

YET ANOTHER TEST

JEANNE,
EVERYONE AT BBN GOT MY LAST TEST MESSAGE (JOURNAL, 8559) EXCEPT
FOR MYSELF AND JULIE MOORE (JBM). ON CLOSER INVESTIGATION,
WE DISCOVERED THAT JULIE DID NOT HAVE A "USER" VALUE IN
HER "IDENT" SO WE ADDED ONE. I WILL NOW TRY TO SEND HER
A COPY OF THIS MESSAGE, AND I FULLY EXPECT THAT SHE WILL
RECEIVE IT. THEREFORE, THE ONLY REMAINING PROBLEM IS
THAT I, AS THE AUTHOR OF A DOCUMENT, SEEM TO BE UNABLE
TO SEND A COPY OF THE DOCUMENT TO MYSELF THROUGH THE
JOURNAL. I WILL LET YOU KNOW THE RESULTS OF TRYING TO SEND
THIS TO JULIE.

1

AAM 19-JAN-72 8:37 8561

YET ANOTHER TEST

(J8561) 19-JAN-72 8:37; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: Jeanne B. North, Julie B. Moore, Alex A. McKenzie/JBN JBM
AAM; Sub-Collections: NIC; Clerk: AAM;

TEST RESULTS

DEAR JEANNE,
MY TEST MESSAGE "YET ANOTHER TEST" (JOURNAL 8561) WAS
SUCCESSFULLY
DELIVERED TO JULIE'S (JBM) INITIAL FILE. AS ANTICIPATED,
IT WAS NOT DELIVERED TO MINE. THEREFORE, THE ONLY PROBLEM WE
NOW KNOW OF WITH REGARD TO THE JOURNAL IS ITS FAILURE TO
DELIVER A COPY OF A MESSAGE (OR BRANCH,...) TO THE AUTHOR
EVEN WHEN HE SPECIFICALLY ADDRESSES HIM(HER)SELF.

THIS IS THE LAST PIECE OF TESTING I ANTICIPATE DOING
WITH THE JOURNAL SYSTEM!!!

AAM 19-JAN-72 10:36 8562

TEST RESULTS

(J8562) 19-JAN-72 10:36; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: Jeanne B. North/JBN; Sub-Collections: NIC; Clerk: AAM;

NEXT NETWORK GRAPHICS WORKING GROUP MEETING

NEXT NETWORK GRAPHICS WORKING GROUP MEETING

1

At the last meeting of the Network Graphics Working Group in Palo Alto, I volunteered Mitre to host the next meeting in Washington, D. C., 'sometime in mid-April.' I would like to suggest April 16-18 as the aforementioned 'sometime.'

1a

Please advise me --as soon as possible-- if there are any violent objections to scheduling the meeting at this time. Otherwise, I will make the necessary arrangements, and prepare a more detailed notice. An early notice of intention to attend would facilitate making hotel reservations.

1b

Also: Imlac Corporation has agreed to provide us with a terminal for the meeting, connected to Mitre's TIP. Hopefully, some presentations will be planned with this in mind.

1c

Ira W. Cotton

1d

The Mitre Corporation
McLean, Virginia 22101

1d1

(703) 893-3500 x2587

1d2

NEXT NETWORK GRAPHICS WORKING GROUP MEETING

(J8563) 19-JAN-72 10:36; Title: Author(s): Ira W. Cotton/IWC;
Distribution: Jeanne B. North, Howard D. Wactlar, Marshall D. Abrams,
John W. McConnell, Steve D. Crocker, W. Jack Bouknight, Karl C. Kelley,
J. C. R. Licklider, Robert M. Metcalfe, James C. Michener, Albert Vezza,
Edwin W. Meyer, Michael A. Padlipsky, Ken Pogran, Ira W. Cotton, Jerry
J. Powell, Dave E. Liddle, Eric F. Harslem, E. Wells Pughe, Jean M.
Saylor, Charles H. Irby, John T. Melvin, Richard W. Watson, James A.
Moorer, Jon B. Postel, Ron M. Stoughton, Jeanne B. North, L. Peter
Deutsch, Ira W. Cotton, W. Jack Bouknight, Steve D. Crocker, Charles H.
Irby, Karl C. Kelley, J. C. R. Licklider, John W. McConnell, Robert M.
Metcalfe, Edwin W. Meyer, James C. Michener, James A. Moorer, Jon B.
Postel, Ken Pogran, Ron M. Stoughton/NGG IIG; Sub-Collections: NIC NGG
IIG; Clerk: IWC;

Authors Do Not Get Online Journal Distribution At Present

You are correct, at the moment if the author is in the distribution list either in a group or explicitly he does not get distribution. A change will go in soon so authors get distribution online; now authors get hardcopy distribution.
Dick

1

RWW 19-JAN-72 11:21 8564

Authors Do Not Get Online Journal Distribution At Present

(J8564) 19-JAN-72 11:21; Title: Author(s): Richard W. Watson/RWW;
Distribution: William S. Duvall, Jon B. Postel/WSD JBP; Sub-Collections:
SRI-ARC; Clerk: RWW;

suggestions for the next emc meeting

SUGGESTED TOPICS FOR DISCUSSION AT THE NEXT EMC MEETING:

1

We need a device for the line printer so that we can start and run big listings unattended and have the resulting listing in one stack and not all over the floor

1a

It would be nice if we could either get a new drum for the line printer that would distinguish between 0 (zero) and O (oh)

1b

1c

An alternative to a new drum would be to take a file to either character and file a horizontal line thru the entire row thru the center of the character

1c1

KEV 19-JAN-72 11:47 8565

suggestions for the next emc meeting

(J8565) 19-JAN-72 11:47; Title: Author(s): Kenneth E. Victor/KEV;
Distribution: Ed K. Van De Riet, Charles H. Irby, James C. Norton,
Richard W. Watson, Kenneth E. Victor/EKV CHI JON RWW KEV;
Sub-Collections: SRI-ARC; Clerk: KEV;
Origin: <VICTOR>EMC.SUGGESTIONS;1, 19-JAN-72 11:41 KEV ;

CSK 19-JAN-72 12:09 8566

Test Message.

This is a test message to myself.

1

CSK 19-JAN-72 12:09 8566

Test Message.

(J8566) 19-JAN-72 12:09; Title: Author(s): Chuck S. Kline/CSK;
Distribution: Chuck S. Kline/CSK; Sub-Collections: NIC; Clerk: CSK;

CHI 19-JAN-72 12:54 8567

DEX-II design revised as per 18-Jan meeting

(J8567) 19-JAN-72 12:54; Title: Author(s): Charles H. Irby/CHI;
Distribution: Harvey G. Lehtman, Charles H. Irby, Walter L. Bass,
William H. Paxton, Douglas C. Engelbart/DEX2; Sub-Collections: SRI-ARC
DEX2; Clerk: CHI;
Origin: <IRBY>DEX-II.NLS;3, 19-JAN-72 12:49 CHI ;
Origin: <LEHTMAN>JCOMENT.NLS;4, 17-JAN-72 16:57 HGL ;

DEX-II design revised as per 18-Jan meeting

the following DFAE (Dynamic File Address Expression) elements do not make sense in an SFAE

4a5c

/ \ ? SP r a fr fa

4a5c1

should legal elements refer only to original file (what about statements inserted earlier in this session?)?

4a5d

CHI thinks that SFAE should only be used in a command file to refer to structural entities that exist before the changes specified in that command file are made.

4a5d1

command file naming convention (esp for dex sink directory)

4a6

filename.IDENT

4a6a

dex could create new file in the proper users directory, lock files for the correct users, and mark changes statements with the proper IDENT.

4a6b

Access existing files.

4b

Assign number to file, existing statements prefaced by number in delimiters.

4b1

(1)1a-- 1a in file 1.

4b1a

Making use of TNLS address specifications

4c

permitting specification of existing items by statement names

4c1

Sequence of execution

4d

It was noted that the commands could have an execution precedence (as was earlier noted) in order to make the semantics of a DEX input file unambiguous.

4d1

Dividing the load among team members

5

We will consider this after the design has been finished.

5a

DEX-II design revised as per 18-Jan meeting

()	4a5a2
literal link	4a5a2a
statement name	4a5a3
statement number	4a5a4
with interpolation, repeat, and moved structure capabilities.	4a5a4a
[] (only yields a structural location)	4a5a5
content search	4a5a5a
<> (only yields a structural location)	4a5a6
word search	4a5a6a
marker name (only yields a structural location)	4a5a7
Questional (an SFAE should only yield a Structural location -- not a textual location)	4a5b
::	4a5b1
content search within a statement	4a5b1a
,	4a5b2
single character search within a statement	4a5b2a
+	4a5b3
advance specified number of entity types	4a5b3a
-	4a5b4
back up specified number of entity types	4a5b4a
←	4a5b5
go to begining of statement	4a5b5a
>	4a5b6
go to end of statement	4a5b6a

DEX-II design revised as per 18-Jan meeting

replace (s/b/g/p)	4a3h
in the order in which they appear in the command file	4a3h1
delete (s/b/g/p)	4a3i
in the order in which they appear in the command file	4a3i1
load file, output file, update file	4a4
NUM ': filename (load file, multi-window capability)	4a4a
NUM may thereafter be used as a modifier to a SFAE	4a4a1
If NUM = 0 then instead of dex creating a new file into which new statements and error and warning messages are inserted the specified file will be used. That is, 0: is initialized by dex to be a new file in the users directory which has the same name as the command file and extension NLS. The use of 0: overrides that default. Whenever a location specification is not preceded by a NUM:, 0: is assumed.	
update file	4a4b
[NUM ':] "uf" CA	4a4b1
if NUM: is not specified, the new or 0: file will be updated.	4a4b1a
Which commands have been executed when this command is executed???	4a4b2
output file	4a4c
[NUM ':] "of" filename CA	4a4c1
Which commands have been executed when this command is executed???	4a4c2
Static file address expression (SFAE)	4a5
Legal SFAE elements	4a5a
S P D U T H E N B L	4a5a1
successor predecessor etc	4a5a1a

DEX-II design revised as per 18-Jan meeting

samantics: The specified structure is replaced in such a way that the first element of the new structure has the [NUM ':] SFAE specified at the begining of the command.

4a2a6b

Transpose

4a2a7

syntax: [NUM ':] STAE NP 't (('s/'b/'p) NP [NUM ':] SFAE / 'g NP [NUM ':] SFAE NP [NUM ':] SFAE NP [NUM ':] SFAE) CA

4a2a7a

samantics: The specified structures are transposed.

4a2a7b

Note on addressing

4a2a7c

statement numbers without repeat counts must refer to the original statements. Repeat counts must be used to refer to statements in these new locations.

4a2a7cl

Order of execution for commands (all commands of the first type are executed before all commands of the second type, which are executed before all commands of the third type, etc.)

4a3

insert statement

4a3a

substitute statement

4a3b

all substitutes reduce to substitute statement commands

4a3b1

copy (s/b/g/p)

4a3c

in the order in which they appear in the command file

4a3cl

break statement

4a3d

append statement

4a3e

move (s/b/g/p)

4a3f

in the order in which they appear in the command file

4a3f1

transpose (s/b/g/p)

4a3g

in the order in which they appear in the command file

4a3g1

DEX-II design revised as per 18-Jan meeting

See below for way to refer to item copied. 4a2a2c

Delete 4a2a3

syntax: [NUM ':] STAE NP 'd (('s/'b/'p) / 'g NP
[NUM ':] SFAE) CA 4a2a3a

samantics: The specified structure is deleted. 4a2a3b

insert statement 4a2a4

syntax: [NUM ':] STAE NP LIT CA @(\$('u/'d/'s) NP
LIT CA) 4a2a4a

samantics: The literal input is made into
statements in the specified locations. After one
statement is input using a full SFAE futher
statements may be input by specifying their
structural relationship to the statement just
inserted.. 4a2a4b

Move 4a2a5

syntax: [NUM ':] STAE NP 'm (('s/'b/'p) NP [NUM
':] SFAE / 'g NP [NUM ':] SFAE NP [NUM ':] SFAE)
CA 4a2a5a

samantics: The specified structure is moved in
such a way that the first element of the new
structure has the [NUM ':] SFAE specified at the
begining of the command. 4a2a5b

Referring to structural elements after they have
been moved 4a2a5c

Old number in slashes after first in group for
move group, for example 3c/lb/ would refer to
statement lb which had been moved (copied,etc.)
in a group (e.g., 1a to 1d) to location 3c. 4a2a5c1

is the second / needed?? 4a2a5c1a

Replace (do we allow full nls replace capability?) 4a2a6

syntax: [NUM ':] STAE NP 'r (('s/'b/'p) NP [NUM
':] SFAE / 'g NP [NUM ':] SFAE NP [NUM ':] SFAE)
CA ????? 4a2a6a

DEX-II design revised as per 18-Jan meeting

Commands in an expanded DEX

4

New commands

4a

substitute will be used for text editing of statements

4a1

easier to provide context, safer in a deferred mode

4a1a

Substitutes will be allowed over any structural entity but all will be accumulated and processed at once; thus, for any given statement only one substitution will be performed.

4a1b

all text to be replaced will refer to the original text of the statement.

4a1b1

An Un-substitute command will be provided to allow a user to revoke a previously specified substitute command.

4a1c

The previously specified command can be uniquely specified if the parameters of the un-substitute command are the same as the substitute command.

4a1c1

Most NLS structural commands

4a2

Some may be left out because of ambiguity in referring to statements later in the input file. The following seem to be safe:

4a2a

Append

4a2a1

syntax: [NUM ':] STAE NP 'a NP [NUM ':] SFAE CA

4a2a1a

semantics: appends the second statement to the first. The substructure is handled as in NLS.

4a2a1b

Copy

4a2a2

syntax: [NUM ':] STAE NP 'c (('s/'b/'p) NP [NUM ':] SFAE / 'g NP [NUM ':] SFAE NP [NUM ':] SFAE) CA

4a2a2a

semantics: The specified structure is copied in such a way that the first element of the new structure has the [NUM ':] SFAE specified at the beginning of the command.

4a2a2b

DEX-II design revised as per 18-Jan meeting

gap followed by text terminated in the usual DEX manner with a statement delimiter. (The first character in the gap will be committed in the inserted text and serves as a separator.) The text will be inserted up from, down from, or after the statement immediately preceding it in the input stream.

3a2a

That is the syntax of the Insert Statement command would be

3a2a1

LN NP LIT CA \$(('\$/'s/'u/'d) NP LIT CA)

3a2a1a

LN should actually be STAE (Static File Address Expression)

3a2a1a1

At first I objected to this on the grounds that it would violate the earlier design decision to have location numbers in the left-hand margin of the input or on a listing to facilitate interpolations and editing at a session (one refers to what one sees on the paper in order to compensate for the inherent lack of interaction in the system.)

3a2b

I later changed my mind when the ease of operation for the most common user (PSO clerk) of the system was considered. It would still be possible even for those who use this proposed facility to edit statements using "u", "d", or "s" in a location specification delimited by some character. For example, 2a'udd' would refer to a statement two levels down the statement up from 2a.

3a2c

It should be obvious to the person who uses this possibility in DEX that there is a danger involved in selecting the wrong statement and that if later editing is anticipated the original DEX input method should be used. However, for draft input material, mistakes can just as easily be edited out at a later time using any of the system modes. You may pay for the ease in inputting with increased difficulty in immediate error correction.

3a2d

Walter questioned the difference between DEX and our other subsystems. He felt that the "languages" were too different. I felt that the transition between systems was not as great as it could be considering the inherent differences in the media. Bill agreed. Also, Barbara has picked up DEX very rapidly. The primary difference-- the fact that items get the numbers listed, is a convenience for the non-interactive user.

3b

DEX-II design revised as per 18-Jan meeting

The first meeting of the DEX-2 software group was held on Friday 14 January. Present were HGL, WLB, CHI and WHP. These notes summarize the content of the meeting and are recorded by HGL. None of the features discussed is presented in a final form in this document-- the discussion has just begun.

1

The Journal group ident is DEX2; the members are HGL, WLB, CHI, WHP and DGE.

1a

The meeting dealt with additions and modifications to the basic DEX-1 design contained in (6965,). It has been decided to have more of these relatively short meetings (about 2 hours in length) until a final design has been agreed upon. The next such meeting is scheduled for Tuesday, 18 January at 1400.

1b

I lost energy toward the end of the creation of this file. Thus the description of the commands is not a complete reflection of the discussion took place at the meeting on the subject.

1c

Notes also added by CHI based on the second meeting held 18-JAN.

2

Additional capabilities-- a question of design philosophy

3

DEX as primary input device vs. DEX as editor-- need for a "center-dot" capability.

3a

Different types of users have different needs.

3a1

The prime users of DEX for quite a while will be people (primarily PSO members) who will be doing primary input of original material and of material for insertion into existing files.

3a1a

Walter and Charles both suggested that these users are not particularly interested in DEX's editing capabilities; thus the need to have statement numbers in the left margin for future editing at a session should be tempered by the desire to have a simpler method of inputting than the current mode of specifying a complete location number before the text.

3a2

The suggestion was to permit the use an effective "center-dot" continue facility; a possible implementation would use the letters "u", "d", and "s" for "up", "down", and "successor", respectively, rather than a statement number. This would be followed by a

Poe and Lubore

Poe and Lubore are on d060nw. Took me about 15 minutes to do it and two days to get the journal entry through notifying you of it.

1

Poe and Lubore

(J8568) 19-JAN-72 14:03; Title: Author(s): James E. White/JEW;
Distribution: Ernest H Forman, James E. White/EHF JEW; Sub-Collections:
NIC; Clerk: JEW;

JEW 19-JAN-72 14:19 8569

test message

test message, white to white.

1

JEW 19-JAN-72 14:19 8569

test message

(J8569) 19-JAN-72 14:19; Title: Author(s): James E. White/JEW;
Distribution: James E. White/JEW; Sub-Collections: NIC; Clerk: JEW;

JBL 19-JAN-72 14:37 8570

Test of bbn-net as distribution list

Another in our long series of tests.

JBL 19-JAN-72 14:37 8570

Test of dbn-net as distribution list

This is a test, attempting to send to all of BBN-NET at one swell
foop. If you get this, please let me know.

1

Test of bbn-net as distribution list

(J8570) 19-JAN-72 14:37; Title: Author(s): Joel B. Levin/JBL;
Distribution: Julie B. Moore, Ellen Westheimer, David C. Walden, Bernie
P. Cosell, Joel B. Levin, Alex A. McKenzie, Frank E. Heart, Will R.
Crowther/BBN-NET; Sub-Collections: NIC BBN-NET; Clerk: JBL;

Notes on Software Group Meeting of 18 January 1972

Notes on Software Group Meeting 18 January 1972

1

Present: DIA WLB MSC RLD CHI HGL JTM BLP KEV

Recorder: WLB

2

Summary: Charles called the meeting to discuss the reorganization of the group into software teams and to relate some recent EMC deliberations of interest to those present. There was considerable discussion of ARC management in general, with particular emphasis on the relationship between EMC and the Software Group. Several specific steps were initiated in order to obtain clarification of EMC/DCE positions and to further the move towards more active internal management of the Software Group.

3

DISCUSSION

4

Much of the discussion centered on the recent EMC decisions relating to standardizing the working modes of software personnel.

4a

There was a general feeling that these decisions were an odious infringement on the rights of Software Group members to exercise professional judgement in determining their own working modes.

4b

The origin of these decisions seemed to rest in the feelings of certain individuals, attributed to Dick Watson in particular and also to Jim Norton, that several members of the Software team were not pulling their share of the load.

4c

There was open discussion of and by the specific members involved, and some reported that they had not been personally approached before complaints against them were brought to the attention of the EMC.

4c1

All present found this procedure objectionable and, without judging what actually happened in the past, agreed that any group member having a complaint against another should bring it to his attention first. Several persons further felt that any member should be notified before being discussed at a specific EMC meeting so that he could request a personal appearance, submit a position paper, request that a specific EMC member be excluded from the deliberations for personal reasons, etc.

4c1a

It was generally recognized that management is faced with difficult problems in judging the productivity of a

Notes on Software Group Meeting of 18 January 1972

software group or of any individual in it, but the dictum on working hours was felt by many present to be both unacceptable and counterproductive.

4c2

There was some feeling of disgruntlement at the fact that software people are expected to put in exhausting overtime hours without compensation during frequent crises, yet are criticised anytime their "productivity" drops in someone's eyes.

4c2a

There was also considerable objection to the fact that the Software Group is receiving so much flak for professional dereliction while it operates in an environment of goals which are seldom clearly stated by management and of hardware which is incapable of supporting work of the highest professional caliber.

4c2b

Charles reported that he had put forth to the EMC the concept of reorganizing the Software Group into teams as a counterproposal to more rigid working hours.

4d

There was general enthusiasm for the team approach but some apprehension that it did not directly approach all the problems involved.

4d1

Working as teams should result in greater peer pressure in cases of actual underperformance and would increase the visibility of a person's work to other members of the group; however, it was realized that this would not solve all the problems of communication with management which have resulted in many of the hurt feelings that currently exist.

4d1a

Everyone was unhappy that Charles was being forced into a position as middleman for communication between members of the EMC and members of the Software Group.

4d2

There was discussion of the fact that constitution of the EMC was somewhat unbalanced, some members being present as independent pushers, Charles playing a de facto role as representative of the Software Group, and many ARC members not being represented at all.

4d2a

There was also confusion concerning just what were (should be) the various roles of DCE, EMC, and the Software Group in setting goals for the group and a general impression of floundering on all sides.

4d2a1

Notes on Software Group Meeting of 18 January 1972

DECISIONS

5

It was unanimously agreed that a meeting should be scheduled as soon as possible between the entire Software Group and EMC, with DCE present if possible.

5a

The purpose of this meeting would be to discuss management philosophy in general and to inquire into the nature of the expectations which EMC has of the Software Group.

5a1

There was debate concerning whether the other professionals in ARC should be included. It was tentatively concluded that they should not be invited without inviting other non-professional members as well and that that would make the meeting too unwieldy.

5a2

It was proposed that the EMC should be enlarged to include two representatives of the Software Group instead of the present one, and that one or both of these memberships should rotate among the members of the group.

5b

This would relieve Charles of some of the excessive pressures on him and would more equally reflect the size and importance of the Software Group within ARC.

5b1

A Software Management Research Team was created to pursue the problems discussed during the meeting and to formulate a program for exploring experimental approaches to internal management of the Software Group.

5c

Charles, Harvey, and Walt will serve initially as core members of the team, and Bruce and Mimi will contribute while they remain at ARC.

5c1

It was suggested that SMRT consider inviting either Mike Kudlick or Paul Rech to participate in the Team.

5c2

Notes on Software Group Meeting of 18 January 1972

(J8571) 19-JAN-72 15:27; Title: Author(s): Walter L. Bass/WLB;
Distribution: Paul Rech, Stephen W. Miller, Michael D. Kudlick, George J
Eilers, Donald R. CONE, Bonnar Cox, David R. Brown, Don Limuti, William
R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn
F. Auerbach, Walter L. Bass, Mary S. Church, William S. Duvall, Douglas
C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper,
Charles H. Irby, Mil Jernigan, Harvey G. Lentman, John T. Melvin, Jeanne
B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H.
Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De
Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Don C. Wallace, Richard W.
Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: WLB;
Origin: <BASS>NOTES.NLS;9, 19-JAN-72 11:57 WLB ;

Suggestions for Cleaning NLS

The following is a list of suggestions of things to be done to "clean up" NLS. In some cases problem areas are mentioned, but no way of handling them. I would hope that everyone will give some thought to this area. Any additional things that ought to be cleaned, any ideas on ways to handle the unhandled problem areas, or objections to the suggested way of handling will be much appreciated.

1

Note that at least some of the suggestions below imply the adoption of some programming standards or conventions. Future NLS programming would be expected to adhere to those conventions -- so if you don't like a convention (or the idea of conventions), now is the time to start yelling.

1a

This is intended as a "working" list. The order below implies nothing. Also its a bit terse.

2

Suggestions for Cleaning NLS

Error handling	3
Everything SIGNALS -	3a
If its a real error that requires some action by somebody before work can proceed, no return FALSE or no SKIP RETURN.	3a1
No calls on error, err, werr, etc.	3a2
No error strings passed as arguments.	3a3
There is a list of error (SIGNAL) codes to be used that will be maintained in CONST.	3a4
Some convention for warning or progress or informational messages	3b
Port-coroutine linkage	3b1
MPS will handle this just fine, but there should be at least a convention in the mean time.	3b2
Declarations	4
A lot of globals (particlarly strings) should be locals.	4a
Certainly there will be no multipurpose globals.	4a1
Get all global constants and record declarations in CONST and RECDEC	4b
(RECDEC would be a new file containing record declarations referenced globally)	4b1
I'm not at all sure I see the reason for local constants.	4b2
In MPS all constants can be the kind of SET declaration where you don't have to use dollar signs.	4b3
Delete almost all JSYS, register, and opcode declarations	4c
Have a routine for each JSYS used in NLS. All these routines would be in one file. This would be the only file with JSYS declarations.	4c1
There are then only a few other legitimate uses of registers.	4c2

Suggestions for Cleaning NLS

There are few if any legitimate uses of machine code in NLS.	4c3
Run a cross-reference and delete all unused globals and routines.	4d
Comment remaining globals and constants	4e
Standard documentation format	5
Mimi is writing something on this.	5a
Files	5b
origin	
FILE xxx % xxx <yyy-nls>xxx %	5b1
% plex containing criteria for what procedures are included herein %	5b2
%-----Declarations-----%	5b2a
% A lot of files will not have this branch. Some will have REFS and RECORDS. %	5b3
%-----Comment on first group of procedures-----%	5b3a
(pl1) PROC;	5b4
...	5b4a
(pln) PROC;	5b4b
...	5b4c
%-----Comment on nth group of procedures-----%	5b5
(pln) PROC;	5b6
...	5b6a
(pnn) PROC;	5b6b
FINISH	5b6c
Procedures	5b7
(prcnam) PROC (arg1, ..., argn); %one line comment	5c
arg1 -- comment	5c1
...	5c1a
argn -- comment	5c1b
	5c1c
	5c1c1

Suggestions for Cleaning NLS

Branch telling what and maybe how routine does. %	5cld
LOCAL	5cldl
loc1, % comment %	5cle
...	5cle1
locn; % comment %	5cle2
REF ...;	5cle3
	5clf
first statement.	5clfl
...	5clg
END.	5clh
Names of formal parameters will be standardized for things like stid, tp, str, etc.	5cli
	5c2
All things that are really REFs will be REFed.	5c3
Pretty up format	6
BEGIN END as head and tail of plex	6a
Operators in in expressions should be preceeded and followed by spaces.	6b
A space should separate a subroutine name from its argument list.	6c
Command parsers	7
Change command parsers to Charles' scheme.	7a
This means there are separate files for each parser -- DNLS, TNLS, DEX, Journal, etc.	7a1
Probably (because of size) the command parsers for TNLS and DNLS Execute commands should each be in there own files.	7a1a
Some suggestions for changing the parsers:	7b
Do WHP's entity record scheme	7b1
Make each parser one big routine of levels of CASE statements that finally call one of a (hopefully small) number of routines to get operand specification	7b2

Suggestions for Cleaning NLS

Throw out groups and entities.	7c
Cleanup GOTO STATE.	7d
Help needs help.	7e
Finish Help	7e1
It should leave you in the right state	7e2
DNLS address expressions	7f
All the Jump commands should be like editing commands in their specification.	7g
Jump content etc. command specifications should be changed.	7h
Reorganize files	8
Rethink the current breakdown into files. Decide on criteria for what routines go in which files.	8a
Charles has a scheme for the organization of NLS under MPS that should be the guiding light here.	8a1
Rethink X and Core routines.	8b
X routines - 1 for every command - except maybe text editing and some jump commands	8b1
Core routines - only need core routines for CLIST	8b2
Probably there should be just one X and one Core routine for each of the text editing operations, namely xdt and cdt (Delete Text), xmt and cmt (Move Text), etc.	8b3
Maybe this is the way its done now.	8b3a
Another possibility is not to have X or Core routines for text editing commands since they're so simple that no one but the commands will ever call them (at least after MPS's string system does CLIST things automatically).	8b3b
Reorganize/rewrite INTNLS	8c
Do device initialization things in a subroutine -- Charles knows about this.	8c1

Suggestions for Cleaning NLS

Reorganize/rewrite IOEXEC

8d

This area needs to be cleaned up!!! For example, xlf should do most of the stuff in loadfile. It should call a Core-NLS routine to get a file opened and get an NLS file number for it. Open should be called by that core routine and should be passed the name of the file only. No routines above the core nls level should deal with jfn's. There should be a core routine to allow access to specreg and the jump routines should be changed to use these two core routines. The jump and link rings (as well as da's) are control module data structures and core nls routines should not deal with them. There should not be a one to one correspondence between x- and c- routines (there should not be a c- routine for each nls command since some commands are not file manipulation commands e.g. splitting the screen or jumping). There should be c- routines for getsuc, getnxt, etc. (CHI)

8dl

Break up Utility

8e

Record declarations mostly into RECDEC; error stuff is either scattered to the places that catch error SIGNALS or is moved into its own file; etc.

8el

LLO support routines -- stack, string stuff -- put in one file.

8f

Decrease number of subroutines

9

Combine routines by adding parameters

9a

Most subroutines that are only called from one place should not be subroutines.

9b

Clean up all correspondence list calls.

10

Cleanup all recreate display calls.

11

There are extra updatings of displays.

11a

Recreate display calls are currently done from different levels of NLS.

11b

CDEASY and CDSET and the updating routines could be changed to allow less work after structural edits.

11c

Do recovery from a bad file better.

12

Suggestions for Cleaning NLS

Write a cross reference generator.	13
Miscellaneous	14
Cleanup DACTL	14a
Record pointers to a display area descriptor should be uniformly used.	14a1
Tabs and indentation should maybe be in columns rather than grid coordinates.	14b
Type ahead when entering NLS bug.	14c
Lines between windows.	14d

Suggestions for Cleaning NLS

(J8573) 19-JAN-72 19:52; Title: Author(s): Bruce L. Parsley/BLP;
Distribution: Walter L. Bass, William S. Duvall, Mary S. Church, J. D.
Hopper, Charles H. Irby, Harvey G. Lehtman, John T. Melvin, Bruce L.
Parsley, William H. Paxton/NPG; Sub-Collections: SRI-ARC NPG; Clerk:
BLP;
Origin: <PARSLEY>CLEANLS.NLS;9, 19-JAN-72 19:50 BLP ;

tenex-bugs from sri-ai

BUGS AND MISCELLANEOUS GRIPEs - PETER H. LIPMAN - SRI-AIG

THE FOLLOWING BUGS AND OTHER COMMENTS ARE SPECIFIC TO VERSION
126 OF THE MONITOR, SINCE OUR GROUP HAS YET TO INSTALL VERSION
128.

1) BUG IN SWJFN

THE ROUTINE UNLCKF IN IO.FAI REQUIRES THE REGISTERS JFN AND
STS

TO BE PROPERLY SET UP. THUS THE FOLLOWING CHANGE TO JSYS.FAI

SWJFNL: MOVE D, (B)

.

.

.

HRRZS JFN

MOVE STS, FILSTS(JFN)
IG***

;***SRI-A

PUSHJ P, UNLCKF

HRRZ JFN, A

MOVE STS, FILSTS(JFN)
IG***

;***SRI-A

PUSHJ P, UNLCKF

JRST MRETN

THE DOCUMENTATION AT THE FRONT OF UNLCKF SHOULD BE EDITED TO

tenex-bugs from sri-ai

REFLECT THE FACT THAT IT REALLY NEEDS STS SET UP AS WELL.	10
2) DOCUMENTATION ERROR IN JSYS MANUAL (14 SEPT 70)	11
THE JSYS, SFBSZ, SKIP RETURNS IF SUCCESSFUL	12
	12a
3) RELEASING DDT AND SYMBOL TABLE	13
	14
CURRENTLY (UNDER TENEX VERSION 126) IF YOU START UP A SYSTEM	14a
WITH DBUGSW=0, YOU AUTOMATICALLY RELEASE MONITOR DDT AND THE	15
ASSOCIATED SYMBOL TABLE. UNFORTUNATELY NO CHECK IS MADE IF BY	
MISTAKE	16
YOU SHOULD EXECUTE THE BUGCHK OR BUGHLT BREAKPOINTS. THEY JUST	
GO	17
OFF INTO THE NONEXISTENT MONITOR DDT.	18
I CONTEND THAT IF MONITOR DDT IS TO BE RELEASED, THEN	18a
BUGCHK AND BUGHLT SHOULD KNOW NOT TO BREAKPOINT, AND LIKEWISE THE	19
JRST DDT IN 100 SHOULD BE A HALT TO PROTECT THE UNKNOWING FROM	
TRYING	20
TO START UP THE NONEXISTENT COPY OF DDT	21
I SUGGEST THAT A NEW LOCATION BE DEFINED CALLED KILDDT.	21a
KILDDT=0 DON'T RELEASE DDT AND SYMBOL TABLE	22
KILDDT=1 RELEASE DDT AND SYMBOL TABLE UNLESS DEBUGGING	23
	24
THE FOLLOWING CODE IN PISRV IMPLEMENTS KILDDT	24a
	25
SYSLOD: SETZ 7, ;CLEAR DIDSCA TO RELOAD DISK	26
.	26a

tenex-bugs from sri-ai

.		26b
.		26c
SKIPG GETSMF	;IF SYSTEM NOT JUST LOADED FROM DECTAPE,	26d
SKIPN DISKP	;AND THERE IS A DISK,	26e
JRST .+2		26f
CALL SYSGO2	;****SRI-A	26g
IG***		
CALL PGRINI	;INIT DST, CST, ETC.	26h
.		26i
.		26j
.		26k
SYSGO2: MOVE 1,MONCOR		
SRI-AIG	TO END OF PAGE	27
SKIPE DBUGSW	;IF DEBUGGING, FORCE	27a
SETZM KILDDT	;DDT TO STAY AROUND	27b
SKIPG KILDDT	;RELEASE DDT?	27c
JRST WRMON	;NO, THIS RETURNS BY RET	27d
MOVEM 1,SWPCOR	;RELEASES, DDT AND SYMTAB	27e
MOVE 1,(HALT 100)		27f
MOVEM 1,100	;HALT INSTEAD OF JRST DDT	27g
JRST WRMON	;RETURNS BY RET	27h
		28
THE FOLLOWING CODE IN BUGCHK AND BUGHLT IMPLEMENT THE		28a
NECESSARY		
CHECKS TO AVOID BREAKPOINTING. NOTE THE USE OF DCHKSW TO ENABLE		29
SEPARATE CONTROL OF BREAKPOINTING AT BUGHLT AND BUGCHK.		30

tenex-bugs from sri-ai

BUGHO: SOS BUGHLT		32
SKIPG KILDDT ;NO SKIP IF DDT PRESENT	***SRI-AIG***	32a
SKIPN DEBUGSW ;SKIP IF DEBUGGING	***SRI-AIG***	32b
JRST .+2	;***SRI-A	
IG***		32c
BUGHB: JRST 4,@BUGHLT ;BREAKPOINT HERE	*	
SRI-AIG		33
.		33a
.		33b
.		33c
BUGCO: SKIPE DEBUGSW ;NO SKIP IF DEBUGGING	***SRI-AI	
G*** TO END OF PAGE		34
SKIPN DOHKSX ;SKIP IF STOPPING ON BUGCHK		34a
JRST @BUGCHK ;NO STOP DESIRED		34b
SKIPG KILDDT ;CAN WE STOP, DDT PRESENT?		34c
BUGCB: JRST @BUGCHK ;YES, BREAKPOINT HERE		35
JRST @BUGCHK		35a
4) [DEV BUSY - GO] LOGIC IN OPENF		36
		37
THE JSYS MANUAL SAYS THAT EACH DEVICE HAS A DEFAULT		37a
CONDITION WHICH SPECIFIES WHETHER OR NOT YOU WAIT IF THE DEVICE		
IS		38
BUSY AND YOU DIDN'T EXPLICITLY SAY WAIT OR DON'T WAIT.		39
IN FACT THIS IS IMPLEMENTED BY SEEING WHETHER THE DEVICE IS		39a
THE LPT AND ASSUMING THAT ALL OTHER DEVICES DO NOT WAIT. THIS		40
MAKES IT SOMEWHAT DIFFICULT TO INTRODUCE OTHER DEVICES THAT ALSO		
WAIT BY		41

DCW 20-JAN-72 12:55 8574

tenex-bugs from sri-ai

DEFAULT. I WOULD LIKE TO SEE A CLEANER MECHANISM HERE, PERHAPS A

42

DEVICE CHARACTERISTIC BIT.

43

DCW 20-JAN-72 12:55 8574

tenex-bugs from sri-ai

(J8574) 20-JAN-72 12:55; Title: Author(s): Don C. Wallace/DCW;
Distribution: Bob Van Tyul, Jeanne B. North, Robert L. Dendy, John T.
Melvin, Kenneth E. Victor, John W. McConnell, Peggy M. Karp, Dan L.
Murphy, Rod M. Fredrickson, Peter H. Lipman, Don C. Wallace, Carl M.
Ellison, Ted R. Strollo/TUG; Sub-Collections: SRI-ARC TUG; Clerk: DCW;
Origin: <WALLACE>TENEX-BUG.NLS;1, 14-JAN-72 17:20 DCW ;

some comments on our operator

comments on bill ferguson's job function and performance:

1

bill ferguson was hired to perform "operator" functions for arc. this function was envisioned as a a general helper for both network and arc users. by helper it should not mean that he inherits all of your shit work or work you feel is beneath you.

1a

bill has been working what i consider an inordinate amount of hours and also times of the day most of us wouldnt even consider.

1b

he has in general been working his ass off doing everones shit work and getting a lot of flak when he makes a minor mistake or inconveniences someone. bill is still rather new at his job and is performing like a veteran. nothing is worse than doing rather demeaning work and catching hell or being taken for granted at the same time.

1c

if you feel like chewing ass come see me not bill.

1d

some comments on our operator

(J8575) 20-JAN-72 12:58; Title: Author(s): Don C. Wallace/DCW;
Distribution: Paul Rech, Stephen W. Miller, Michael D. Kudlick, George J
Eilers, Donald R. Cone, Bonnar Cox, David R. Brown, Don Limuti, William
R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn
F. Auerbach, Walter L. Bass, Mary S. Church, William S. Duvall, Douglas
C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper,
Charles H. Irby, Mil Jernigan, Harvey G. Lehtman, John T. Melvin, Jeanne
B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H.
Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De
Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Don C. Wallace, Richard W.
Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: DCW;
Origin: <WALLACE>COMMENT.NLS;2, 20-JAN-72 12:38 DCW ;

Response to NLS Clean-Up Suggestions (8573,)

(message) Response to BLPs Clean-Up Suggestions (8573,)

1

Most of the suggestions will make the system much easier to program in and to understand although I anticipate a certain (not insurmountable) difficulty in getting us all to follow all of the conventions at first. I am sure, however, that we all agree on the need.

1a

Some suggestions:

1b

Concerning a cross reference generator: WSD has a set of programs which effectively catalog (using links) all procedures in NLS into a file which was called SYSGD which was deleted some time back.. I, for one, found it extremely useful. It should be run again (it requires a bit of time. Perhaps it could be expanded to make a general cross reference.

1b1

The confusion between mode and device (the globals nlmode and nldevice) should be dealt with. The modes I suggest would be DNLS, TNLS, and DEX currently. The devices would be appropriately specified. We should do this in anticipation of the time when we will be able to shift modes on particular devices.

1b2

HGL 20-JAN-72 15:10 8581

Response to NLS Clean-Up Suggestions (8573,)

(J8581) 20-JAN-72 15:10; Title: Author(s): Harvey G. Lehtman/HGL;
Distribution: Walter L. Bass, William S. Duvall, Mary S. Church, J. D.
Hopper, Charles H. Irby, Harvey G. Lehtman, John T. Melvin, Bruce L.
Parsley, William H. Paxton/NPG; Sub-Collections: SRI-ARC NPG; Clerk:
HGL;

UCLA-NMC, identfile, and other things

<UCLA-7>CSK.NLS;7, 19-JAN-72 12:19 CSK ;

1

Dick and John,

1a

We just noticed that our signon name has changed to
UCLA-NMC. However, identfile for me (and the rest of the
people here) look like this:
192 (CSK) UCLA-NMC

...

user: UCLA-7

...

will this prevent us from getting online delivery?

1a1

Also, I have the following in my identfile:

...

Delivery: On-line Hard Copy

...

however, some other people have:

...

Delivery: Online Hardcopy

...

Does the different spelling make a difference?

1a2

Some of us have found that when we submit things to the
journal
and put ourselves on the distribution list, we only get the
author copy (we expected two copies, author and the
distributed

one, in addition to expecting one online which we don't
get). Is this correct?

1a3

Thanks,

Chuck Kline

1b

CSK 20-JAN-72 15:25 8582

UCLA-NMC, identfile, and other things

(J8582) 20-JAN-72 15:25; Title: Author(s): Chuck S. Kline/CSK;
Distribution: John T. Melvin, Jon B. Postel, Richard W. Watson, Chuck S.
Kline/JTM JBP RWW CSK; Sub-Collections: NIC; Clerk: CSK;

Current Folklore Branch of <NLS>STATUS with New System Changes

(Folklore) Documentation for users of NLS changes since last User Guide

1

(Changes) New features, commands, etc.

1a

JOURNAL ONLINE DELIVERY CHANGES

1a1

The Journal online delivery system will use pairs of square brackets (/ 's and / 's) to enclose RFC numbers (where appropriate). This eliminates any confusion with link syntax.

1a1a

Comments in the distribution field are now included as the last item in the delivery statement. Comments in the comment field are delivered as a sub-statement of the delivery statement.

1a1b

Author copies are delivered to a new branch called "Jauthored".

1a1c

UPDATE FILE COMMAND IN TNLS AND DNLS

1a2

A user may supply a name for the updated file, instead of just updating to the next higher (or to the same) version. (Note that supplying a name to the update command will not make this command just like Output File. Output File reorders the file and reclaims unused space in the file. Update does neither of these, but, in many cases, is significantly faster than Output.)

1a2a

The syntax of Update is now:

1a2b

```
U/pdate/ n/ew/ CA
          o/ld/
          FILENAME
```

1a2b1

"new" specifies the next higher version

1a2c

"old" specifies the current version

1a2d

FILENAME is the name of a new file; i.e. any character other than "o" or "n" is taken as the first character of a new file name. To specify a file name that begins with 'O or 'N type a space, then the file name. (Note that if one started with the 'n or 'o , the character would be interpreted to mean "old" or "new" versions.

1a2e

CHANGES TO IDENT SYSTEM

1a3

Current Folklore Branch of <NLS>STATUS with New System Changes

-- The process for entering a new affiliation has been made identical to entering a new group. This is, the user will be prompted by the system for a coordinator and a membership list.

1a3a

-- When all of the information for a new IDENT has been entered, the system previously asked "ok?" and an affirmative answer initiated an update of the IDENTFILE. Now, the system asks "Abort?" and a negative answer initiates the update.

1a3b

--. When specifying the record to be modified, the name corresponding to the IDENT, and, if the IDENT is an individual, his affiliation, is typed out, followed by "Proceed?". An affirmative response puts the user in the modify submode. A negative response puts one back at the top ('>) level of the IDENT system.

1a3c

-- In the group membership subcommand mode, the herald is now ">>>", and the command may be terminated by Quit, which has the same effect as terminating with a CA.

1a3d

-- When modifying the name of a group or affiliate, the prompt "New name" is given. Prompts for modifying individual names are as in the past. (The bug that made the prompts appear only after one character had been typed in has been fixed.)

1a3e

-- The Identification system now recognises the commands 'o for Online Delivery and 'h for Hard copy delivery in the modify mode.

1a3f

LIT SEARCHES

1a4

In TNLS, single character searches preceded by a number (e.g. 3't to move to the third "t") now work.

1a4a

MARKERS

1a5

Markers may be included in links in both TNLS and DNLS. A marker name may be placed in the link where the statement name or number would be, prefaced by a #, to distinguish it from a name.

1a5a

PRINT CM LOCATION RESPONSE

1a6

The response to the print current location (.) command in TNLS is now formatted in the way a user would type in

a TNLS address specification... e.g., 1 +2 instead of 1(2).	1a6a
PROMPT IN REPLACE AND SUBSTITUTE	1a7
Prompts in TNLS to ask for a literal in the Replace and Substitute commands have been changed to use the word "literal" instead of "text". The help responses use the word "LIT" instead of "TEXT" also.	1a7a
FROZEN STATEMENT BUG FIX	1a8
Previously, if the user did a Jump to Item pointing to a frozen statement from another file, a subsequent Jump to Return or Jump to File Return would cause unpredictable results.	1a8a
DNLS LITERAL FEEDBACK AREA	1a9
The literal feedback area in DNLS uses 72 columns now (instead of 63. (MSC)	1a9a
EDITING FILE RESTRICTION	1a10
Editing files which are not the highest versions will no longer be allowed	1a10a
The write pseudo interrupt will do a gtjfn for the highest version numbered file. If it is not the same as the current file, the edit will fail and the user will be informed of the situation.	1a10a1
EXECUTE ASSIMILATE SYNTAX CHANGE	1a10a2 1a11
The syntax for Execute Assimilate has been changed to:	1a11a
e[execute] a[ssimilate] (b[ranch]/g[roup]/p[lex]/s[tatement]) BUG (BUG [BUG %if its a group%] LEVADJ CA Viewspecs CA.	1a11a1
e[execute] a[ssimilate] s[tatement] CA BUG... b[ranch] p[lex] g[roup] BUG BUG	1a11b
...LEVADJ CA VIEWSPECS CA	

Current Folklore Branch of <NLS>STATUS with New System Changes

The first BUG specifies the statement after which to copy the stuff. The second (and, for groups, third) BUG specifies which particular structural entity to copy. LEVADJ specifies the level relative to the first statement at which to start inserting. VIEWSECS select the actual content of the assimilated entity.

1a11c

A BUG is a bug selection (in DNLS only), a typed in statement number or statement name, or a TNLS address specification (including links).

1a11d

Note that to assimilate from one file to another in DNLS, it is necessary to have the appropriate statements displayed on the screen before the command is commenced. This may be done via split screen or frozen statements.

1a11e

OUTPUT QUICKPRINT AND OUTPUT DEVICE PRINTER CHANGES

1a12

The file name specification for Output Quickprint and Output Device Printer has been changed in both TNLS and DNLS.

1a12a

o/utput/ d/evice/ p/rinter NAME/ CA [copies 1/ CA
LIT CA LIT

CA

1a12a1

and,

1a12a2

o/utput/ q/uickprint file NAME/ CA [copies 1/ CA
LIT CA LIT

CA

1a12a3

1) The file is put in PRINTER directory unless the user explicitly includes a directory name in the file name.

1a12b

2) The system automatically echoes a file name (which is the user's IDENT) when the user is to specify an output file name. (This will be put in directory PRINTER, as per 1) above.) If the user responds with a CA then this becomes the file name. Otherwise, the text specified by the user (by typing or bug selection) are taken as the file name.

1a12c

3) After the user has specified the file name, the prompt "Copies: 1" is given. A CA affirms that one copy is needed. Any other number terminated by a CA is taken to be the number of copies. (MSC)

1a12d

Old versions of files not in the directory created by Output Quickprint or Output Device Printer commands that are <PRINTER> are no longer automatically deleted by the system. The printer routine deletes <PRINTER> files after they have been processed. MSC

1a12e

COMMENTS IN TNLS

1a13

The " (comment) command in TNLS has been changed to the ; command -- in order to make TNLS compatible with TENEX (BLP).

1a13a

TABSTOPS IN DNLS

1a14

There is now a tabstop setting command in DNLS.

1a14a

The syntax is:

1a14a1

E(xecute) T(abstops set) \$10 NUMBER;

1a14a1a

Where for the ith number the column of the ith tabstop is shown in the name register. If a CA is typed immediately, that tabstop remains unchanged, otherwise a number maybe typed in (not bug selected) followed by a CA.

1a14a1b

The command is terminated when all 10 tabstops have been specified or a CD is typed. Any tabstops changed up to the point of a CD remain changed (BLP).

1a14a1c

QUICKPRINT AND STATEMENT SIGNATURES

1a15

Output Quickprint will now recognize the Statement Signature viewspecs.

1a15a

QUICKPRINT SHOULD NOW BE QUICKER (BLP).

1a16

NAME DELIMITERS COMMANDS

1a17

The Name Delimiter commands ... are now E(xecute) N(ame Delimiter) The syntax remains the same except for the initial E. This is in order to make room for the new command New File (BLP).

1a17a

VIEWSPECS AND SPLIT SCREEN

1a18

(PRMSPC, invspc) has been slightly changed so that it

first changes the viewspecs displayed to those of the display area passed to it. Previously it made the existing viewspec area large while leaving the characters in it alone. If the screen were split, you were sometimes not looking at the viewspecs you were changing until after the first character was typed in -- I think (BLP). 1a18a

CONTINUE AND REENTER 1a19

All the problems with CONTINUE and REENTER should be no more. In addition a CONTINUE after an Execute Quit will have the same effect as a REENTER. 1a19a

TNLS LEVADJ FEEDBACK FIX 1a20

The system no longer echoes "32" when inserting a statement after the origin statement. 1a20a

TNLS JUMP TO CONTENT '; FIX 1a21

Specifying a semicolon preceded by a single apostrophe in a Jump to Content command (SP '; CA) will not automatically move the cursor to the origin statement but will function as intended. 1a21a

REPLACE NUMBER FIX 1a22

When using the Replace Number Command, replacement numbers of any length will be right-justified. 1a22a

RESET PARTIAL COPY IN DNLS FIX 1a23

Resetting a partial copy in DNLS with any statement but the origin at the top of the screen will no longer produce ugly results. 1a23a

DEFAULT DIRECTORY FIX 1a24

The Default Directory for links is now accurate and reflects the true file ownership (HGL). 1a24a

TNLS FORMATTING FIX 1a25

Double echoing of formatting characters in TNLS has been fixed (HGL). 1a25a

JOURNAL DELIVERY 1a26

Irregularities in Journal Delivery have been fixed. WSD 1a26a

DEX 1a27

As a convention for DEX, name the sequential file to be processed with the extension "DEX" as this will remove any confusion between the input files and the created print files (HGL). 1a27a

The DEX delete control characters should now work in the following manner: 1a27b

> -- Delete character. Deletes one character. For this purpose an EOL is treated as a single character rather than as the two individual characters CR LF. 1a27b1

< -- Delete word. Deletes any number of printing characters (including zero) followed by any number of non-printing characters (including zero). Thus this takes the user through the preceding gap. Thus a single "<" may be used to delete through the preceding gap no matter how large. 1a27b2

/ -- Delete line. Deletes text through the gap before the first preceding EOL (HGL). 1a27b3

(Bugs) Known existant bugs and glitches 1b

KNOWN BUGS IN BASEDATA 1b1

The following braches of Basedata record current known bugs: 1b1a

(MSR, BASEDATA, nls'maintain) 1b1a1

(MSR, BASEDATA, tenex'maintain) 1b1a2

(MSR, BASEDATA, journal'maintain) 1b1a3

DNLS REPLACE TEXTUAL ENTITY 1b2

A bug, documented in <MSR, BASEDATA, Textual'Replace'Glitch :g>, has the following effect: 1b2a

In any Replace <textual entity> command in which the user misspecifies the second entity by typing one (or two) bugs, then a literal, the literal will be taken

Current Folklore Branch of <NLS>STATUS with New System Changes

as the second entity. No error message will be given.

1b2a1

Unfortunately, fixing the bug would require a reasonable amount of effort, so unless there is great hue and cry, this bug will probably not be fixed until the system is rewritten for MPS. (Note that this affects only DNLS users, not TNLS users, and thus won't bother network users.) MSC

1b2b

Current Folklore Branch of <NLS>STATUS with New System Changes

(J8584) 20-JAN-72 16:44; Title: Author(s): Marilyn F. Auerbach/MFA;
Distribution: Paul Rech, Stephen W. Miller, Michael D. Kudlick, George J
Eilers, Donald R. Cone, Bonnar Cox, David R. Brown, Don Limuti, William
R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn
F. Auerbach, Walter L. Bass, Mary S. Church, William S. Duvall, Douglas
C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper,
Charles H. Irby, Mil Jernigan, Harvey G. Lehtman, John T. Melvin, Jeanne
B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H.
Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De
Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Don C. Wallace, Richard W.
Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: MFA;

JDH 20-JAN-72 18:12 8585

If you sort it, it comes out backwards.

Next block to merge

1

sing a song of sixpence

1a

pocketfull

1b

of rye

1c

four and twenty

1d

blackbirds

1e

baked in a pie

1f

JDH 20-JAN-72 18:12 8585

(J8585) 20-JAN-72 18:12; Author(s): J. D. Hopper/JDH; Distribution:
William S. Duvall/WSD(fyi); Sub-Collections: SRI-ARC; Clerk: JDH;

DVN 21-JAN-72 8:58 8596

re:Our Operator's Performance

This message responds to (journal,8580,) and (journal,8575).
Amen!

1

DVN 21-JAN-72 8:58 8596

re:Our Operator's Performance

(J8596) 21-JAN-72 8:58; Title: Author(s): Dirk H. van Nounhuys/DVN;
Distribution: Harvey G. Lehtman, Don C. Wallace, William R. Ferguson/HGL
DCW WRF; Sub-Collections: SRI-ARC; Clerk: DVN;

8597

See

BASELINE

BOOK

&SRI-ARC JCN 3-FEB-72 14:14 8598

ARC Proposal to RADG/ARPA ISU-72-20 (3 months part of ISU-71-94):
Cost Estimate for 3 months

Stanford Research Institute

Extension to Contract No. F30602-70-C-0219

Cost Estimate THREE MONTHS:

1

&SRI-ARC JCN 3-FEB-72 14:14 8598

ARC Proposal to RADG/ARPA ISU-72-20 (3 months part of ISU-71-94):
 Cost Estimate for 3 months

Stanford Research Institute
 Extension to Contract No. F30602-70-C-0219

1a

1b

1b1

COST ESTIMATE

1b1a

(for the three month period starting 2/8/72)

1b1b

Personnel Costs

1b1c

Proj Supv	280 hrs.		1b1c1
Senior Prof	1,460 hrs.		1b1c1a
Prof	5,220 hrs.		1b1c1b
Technical	1,250 hrs.		1b1c1c
Clerical	1,870 hrs.		1b1c1d
Total Direct Labor		67,599	1b1c1e
Payroll Burden @ 28% *		18,928	1b1c2
Total Labor and Burden		86,527	1b1c3
Overhead @ 105% *		90,853	1b1c4
Total Personnel Costs		177,380	1b1c5

1b1c6

Direct Costs

1b1c7

Travel		1,563	1b1d
4 trips East @ 310 =	1,240		1b1d1
8 Days Subsistence @ 31 =	248		1b1d1a
Auto Rental (5 days @ 15)	75		1b1d1b
Facility *		103,910	1b1d1c
Consultants		4,000	1b1d2
Total Direct Costs		109,473	1b1d3
Total Estimated Cost		286,853	1b1d4
Fixed Fee		15,777	1b1e
Total Estimated Cost Plus Fixed Fee \$		302,630	1b1f

1b1g

* See following Schedules

1b1h

&SRI-ARC JCN 3-FEB-72 14:14 8598
ARC Proposal to RADC/ARPA ISU-72-20 (3 months part of ISU-71-94):
Cost Estimate for 3 months

Stanford Research Institute
Extension to Contract No. F30602-70-C-0219

lc

lcl

lc1a

2

Cost Schedules: THREE MONTHS:

&SRI-ARC JCN 3-FEB-72 14:14 8598

ARC Proposal to RADG/ARPA ISU-72-20 (3 months part of ISU-71-94):
 Cost Estimate for 3 months

Stanford Research Institute
 Extension to Contract No. F30602-70-C-0219

SCHEDULE A

2a

DIRECT LABOR

2a1

2a2

2a2a

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

2a2b

SCHEDULE B

2a3

2b

OVERHEAD AND PAYROLL BURDEN

2b1

2b2

2b2a

By letter agreement of 21 May 1971 with the Tri-Service Overhead Negotiations Committee, the Institute negotiated the following rates as acceptable for current bidding and billing purposes:

2b2b

	1972 Billing/Bidding Rates	

On-Site Overhead	105%	2b2b1
Off-Site Overhead	75%	2b2b2

2b2b3

The Payroll Burden rate of 28% is acceptable to DCASR, San Francisco for bidding and billing purposes on an interim basis.

2b2c

2b2c1

Rather than setting forth these specific rates, it is requested that contracts provide for reimbursement at billing rates acceptable to the Contracting Officer, subject to retroactive adjustment to fixed rates negotiated on the basis of historical cost data. Included in payroll burden are such costs as vacation,

ARC Proposal to RADG/ARPA ISU-72-20 (3 months part of ISU-71-94):
Cost Estimate for 3 months
Stanford Research Institute
Extension to Contract No. F30602-70-C-0219

holiday, and sick leave pay, social security taxes, and
contributions to employee benefit plans.

2b2d

&SRI-ARC JCN 3-FEB-72 14:14 8598

ARC Proposal to RADG/ARPA ISU-72-20 (3 months part of ISU-71-94):
 Cost Estimate for 3 months

Stanford Research Institute
 Extension to Contract No. F30602-70-C-0219

SCHEDULE C

2b3
2c

TRAVEL COSTS

2c1
2c2

Air fare is based on prices for travel to Washington, D.C., at \$310 round trip tourist established in the Official Airline Guide dated December 1, 1971.

2c2a

Domestic subsistence rates and travel by private automobile are established standards based on cost data submitted to and approved by DCAA.

2c2b

2c2c

2c2d

SCHEDULE D

2c3
2d

CONSULTANTS

2d1
2d2

The estimated costs for outside consultants are based on previous experience on this program and are estimated at \$ 4,000 for the period proposed.

2d2a

Specific consultants and their rates have not yet been determined. The client will be kept informed as such needs develop.

2d2b

Representative consultants recently contributing to the ARC program are:

2d2c

Dr. James A. Fadiman, Management Consultant
 Donald I. Andrews, Systems Programmer

2d2c1
2d2c1a
2d2c1b

SCHEDULE E

FACILITY COSTS

2d3
2e
2e1

Total Facility Costs:
 103,910

\$

Computer Facility support
 90,155

2e2
2e3

&SRI-ARC JCN 3-FEB-72 14:14 8598

ARC Proposal to RADG/ARPA ISU-72-20 (3 months part of ISU-71-94):
 Cost Estimate for 3 months

Stanford Research Institute
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Lease Cost		83,655	2e3a
Computer Facility	\$	72,177	2e3a1
PDP-10:	\$ 50,022		2e3a2
(P.O. B13477)			2e3a2a
3 Mo. @ \$ 16,674			2e3a2a1
Basic lease	\$ 13,320		2e3a2a2
Use Tax	666		2e3a2a2a
Maintenance	\$ 2,688		2e3a2a2b
Univac Drums	19,275		2e3a2a2c
3 months at \$ 6425			2e3a2b
(P.O. B 52495)			2e3a2b1
Including Control, 4 Drums			2e3a2b2
Bryant disc maint.	2,400		2e3a2b3
(P.O. B 54148)			2e3a2c
Bryant drum maint.	480		2e3a2c1
(P.O. B 54677)			2e3a2d
Terminal expenses		6,429	2e3a2d1
Monthly rate:	2,143		2e3a3
Teletypes (Mod 33)	3 @ \$ 50 = 150		2e3a3a
(P.O. R54760)			2e3a3a1
Texas Instruments	7 @ \$115 = 805		2e3a3a1a
(P.O. 54305)			2e3a3a2
Texas Instruments	3 @ \$146 = 438		2e3a3a2a
(P.O. 55031)			2e3a3a3
Couplers	2 @ \$ 15 = 30		2e3a3a3a
(P.O. R54760)			2e3a3a4
Cassette recorders	8 @ \$ 90 = 720		2e3a3a4a
(verbai quote from Mobark, Sunnyvale, Calif. 1/18/72, to be further discussed)			2e3a3a5
Telephone expenses		5,049	2e3a3a5a
Datasets - 3 mo at 210	630		2e3a3a5b
5 - 103s at \$35.00	175.00/mo		2e3a4
1 - 103s at \$35.00	35.00/mo		2e3a4a
Lines to remote sites	2,823		2e3a4a1
Dataline 3 mo at 609/mo=	1,827		2e3a4a2
3 - 202s included			2e3a4b
(P.O. B 52159)			2e3a4b1
Voiceline 3 mo at 332/mo=	996		2e3a4b1a
NIC service	1,596		2e3a4b1b
Fixed cost 3 mo at 132/mo=	396		2e3a4b2
including			2e3a4c
			2e3a4c1
			2e3a4c1a

&SRI-ARC JCN 3-FEB-72 14:14 8598

ARC Proposal to RADC/ARPA ISU-72-20 (3 months part of ISU-71-94):
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Stanford Research Institute
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PA Answering Service @ \$40 / Mo. (P.O.73018)		2e3a4c1b
Enterprise Service @ \$92 / Mo. (SRI 23-70)		2e3a4c1b1
		2e3a4c1c
		2e3a4c1c1
Toll calls 3 mo at 400/mo= 1,200		2e3a4c2
Maintenance and Operation	6,500	
		2e3b

Maintenance Materials	3,300	2e3b1
		2e3b2

Such as:		2e3b2a
Picture tubes 2 @ \$ 75= \$ 150 (P.O.64901)		2e3b2a1
		2e3b2a2
CRTs 4 @ \$500= \$ 2,000 (Verbal quote Fairchild-Dumont, Mr. Bob Koppelon, 1/18/72)		2e3b2a2a
		2e3b2a3
Vidicons 5 @ \$150= \$ 750 (P.O.66508)		2e3b2a3a
		2e3b2a4
		2e3b2a4a
Other \$ 400		2e3b2a5

(Actual components and costs will depend upon the results of further design work. This estimate is based upon previous experience in the field.)

		2e3b2a6
Operating Supplies	3,200	2e3b2a7
		2e3b3

		2e3b3a
Mag tape 20 @ \$15 = 300 (SRI Comp Center)		2e3b3a1
		2e3b3a1a
NIC mailing costs = 500		2e3b3a2
Paper tape, printer		2e3b3a3
paper,etc.= 400		2e3b3a4
Xerox for NIC dist 2,000		2e3b3a5
(These estimates are based upon initial and anticipated experience in NIC.)		2e3b3a5a

2e3b3b

2e3b4

Anticipated improvements

&SRI-ARC JCN 3-FEB-72 14:14 8598
ARC Proposal to RADG/ARPA ISU-72-20 (3 months part of ISU-71-94):
Cost Estimate for 3 months
Stanford Research Institute
Extension to Contract No. F30602-70-C-0219

13,755

RPO2s Disc Storage: 3 months @ 4,585
Including maintenance
1 DF-10 channel
Disc Controller
5 Disc Drives

2e4
2e4a
2e4a1
2e4a2
2e4a3
2e4a4

(P.O. B 13477)

2e4a4a

John T. Melvin
Augmentation Research Center
Stanford Research Institute
Menlo Park, California 94025

To:

John T. Melvin
Augmentation Research Center
Stanford Research Institute
Menlo Park, California 94025

8798

Author Copy

&SRI-ARC JCN 3-FEB-72 14:14 8598
ARC Proposal to RADG/ARPA ISU-72-20 (3 months part of ISU-71-94):
Cost Estimate for 3 months
Stanford Research Institute
Extension to Contract No. F30602-70-C-0219

(J8598) 3-FEB-72 14:14; Title: Author(s): S.R.I. - Augmentation
Research Center, James C. Norton/&SRI-ARC JCN; Sub-Collections: SRI-ARC;
Clerk: JCN;
Origin: <NORTON>J8598.NLS;1, 24-JAN-72 8:08 JCN ;

.RTJ=0; 1=" SRI-ARC 7 FEB 72 8598 ";

8600

See

BASELINE
BOOK

Note on potential of aug-sys application in city management, and
a contact in Oakland

Robert Dendy is related distantly by marriage to Mr. Harry Rosenberg, one of the city managers in Oakland. At the family's recent Christmas dinner, Rosenberg expressed considerable interest in any of the possible ways that computers, cable TV, etc. could help in the process of information exchange and the like. He made an off\ hand comment to the effect that any reasonable experieient proposal could probably attract substantial funding (from Ford Foundation?).

1

Robert felt that Rosenberg felt a very strong need for such help; and thinks that he was explicit in saying that the Ford Foundation was "very interested" in potential solutions to support.

1a

Note: This is the type of case where BC would like to see a systems-developmnt group get in gear to work at such experimentation and appication; then we'd like for that group to participate in BC.

2

DCE 21-JAN-72 10:42 8601

Note on potential of aug-sys application in city management, and
a contact in Oakland

(J8601) 21-JAN-72 10:42; Title: Author(s): Douglas C. Engelbart/DCE;
Sub-Collections: SRI-ARC; Clerk: DCE;

BER 21-JAN-72 11:09 8602

Stanford Research Institute
Network Information Center
333 Ravenswood Avenue
Menlo Park, California 94025

Linda M. Connelly
Station Agent
The RAND Corporation
Information Sciences Department
1700 Main Street
Santa Monica, California 90406

Dear Linda:

(J8602) 21-JAN-72 11:09; Title: Author(s): Barbara E. Row/BER;
Distribution: Linda M. Connelly, Cindy Page, Jeanne B. North/LMC CXP
JBN; Sub-Collections: NIC; Clerk: BER;
Origin: <ROW>RANDLETTER.NLS;5, 21-JAN-72 10:31 BER ;

Cindy gave me a copy of your letter of January 6.

1

I am confused. According to your letter the following people should be in the RAND-CSG group:

2

Keith Uncapher (KWU)

2a

Rich Watson (not in Identfile as yet)

2b

Mal Davis (MRD)

2c

Linda Connelly (LMC)

2d

Eric Harslem (EFH)

2e

John Heafner (JFH)

2f

This leaves Rod Fredrickson (RMF) as the only member of RAND-RCC. Please let me know if this is correct.

3

Thank you.

4

Sincerely,

Barbara Row, Secretary
Network Information Center

Some Questions and Notes from Recent Reading

The notes that follow resulted from some reading I just did in some business type books to get some questions as guidelines for NIC planning. These notes are essentially unedited, but the types of questions raised seemed relevant to many areas in ARC and I thought it would be worthwhile to pass them around. I will be refining them over time and adding them to other questions I'm collecting or thinking.

QUESTIONS and SOME COMMENTS

Neither ultimate results nor resources exist inside the business.

Results are obtained by exploiting opportunities not solving problems.

Resources to produce results, must be allocated to opportunities.

Economic results are earned only by leadership in something of real value to a customer or market.

Any leadership position is transitory and likely to be short lived.

What exists is getting old.

What exists is likely to be misallocated.

Concentration is the key to economic results.

Key resources, people, etc.

Define the product

What's the result or product, what's promotion, accessories, etc.

Products, markets, distribution channels

Market and distributive channels often more important than product

Analysis examines the entire product range of a business

Transactions the important cost concept

Defining what key transaction which has highest correlation with costs is not simple

1
2
3
4
5
6
7
8
9
10
10a
11
11a
11b
11b1
12
13
13a

Some Questions and Notes from Recent Reading

Leadership position of products	14
Leader	14a
Marginal	14b
Dead	14c
Trend	14d
Without changes	14d1
With changes	14d2
Up	14d3
Down	14d4
Static	14d5
Leadership not quantitative, has many factors. Can't necessarily be leader in all fields, but must be in some.	14e
Resources	15
Managerial	15a
Marketing	15b
Service	15c
R & D	15d
Etc.	15e
How are We doing	16
Some categories of products	16a
Today's breadwinners	16a1
Tomorrow's breadwinners	16a2
Productive specialties	16a3
Development products	16a4
Failures	16a5

Some Questions and Notes from Recent Reading

Yesterday's breadwinners	16a6
Repair jobs only one or two things wrong	16a7
Unnecessary specialties	16a8
Unjustified specialties	16a9
Investments in ego	16a10
Sleepers	16a11
Where are we in product life cycle	17
Costs	18
Concentration on those major areas of costs over which really have control and are not producing utility.	18a
Different costs must be treated differently	18b
Some may be producing results	18b1
Truly effective way to cut costs is to cut out some activity not general across the board cuts	18c
Whole business must be looked at	18d
Cost should be seen as viewed from customers' point of view. What does it cost him to effectively use the product?	18e
Cost units	18f
Money	18f1
Distribution	18f2
Raw materials	18f3
Manufacture	18f4
Service	18f5
Marketing	18f6
Administration, etc.	18f7
Productive costs	18f8

Some Questions and Notes from Recent Reading

Support costs	18f9
Policing costs	18f10
Waste	18f11
What do we stand to lose if we do nothing	18f12
The Customer Is the Business	19
The purpose is to provide something the world outside the organization is willing to pay for	19a
What is it the business is paid for	20
What the people in the business think they know about customers and market is more likely wrong than right. Only the customer knows.	20a
What the goods and services manufacturer sees as direct competitors may not be the real ones. Customer has need, may be something very different than causes the problem.	20b
What manufacturer thinks is most important feature of product may be unimportant to customer and vice versa. Customer only interested in what it does for him.	20c
Customer has to be assumed to be rational.	20d
No single product or company important to market	20e
What is the real customer, i.e. who, decides to buy	20f
Who is non customer why	20g
What does the customer really think he is buying	20h
What do customers and non-customers buy from others	20i
What service product is really needed	20j
What would enable customers to do without our service	20k
Who are our non-competitors and why	20l
Understanding customer	20m
Knowledge is the business	21

Some Questions and Notes from Recent Reading

Economic results are the results of differentiation innovation	21a
What is our area of leadership knowledge	21b
What can we do well	21c
What do we do poorly	21d
Every knowledge eventually becomes the wrong knowledge	21e
No company can excel in many knowledge areas	21f
Do we have the right knowledge	21g
Do we concentrate where the results are	21h
How effectively is our knowledge being used	21i
Are we actually getting paid for the knowledge we contribute	21j
Is our knowledge built into our good and services	21k
How can we improve? What is missing? How do we go about supplying it?	21l
Are right people on right opportunity	22
Summary Analysis of Business	22a
Analysis of results, revenues, resources	22a1
Analysis of cost centers, cost structure	22a2
Marketing analysis	22a3
Knowledge analysis	22a4
Targets Time	22b
What is our proper present or future	22b1
Must abandon some things	22b2
Vulnerability as opportunity weakness to strength	22c
Is business right size	22d
What are we afraid of	22e

Some Questions and Notes from Recent Reading

The Future which is Here now	22f
Power of an Idea	22g
The idea of the business	23
The specific excellence it needs	24
The priorities	25
Right opportunities and right risks	25a
Additive	25a1
Complementary	25a2
Breakthrough	25a3
Risks	25b
risk one can afford to take	25b1
risk one cannot afford to take	25b2
risk one cannot afford not to take	25b3
Specialization	25c
Diversification	25d
Integration	25e
Build or Buy	25f
Some marketing functions	26
Advertising -- promotion	26a
Information	26b
Market research	26b1
Intelligence	26b2
Product development	26c
Sales	26d

Some Questions and Notes from Recent Reading

1) Identification of unique skills or talents within the company.	27
2) Competitive pressures	28
3) Recognizing what a leader does best is often what he enjoys doing best	29
4) Boldness of spirit	30
5) Clear understanding of what the customer is really buying.	31
Channels of distribution -- delivery	31a
Phases of a business	31a1
1) Development of a new idea into a business	31a1a
2) Expanding phase of the idea that brought the business into being	31a1b
3) The declining phase as new ideas being to supersede the concepts on which the business was founded.	31a1c
Need to have everyone on the project intuitively plugged into market. What do people need.	31a2
Concentrations needed	31a3
Problems that a business can get into	31b
1) head on battle with entrenched competitors	31b1
2) poor strategies for marketing	31b2
3) devotion to an existing business pattern	31b3
4) attachment to products that may have passed its prime, attachment to technological or managerial ego trip.	31b4
5) not knowing your costs	31b5
6) failure to define a business broadly enough	31b6
7) lack of defined goals and considering alternatives	31b7
8) too much centralized control in decentralized operations	31b8

Some Questions and Notes from Recent Reading

Users are always willing to tell you things if you will listen and do something about it.	31c
Our ultimate success I believe will depend on our ability to help people use our system	31c1
People don't buy IBM computers, they buy IBM services	31c1a
Retailers often don't buy products, but managerial help or promotional help.	31c1b
We need more concentration.	31c2
Sequencing objectives through time rather than all at once.	31c2a
Market segmentation -- we need to do this	31c2b
Product cycles	31c2c
prediction of profile	31c2c1
newness creates special visibility	31c2c2
favorable first impression important	31c2c2a
competitors watching come in	31c2c3
Competitors often helpful as they develop the market	31c2d

RWW 21-JAN-72 11:39 8603

Some Questions and Notes from Recent Reading

(J8603) 21-JAN-72 11:39; Title: Author(s): Richard W. Watson/RWW;
Distribution: Paul Rech, Stephen W. Miller, Michael D. Kudlick, George J
Eilers, Donald R. Cone, Bonnar Cox, David R. Brown, Don Limuti, William
R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn
F. Auerbach, Walter L. Bass, Mary S. Church, William S. Duvall, Douglas
C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper,
Charles H. Irby, Mil Jernigan, Harvey G. Lehtman, John T. Melvin, Jeanne
B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H.
Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De
Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Don C. Wallace, Richard W.
Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC SRI-ARC; Clerk:
RWW;

HGL 21-JAN-72 11:41 8604

DEX Buyers Group Created for Select ARC VIPs

There is a new journal group called the DEX Buyers Group with the ID DEXBUY. The members are HGL, DCE, RWW, DRC, and JCN. The DEX design team (whose ID is DEX2) will keep DEXBUY aware of developments concerning the design and implementation of DEX.

1

HGL 21-JAN-72 11:41 8604

DEX Buyers Group Created for Select ARC VIPs

(J8604) 21-JAN-72 11:41; Title: Author(s): Harvey G. Lehtman/HGL;
Distribution: Harvey G. Lehtman, Douglas C. Engelbart, Richard W.
Watson, James C. Norton, Donald R. Cone, Harvey G. Lehtman, Charles H.
Irby, Walter L. Bass, William H. Paxton, Douglas C. Engelbart/DEXBUY
DEX2; Sub-Collections: SRI-ARC DEXBUY DEX2; Clerk: HGL;

Proposal for Sequential File Input Subsystem for DEX

NEED FOR SMALL NEW SUBSYSTEM (SEQIN) FOR SEQUENTIAL FILE INPUT 1

A small new subsystem (SEQIN) should be written to take input from (primarily) TI terminals and place it in a sequential file for DEX input. 1a

This is desirable because the use of TTYS for input is not attractive and cassette recorders will take some time to be delivered. Until the cassettes appear it would be useful to have an input device for use primarily by PSO staff which does not consume the full resources of NLS. 1a1

At first it was thought that a "COPY TTY: TO <sequential filename>" would be effective. However, if the system crashes, all input entered in this mode disappears because the file does not exist in TENEX in this situation until it has been closed and reopened. 1b

This subsystem is just a kludge to get some load off of the system until the delivery of cassette devices for DEX. It will not become a permanent part of the system. 1c

Further suggestions are welcome. 1d

NEEDED CAPABILITIES AND IMPLEMENTATION SUGGESTIONS 2

A useful capability of SEQIN would be to display the last (arbitrary number?) of characters in the file to permit continuation of work on a file in the event of a crash. (A special control character to do this?) 2a

Because of the nature of DEX, backspace characters are not completely necessary. 2a1

We also want the possibility of being able to add information to the end of an existant sequential file. 2a2

A control Z (↑Z), the EOF character, could be used to exit the system. 2a3

SEQIN would open the specified file, close it, then open it again in order to make sure it exists. Then characters could be put into it in one of several ways: 2b

They could be pmap'd periodically into the file. 2b1

They could be entered into the file character by character. 2b2

Proposal for Sequential File Input Subsystem for DEX

PROPOSED USER INTERACTION

3

Enter subsystem:

3a

At EXEC level type "SEQIN" or appropriate abbreviation followed by a carriage return.

3a1

SEQIN would ask for a file name.

3b

The name may be specified without extension in which case the default "DEX" would be used.

3b1

If the file does not exist in the user's directory it will be created.

3b2

Inputting text:

3c

DEX text may then be input until a control Z (↑Z) is typed. If the file is an old one, the input text will be placed on the end of the file. It will also serve as the termination.

3c1

A control blap (↑ blap) where blap is a character to be chosen which has no conflicting TENEX use will print out the last 20 (?) characters in the file.

3c2

IMPLEMENTOR

4

It is proposed that JTM, with his knowledge of the monitor and in his capacity as DEX-1 maintenance team member, write this subsystem.

4a

HGL 21-JAN-72 11:46 8605

Proposal for Sequential File Input Subsystem for DEX

(J8605) 21-JAN-72 11:46; Title: Author(s): Harvey G. Lehtman/HGL;
Distribution: Walter L. Bass, William S. Duvall, Mary S. Church, J. D.
Hopper, Charles H. Irby, Harvey G. Lehtman, John T. Melvin, Bruce L.
Parsley, William H. Paxton, Harvey G. Lehtman, Douglas C. Engelbart,
Richard W. Watson, James C. Norton, Donald R. Cone/NPG DEXBUY;
Sub-Collections: SRI-ARC NPG DEXBUY; Clerk: HGL;
Origin: <LEHTMAN>SUBPROP.NLS;2, 21-JAN-72 11:13 HGL ;

Reply to CSK on Journal Questions

Charlie,

If we haven't changed your USER name you won't get online delivery. We should have changed it however by now. The different spelling forms don't matter. Authors now get their stuff delivered in a separate branch.

1

RWW 21-JAN-72 11:51 8606

Reply to CSK on Journal Questions

(J8606) 21-JAN-72 11:51; Title: Author(s): Richard W. Watson/RWW;
Distribution: Chuck S. Kline/CSK; Sub-Collections: SRI-ARC; Clerk: RWW;

Author's option to refuse hardcopy

Joel- The option of an author to refuse hardcopy is a desirable feature which is planned but not yet implemented. Thanks for your complaint, but bear with the automatic distribution of author hardcopy as well as online receipt until the Journal design can cope with the suppression. Please, I meant to say. You probably noticed that BBN's request for notice of messages sent by an author to appear in his file has been implemented as of today.

1

JBN 21-JAN-72 15:20 8607

Author's option to refuse hardcopy

(J8607) 21-JAN-72 15:20; Title: Author(s): Jeanne B. North/JBN;
Distribution: Joel B. Levin, William S. Duvall/JBL WSD; Sub-Collections:
SRI-ARC; Clerk: JBN;

JBN 21-JAN-72 15:43 8610

Request to SDC2 to send docs to Council of Ontario Universities

Steve - We have a letter from:

Muriel A. Lloyd
Secretary, Office of Computer Coordination
Council of Ontario Universities
102 Bloor Street West
Toronto, 181, Ontario

(416) 920-6865

requesting copies of the basic documents 7590, 6740 and 5145. OK
to send?

1

JBN 21-JAN-72 15:43 8610

Request to SDC2 to send docs to Council of Ontario Universities

(J8610) 21-JAN-72 15:43; Title: Author(s): Jeanne B. North/JBN;
Distribution: Steve D. Crocker, Cindy Page, Richard W. Watson/SDC2 CXP
RWW; Sub-Collections: SRI-ARC; Clerk: JBN;

Author's Option to Refuse Hard Copy

Joel - There is reason to doubt that a recent message to you made it to the Journal, because I received a message: Number not assigned 8607. The substance of the message was: The option of an author to refuse hardcopy is a feature now noted as desirable but not ready for implementation. Please bear with the extra mail until Bill Duvall can get time to turn you off. Some steps forward are noticeable, however. You may have discovered that BBN's request to have evidence in the author's file that a message has been sent was operational this morning, with notes of Author Copy in the author's initial file.

1

JBN 21-JAN-72 15:57 8611

Author's Option to Refuse Hard Copy

(J8611) 21-JAN-72 15:57; Title: Author(s): Jeanne B. North/JBN;
Distribution: Joel B. Levin, William S. Duvall, Richard W. Watson/JBL
WSD RWW; Sub-Collections: SRI-ARC; Clerk: JBN;

Execuport order note for RADG

We have placed the order for four (4) Execuport Model 310's. The P.O. Number is A55702 and is directed to Computer Transciever's local representative -- Systems Marketing Consultants, Los Altos, California. They will deliver the terminals direct from the Eastern factory to you at Rome. These are new equipment, not rebuilt as we discussed. The price finally came out to \$3,590. Our purchasing people talked directly to Computer Trans. people on this. The other possibility of what appear to have been rebuilt models was rejected.. and it came to about 3,300 \$ at that. The delivery time may be as long as 6 weeks..we'll follow it. Any questions?

1

JCN 21-JAN-72 16:59 8612

Execuport order note for RADC

(J8612) 21-JAN-72 16:59; Title: Author(s): James C. Norton/JCN;
Distribution: Duane L. Stone, Martin E. Hardy, Ed K. Van De Riet/DLS MEH
EKV; Sub-Collections: SRI-ARC; Clerk: JCN;

CHI 21-JAN-72 16:47 8613

New Groups In The Ident System

two groups have been added to the IDENT system:

NFFET: NLS File Feature Extention Team (to and
implement backlinks, commenting, primitives for set
systems, and an initial set system) and
NFFEB: NLS File Feature Extension Buyers.

1

CHI 21-JAN-72 16:47 8613

New Groups In The Ident System

(J8613) 21-JAN-72 16:47; Title: Author(s): Charles H. Irby/CHI;
Distribution: Paul Rech, Stephen W. Miller, Michael D. Kudlick, George J
Eilers, Donald R. Cone, Bonnar Cox, David R. Brown, Don Limuti, William
R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn
F. Auerbach, Walter L. Bass, Mary S. Church, William S. Duvall, Douglas
C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper,
Charles H. Irby, Mil Jernigan, Harvey G. Lehtman, John T. Melvin, Jeanne
B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H.
Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De
Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Don C. Wallace, Richard W.
Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: CHI;

A Meeting to Discuss ARC's current Organization

This message continues the dialogue begun in (8571, 1). During the software meeting described in that Journal entry, we decided that we needed to meet with the EMC and with Doug. Hopefully, this second meeting would provide an opportunity for those uneasy about the current state of ARC's organization to express their concern.

1

We felt that the meeting should be as small as possible, so that everyone would feel free to speak. We decided to limit the meeting to the software group, the EMC, and Doug, and to limit the discussion to problems peculiar to the software group. However, such a discussion might well have implications for other members of ARC. Now it's clear that limiting the discussion group might exacerbate the feelings of mistrust that the meeting is intended to alleviate.

2

All ARC members are invited to the discussion of ARC's current organization, to be held at 2:00 PM on Tuesday, 25 January, 1972. No one should feel obliged to attend this meeting. In fact, if everyone does attend, the group will probably be too unwieldy to accomplish anything. The meeting is designed to provide a forum for anyone who has questions about our current style of organization. If you have no questions, or if you don't wish to participate in the discussion, please don't feel you must attend.

3

There's even a recommended reading list. Much of the dialogue pertaining to our current mode of organization appears in the minutes of the EMC meetings. The first formal description of the EMC is (Journal, 7657, 1). The minutes of the EMC meetings are (in chronological order) (Journal, 7655, 1), (Journal, 7659, 1), (Journal, 7872, 1), (Journal, 7994, 1), (Journal, 7900, 1), (Journal, 7992, 1), (Journal, 8294, 1), (Journal, 8311, 1), (Journal, 8403, 1), (Journal, 8407, 1), (Journal, 8513, 1).

4

Some questions that arose during the previous meeting of the software group and which might merit further discussion are:

5

1. What are the groups, and the relationships among them, in ARC's current formal organization?

5a

2. What is our de facto organization?

5b

3. How are ARC's goals and policies formed? How are these goals, and their evolution, communicated to the outside world and to ARC members?

5c

4. How can an individual decide which of several tasks is most important to ARC?

5d

MSC 21-JAN-72 17:58 8614

A Meeting to Discuss ARC's current Organization

5. How are the task force teams needed to work on ARC's problem areas established and coordinated?

5e

MSC 21-JAN-72 17:58 8614

A Meeting to Discuss ARC's current Organization

(J8614) 21-JAN-72 17:58; Title: Author(s): Mary S. Church/MS; Distribution: Paul Rech, Stephen W. Miller, Michael D. Kudlick, George J Eilers, Donald R. Cone, Bonnar Cox, David R. Brown, Don Limuti, William R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn F. Auerbach, Walter L. Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil Jernigan, Harvey G. Lehtman, John T. Melvin, Jeanne B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Don C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: NIC SRI-ARC; Clerk: MSC;

8627

See

BASELINE

BOOK

8628

See
BASELINE
BOOK

Some Background on Pressures Existing on ARC

A healthy dialog is beginning to build on the important problems of ARC organization, modes of working, implicit and explicit contracts among ARC subgroups members, ARC goals etc..

1

In any organization the size of ARC and with the number of potential clientel, there are going to be people who play linking roles linking subgroups, individuals, and outside buyers together in various ways. In fact if we are functioning healthily all of us are playing such roles. Linking roles are not easy as there are often multiple needs, possibilities, and limited resources which must be reconciled.

2

During the past year I feel I have been playing, what has been for me, a fairly tough linking function between ARPA, the network community and ARC.

3

It has been clear to me for the past few months that I have not communicated clearly the strong pressures which ARPA and the outside world have been laying on us through me, even though I have felt it necessary to be a visible strong champion of NIC needs for reasons described below and the importance over the short and long haul of our coming to grips with them.

4

The purpose of this piece is to review our relations with the outside as I have seen it over the past year and hopefully as part of the dialog beginning to get some more help so that I don't feel as I often have that I have to carry these pressures myself because I can't do it any longer.

5

To start at the beginning, research like any other activity has a buyer or buyers and failure to meet their felt needs and goals eventually results in the buyer withdrawing support. This failure can be because of inadequate specification on the part of the buyer of his needs, failure of the buyer to recognize the contribution a contractor can make, failure of the contractor to meet specifications and lots of other reasons like clear specifications from the buyer and clear success on the part of the contractor to meet them and yet failure of the buyer to apply the results.

5a

My experience in R&D before coming here showed cases of all of the above. The result was Shell cutting back research in all fields and a general distrust of the research process in the operating parts of the enterprise. Therefore I arrived for interviews at ARC sensitized to problems in buyer seller relationships and very interested in finding out what ARC's relationships with its buyer, ARPA were like.

5b

Some Background on Pressures Existing on ARC

What I found was that relationships with ARPA were probably strained although without talking to ARPA I had no way to confirm this.

5c

I thought there was probably some risk in coming to work for ARC because of these problems with ARPA, but I felt so turned on by what was happening here that I thought it was worth it and that maybe the hassels I had been through in Shell could help. In particular I felt that the project had to form healthy relationships with multiple buyers in the outside world not only to assure financial health, but also have NLS really be a useful system to people other than ourselves. Everything in my experience has confirmed that technical virtuosity is not an end in and of itself in an applied project such as this one; what is required is not even great reports, what is needed is deliverable useable effective products which meet real needs of outside buyers.

5d

On Jan 6, 72 I had my first chance to checkout my hypothesis about relations with ARPA when Doug invited me down to be around when Larry Roberts visited ARC with Steve Crocker. The visit frankly stunned me. The communication between ARC and ARPA about goals was nonexistent. Larry communicated clearly his displeasure with where he thought LARC was at, particularly with respect to the NIC which as I only really understood later had had a bad history here. I got the strong feeling that if we did not get some kind of NIC on the air our funding might be cut; I got such feelings from Doug as well and that our June contract renewal was a key Watershed coming up.

5e

In all my five years of selling research and development and interfacing with buyers of various kinds, I had never been in just a tense session; further my experience indicated that unless such a relationship could be reversed it was just a matter of time until funding was cut whether in a year or several years, but such a relationship was not conducive to long term survival.

5e1

Shortly after I arrived Doug went to the IPT meeting in San Diego where he was given a rough time as he reported to all of us. This was more confirmation that we had to get a meaningful NIC on the air.

5f

Later in the month I went to a NWG meeting at Ill. and found that while things were more sympathetic there, ARC and NIC were somewhat of a joke.

5g

Some Background on Pressures Existing on ARC

Throughout the following months as I met people I knew, I was constantly asked why I had gone to work for that AHI scandal as some put it. I was constantly defending the project and saying wait you'll see type of thing.

5h

The real heavy pressure came at the May NWG meeting, when in a brief conversation with Larry Roberts I asked him what procedure we should follow to get more money for core and other facilities as I thought that once we were up people around the net would really begin to put a heavy load on us by this spring. Larry looked at me and said if you prove useful and cost effective we'll see later, but first we have to see if you are useful. At that time we still were not up on the net. Later Larry came up to me and said "I am only supporting ARC because of the NIC and that NIC should look upon the rest of ARC as its research group and that if Engelbart was not giving the NIC enough resources I should call him. He had come to the latter conclusion from ARC's not having done much about the NIC over the last 3 years or so.

5i

The above conversation with Larry really disturbed me as it clearly indicated both a failure of communications with ARPA, but also that we were in more trouble than I had thought. The above view of a NIC ARC relationship I found completely unacceptable. Charles was at Atlantic city and knows how I felt. I called Doug and told him what had happened, but made what I now think was a mistake of not discussing that event with the rest of the project as I thought that it might get people so upset that we would not be able to function at all.

5j

The next meeting with ARPA was in June when we discussed contract renewal. By then we were up on the net shakily and had run one TNLS course. The meeting was tense, but funding was renewed with an informal understanding, never really confirmed by Larry explicitly, that something like half the computer capacity an 30% of other resources were to be allocated to NIC.

5k

Everybody working on things associated with a NIC payout were working very hard all summer, with me transmitting only some of the pressure I felt from the above events, inspite of what my role may have looked like.

5l

During early fall we were up more solidly, the Journal was functioning, we had run another TNLS course and were about to run one ove the net from MIT at the Oct NWG meeting.

5m

At the Oct. meeting the things Larry said to me indicated that

Some Background on Pressures Existing on ARC

the pressure was easing, that he seemed to think we were going to be useful and that his main concern about us was ongoing evolution and cost effectiveness. During all of the above one needs to understand Larry's position with his buyers and his strong need to get the net functioning.

5n

The next meeting with ARPA was in Dec. at the IPT meeting in Washington. I got continuing good vibes and felt the crisis was over and that I could relax and enter evolutionary mode. The project as a whole still is not out of the woods as the interesting thing about most of the discussion of new ideas for computer science research found us right in the middle.

5o

What this pleasing situation means is that other principle investigators around will want a piece of the action and as long as we can plan properly and work closely with them and continue to be productive everything is very cool, but if we drop the ball there are now going to be others to pick it up and run with it.

5p

RWW 24-JAN-72 10:44 8634

Some Background on Pressures Existing on ARC

(J8634) 24-JAN-72 10:44; Title: Author(s): Richard W. Watson/RWW;
Distribution: Paul Rech, Stephen W. Miller, Michael D. Kudlick, George J
Eilers, Donald R. Cone, Bonnar Cox, David R. Brown, Don Limuti, William
R. Ferguson, Priscilla Lister, Robert L. Dendy, Linda L. Lane, Marilyn
F. Auerbach, Walter L. Bass, Mary S. Church, William S. Duvall, Douglas
C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper,
Charles H. Irby, Mil Jernigan, Harvey G. Lehtman, John T. Melvin, Jeanne
B. North, James C. Norton, Cindy Page, Bruce L. Parsley, William H.
Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De
Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Don C. Wallace, Richard W.
Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC SRI-ARC; Clerk:
RWW;

VRB 24-JAN-72 11:02 8635

request for nic tnls user guide

please send a copy of the NIC TNLS USER GUIDE,
NIC #7470 to:

Vernon Bruffey
Seismic Array Analysis Center
813 North Royal St.
Alexandria, Virginia 22314

Mr. Bruffey is working for SAAC, pending installation
of SAAC'S tip.

thank you,
Ernie Forman

1

VRB 24-JAN-72 11:02 8635

request for nic tnls user guide

(J8635) 24-JAN-72 11:02; Title: Author(s): V. R. Bruffey/VRB;
Distribution: V. R. Bruffey/VRB; Sub-Collections: NIC; Clerk: VRB;

JBP 24-JAN-72 11:29 8636

comments ?

Do you have any comments on the proposed Telnet documents i sent
you ? If so I would like to hear from you soon. Thanks - jon.

1

JBP 24-JAN-72 11:29 8636

comments ?

(J8636) 24-JAN-72 11:29; Title: Author(s): Jon B. Postel/JBP;
Distribution: Joel M. Winett/JMW; Sub-Collections: NIC; Clerk: JBP;

Comments on Cleaning up nls 8573.

The difference between RECDEF and CONST is not made entirely clear.

8

Couldn't RECDEF simply be a branch in CONST?

8a

JSYS Routines

9

An alternate approach to the JSYS stuff would be to have one routine which accepted as parameters register values, and a JSYS identification, and executed that JSYS in a particular way.

9a

In any event, the JSYS routine/identification name MUST ALWAYS be the same as the name of the JSYS, i.e. no expanding such as changing lgtjfn to lgetjfn.

9b

If we use individual procedures, let us standardise the types of calls (i.e. Is a Destination Designator a String address, a JFN, a file number, a String Pointer ?????)

9c

If individual procedures are used, a directory similar to the JSYS directory should be published, which has the calling arguments and results.

9d

The JSYS routines should not SIGNAL.

9d1

Universal File Handle

10

We Need some type of NLS Universal file handle, which may be used anywhere a file is to be identified.

10a

The Universal File Handle should be able to be either:

10a1

(1) An NLS File Number

10a1a

(2) A JFN

10a1b

(3) The address of a string containing a file name.

10a1c

Appropriate library routines should be available for turning each of these things into each of the other things, without knowing what the thing you have is.

10a2

For example, If a routine is passed a UFH blap, and needs the JFN of the file for whatever he wishes to do, it calls the routine FINDJFN(UFH) which either SIGNALS, or returns the JFN.

10a2a

Comments on Cleaning up nls 8573.

1: Comments should be liberally sprinkled throughout the statement saying what is being searched for, where pointers are pointing, etc.

4d1a1

2: Under no circumstances should SWORK and SCNDIR be set up in one procedure, and assumed to be right in another. If another procedure wishes to use the values of swork and scndir, they should be passed as parameters.

4d1a2

LOCAL declarations should always be in the order of LOCALS, TEXT POINTERS, STRINGS.

4d2

This makes perusing the stack much simpler.

4d2a

Pretty-up format

5

Each LLO statement should correspond to one NLS statement except in the case of extended IF a AND b OR c....type of statements.

5a

Specifically, the procedure actual parameter list should appear in the same statement as the procedure name in a procedure call. This makes it much easier for TNLS users.

5a1

There should NOT be a space between the procedure name and the actual parameter list in a call.

5b

Operators and expressions separated by spaces is pushing things, I think.

5c

GOTO State

6

Should be done away with entirely, and replaced by the SIGNAL mechanism.

6a

See (nls,idtctl,) for an example of how this might work.

6b

Core-routines...CLIST

7

I do not think that core routines should have anything to do with CLISTS.

7a

Except for markers.

7b

And if they must (because we cannot figure a way around it), it should be entirely and easily optional.

7c

Comments on Cleaning up nls 8573.

Errors

1

I agree philosophically with the idea of everything signalling, but I think that the restriction of having only one SIGNAL statement active at a time in a procedure, and not having anyway of explicitly activating others is sufficiently severe so that the exclusive use of SIGNAL for errors is not feasible.

1a

How about a global error string in which any routine signalling may place an error message. This provides an alternative to the passing of error strings.

1b

Warning/progress messages

2

These should not be issued directly from core NLS routines, or at least should be issued in a way such that they are suppressed if the job is running as a library process or detached.

2a

Local Strings

3

The current need for global strings stems from the inability to return a local string as the result of a procedure. How about the dynamic string system we have talked about as a solution??

3a

Standard Format

4

I think that the description of what a procedure does should be the first sub-branch, followed (or including) a description of the arguments.

4a

I think that the format for the description of the parameters is important...i.e. they should not be imbedded in text.

4b

I think that a like branch should describe possible returns and results.

4c

Re- standard local and formal parameter names....anything REFed in one place should always be REFed.

4d

I use and find very convenient z1, z2, z3, z4...for names of local text pointers.

4d1

While this is not as descriptive as mnemonic names, the FIND construct is sufficiently compact and complex that

4d1a

WSD 24-JAN-72 11:48 8637

Comments on Cleaning up nls 8573.

(J8637) 24-JAN-72 11:48; Title: Author(s): William S. Duvall/WSD;
Distribution: Walter L. Bass, William S. Duvall, Mary S. Church, J. D.
Hopper, Charles H. Irby, Harvey G. Lehtman, John T. Melvin, Bruce L.
Parsley, William H. Paxton/NPG; Sub-Collections: SRI-ARC NPG; Clerk:
WSD;

VRB 24-JAN-72 12:00 8638

Request for Nic User Guide

Please send a copy Nic User Guide ,#7590 to:

Vernon Bruffey
Seismic Array Analysis Center
813 North Royal St.
Alexandria, Virginia 22314

Mr. Buffey is working with SAAC prior to their coming on the network.

Thank you,
Ernie Forman

1

VRB 24-JAN-72 12:00 8638

Request for Nic User Guide

(J8638) 24-JAN-72 12:00; Title: Author(s): V. R. Bruffey/VRB;
Distribution: Jeanne B. North/JBN; Sub-Collections: NIC; Clerk: VRB;

DVN 24-JAN-72 14:00 8639

Ken Showalter's Possible Free Day at ARC.

Ken Showalter is coming for the TNLS class on the 27th and 28.

1

He spoke with Mil this morning and said he might arrive Tuesday (tomorrow)night, and that he then might call us.

2

Do you want to make any plans to show hm ARC if he comes to us on Wednesday?

2a

DVN 24-JAN-72 14:00 8639

Ken Showalter's Possible Free Day at ARC.

(J8639) 24-JAN-72 14:00; Title: Author(s): Dirk H. van Nouhuys/DVN;
Distribution: Douglas C. Engelbart, James C. Norton, Mil Jernigan,
Richard W. Watson/DCE JCN MEJ RWW; Sub-Collections: SRI-ARC; Clerk: DVN;

Status Summary on Mini-Console Project

To: Doug Engelbart

Date: 12-16-71

1

From: George Eilers

Location: K1076

2

Subject: Mini Console

3

This memo summarizes work completed on Project 8457-21, the Computer Mini Console.

4

A telephone discussion was held with our Contract Monitor, Larry Roberts, on November 5, for the purpose of obtaining a more precise definition of the project requirements and goals.

5

Roberts stated that he considered the main objective to be the development of a personal computer terminal, which he visualized as something approaching the size and weight of a pocket transistor radio.

5a

Some specific requirements were that it be operated entirely by one hand, battery operated, and linked by radio into a computer system.

5b

These were ultimate requirements, and were not meant to preclude the construction and testing of line-powered and direct-wired units in the early development stages.

5c

Roberts mentioned several state-of-the-art technologies which he thought could be used in a terminal of this kind.

6

Because of ARPA support, Roberts is familiar with a form of plasma display panel currently being developed and marketed by Owen-Illinois.

6a

He ventured an estimate of 80 lines per inch resolution for their displays and suggested they be contacted through John Klotz, who heads the project sponsored by ARPA at Owens.

6b

A radio communications link intended for the same or similar purpose has apparently been built and operated in Hawaii, possibly under the direction of Dr. Abramson.

6c

The project is known as the Aloha Project.

6d

It apparently uses an 80 KHZ channel in a burst mode with a fairly elaborate header and error checking.

6e

No provision is made to prevent overlapping transmissions by several independent users.

6f

Status Summary on Mini-Console Project

Instead, the receiving station constantly examines the header data for an acceptable header.

6g

Apparently, overlapping transmissions will virtually always cause the header information to be rejected.

6h

Upon receipt of an acceptable header, the receiver processes the remainder of the transmitted data from a remote station and issues a reply.

6i

Larry claims that in this way one-sixth of the channel capacity can be realized in practice for terminals capable of transmitting an average rate of one bit per second.

6j

The use of special pressure sensitive rubber pads as keys on the keyboards was also suggested.

6k

Apparently, Marvin Minsky at MIT has done some checking into them and has found them cheap and reliable.

6l

Roberts stressed that he did not want to begin immediately to build the entire mini console, but would rather gather data relating to the practicality of the five-finger keyboard.

7

In particular, he wants to ascertain whether the five-finger keyboard presents a training problem.

7a

He has apparently been told that it can be learned in as short a time as two hours, but is skeptical of this.

7b

He suggested making some measurements and getting "hard data" on the learning curve for the five-finger keyboard before proceeding to expend a great amount of effort on other problems.

7c

An attempt was made to call John Klotz at Owen-Illinois on Monday, November 15, but his immediate superior Gene Oster was reached instead.

8

Oster apparently heads up the entire plasma display effort and Klotz works for him as a Project Engineer solely on the ARPA contract.

8a

Oster was a little reluctant to divulge much information on the panels, saying that Owens has made a roughly \$10 million investment in the plasma display technology to this point and ARPA has supplied 5 to 10 percent of this.

9

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He suggested that if further technical information were desired that we formulate a detailed list of questions in letter-form.

9a

He gave me the address as:

9a1

Electro Optical Display Business
Plant 30
Louis Development Park
Route 25
Perrysberg, Ohio.

9a1a

Oster mentioned that they currently had in production a 1100-dot-per-square-inch and a 3600-dot-per-square-inch panel.

10

He seemed hesitant to confirm that 80 lines per inch could be obtained, although he did not deny this.

10a

When questioned about power requirements, he said that one milliwatt per dot was required by the display panel itself, but that the electronics required for addressing the panel could consume itself several times this.

10b

Just as a check, he mentioned that the 8-1/2-by-8-1/2-inch 60-line-per-inch panels that they are making consume 150 watts total.

10c

This is broken down into 40 watts for the panel and 110 watts for the addressing circuitry.

10d

All in all, Oster's response was discouraging, and an attempt will be made to talk directly to Klotz in the future.

11

The major effort, aside from that explicitly stated above, has been in the area of measurement of the learning curve for the five-finger keyboard.

12

A keyboard interface has been built which allows a five-finger keyboard identical to the ones in use on the NLS to be connected to the LINC-8 used by the Bioinformation Systems Group.

12a

The LINC-8 has a display screen, built-in hardware character generator, and a great deal of software designed to present alphanumeric characters.

12b

Software is currently being developed to provide a Times-Square-type sign-board display of both the text to be

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copied and the characters struck on the keyboard, for measuring the learning curve of subjects.

12c

The programming was approximately 70 percent completed as of the date of this memo, and the system was in operation with only one case of character available.

12d

Every effort will be made to maintain the character set as close as possible to the one currently in use on NLS, so that comparisons can be made directly between the performance of naive subjects and those experienced on NLS.

12e

There is no provision for case changing with right-hand control buttons as on NLS, so all case changes will be made by entering a command character to move into the command case and then entering a transfer command to the appropriate case.

12f

The system is being designed to accumulate a permanent tape record of the text to be copied, each subject response, and the time interval between present response and the last previous.

12g

The display is synchronized so that it appears to move smoothly from right to left across the screen, maintaining the current character approximately in the center of the screen.

12h

No check is made on the correctness of the character entered at the time of entry.

12i

Analysis will be performed by a separate program later.

12j

We plan to make several short test runs with subjects obtained from among SRI staff in order to debug the system and develop some experience with it.

13

After this has been accomplished, several subjects will be hired on an hourly basis to provide a few hours a week of experimental time each.

13a

Rob Savoie has been doing the programming of the LINC-8, spending approximately 50 percent time during the last few weeks; it is expected that a week or two more at his present rate will accomplish the needed programming, although the pending installation of a memory extension on the LINC-8 may introduce a one-week hiatus.

14

GJE 24-JAN-72 13:57 8640

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