJOURNAL, 18942, 1:w)
*****Note: this may be too elementary for you but it may be
useful*****

6p

FJT 7-SEP-73 07:18 18844
tickler for week of 10 september
Location: (JJOURNAL, 18844, 1:w)

6q

EJK 7-SEP-73 06:46 18842
lost execuport
Message: Somewhere between 1830 on 6 Aug and 0830 on 7 Aug an
Execuport was borrowed(hopefully) from the office where Cap
daughtry resides. Does anyone have any information. Please advise
him or me before we call in the CID.

6r

EJK 24-AUG-73 11:14 18645
info on phone numbers
Location: (MJOURNAL, 18645, 1:w)

6s

JHB 24-AUG-73 06:37 18631
Silent Connections to Host 2
Location: (MJOURNAL, 18631, 1:w)

BETHKE INITIALS FILE SAVED

*****Note: For your information*****

6t

Comments: This 2 pp document represents an attempt to deal with
some of the problems we have been having at RADC getting into
Host 2.

6t1

DLS 20-AUG-73 12:02 18510
SOFTWARE SCIENCES TECHNOLOGY TPO-11
Location: (MJOURNAL, 18510, 1:w)

6u

(meetings)

7

(trips)

8

(briefings)

9

(reports)

10

(staffmeet)

11

(minutes)

12

(history)

13

(IS briefs)

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