RWW 19-SEP-74 11:39 23995

Note to Oestreicher on Lack of references in ISI Literature to ARC Work

(J23995) 19-SEP-74 11:39;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /CHI([INFO-ONLY]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: RWW;

RWW 19-SEP-74 11:39 23995

Note to Oestreicher on Lack of references in ISI Literature to ARC Work

Don, thanks for your reply on references, I never did think you guys were plagarizing, nor did I discount the possibility of reinvention, parallel invention etc. Its just that we have over ten years of documents around in the open literature, reports, working documents, etc.; many of which we have sent to you hoping that they would be helpful and that you would take them and avoid our mistkes, improve on them etc. You are doing all those things and we are pleased and will undoubtedly do the same with yours. 1

All we ask is that references be given as is the research custom. 2

3

Papers that we feel relevant to your work are numerous but a few that are particularly important are. 4

The Augmented Knowledge Workshop, in AFIPS June 1973, it details the philosophy both of our groups are following. 5

Design considerations for Knowledge workshop Terminals in AFIPS Proceedings June 1973, has a good annotated bibliography up to that points to some useful papers and describes some aspects of the user interface philosophy ARC had followed to that point, although starting just before then there was a shift to more emphasis on novice users as well as expert users. 6

7

A Research Center for Augmenting Human Intellect in AFIPS Fall 1968, descroption of base NLS facilities. 8

Papers by Irby and Andrews in recent AFIPS 74 on display techniques. 9

The working paper on the Command Meta-language by Dornbush you have. 10

Our recent proposal for NSW describing our frontend, protocol approach based on rfc 591(I think) for resource sharing. 11

Lots of reports, there is one in preparation that is better than most. 12

Anyway thats enough, one of our two groups problems (if it is a problem given the enormous amount there is to do in this field) is that we agree almost completely on what the basic components of this type of system should be and how they should interact, We disagree , if at all,primarily in emphasis at this time, we're more heavily emphasizing the "clp" in a mini, communication by formal muiti process protocols, network based geographically distributed

functions, simpler help facilities and not much adaptive stuff at this time. We think the adaptive stuff is interesting and eventually useful and think there wll be lots of problems before the stuff is really useful and are glad you guys are doing it while we go on to use limited resources in other areas that seem critical. When you guys demonstrate it all works and users love it we'll undoubtedly us it ,modify it or whatever as you are planning on doing with NLS. 13

Again thanks for your nice note and the coming references. It will not only make us feel good, but could keep you guys from embarrassing situations as the funding and other world you deal with overlaps significantly ours and they are aware of what we are doing and might wonder why you guys were not aware of us also. Dick 14

JEW 19-SEP-74 11:45 23996

MAP Visit

(J23996) 19-SEP-74 11:45;;;; Title: Author(s): James E. (Jim) White/JEW; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JEW;

JEW 19-SEP-74 11:45 23996

MAP Visit

Mike Padlipsky will be at SRI-ARC on OCT 2nd or 3rd to discuss NSW protocol development, and how it relates to AFSCNET protocols. 1

JMB 19-SEP-74 14:40 23997

answer to your sendmessage about old to new document

(J23997) 19-SEP-74 14:40;;;; Title: Author(s): Jeanne M. Beck/JMB; Distribution: /RWW([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: JMB;

JMB 19-SEP-74 14:40 23997

answer to your sendmessage about old to new document

I am mostly having trouble in the cases where the NLS-8 commands will be different from the NLS version that now exists here at ARC when you log in. The presently available NLS is well documented already. I was only unfamiliar with the functions of commands in a few out-of-the-way areas of NLS. 1

Of the changes still to be made to NLS before Oct 1, information about exactly what's going to be implemented is available either in Work (except for the DNLS stuff I caa't get on my TI); Kirk is working on getting it ccmplete in XHELP (though he has some of the same problems I do in discovering it); and some of it is still in the hands of the programmers. 2

I have found out all I need to know from some programmer or other personnally, but the process of sendmessage or linking to the right guy at the aright time has simply been time-consuming. There have been no outright obstacles, so I hope I am near the finish line. 3

Main Problem #1 - Detailed information about syntax and functions (ie which old command is being replaced) of all the commands being changed is not centrlly located--it's still in their heads, or in some file they didn't tell me about. 4

Main Problem #2 - Decisions about changing things are still being made. For example, when I was writing the section of this document translating the Ident commands, I was missing some functions and so asked CHI to verify the list. His reply was that the Ident subsystem was disappearing. Some time was lost in this process. 5

ACM 19-SEP-74 14:57 23998

testing

(J23998) 19-SEP-74 14:57;;;; Title: Author(s): ADRIAN C. MCGINNIS/ACM; Distribution: /ACM([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: ACM;

ACM 19-SEP-74 14:57 23998

testing

this is just a test or practice session to see if i can do this certain taks, since this is my first snd msg, it will probably be a failure---but at least i tried! 1

RWW 19-SEP-74 15:17 23999

The User Program Library

(J23999) 19-SEP-74 15:17;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: RWW;

RWW 19-SEP-74 15:17 23999

The User Program Library

Before I went away on vacation there was a meeting to talk about the problem of transfering User programs across system changes. It was agreed that there would be three basic categories, user programs that are widely used and should be considered as part of the core system in some sense (class 1), user programs that would use only procedures from a list guaranteed to work across system changes (class 2), and user programs using more esoteric features and procedures that are the users respensibility to convert across changes (class 3). 1

Inorder to get all this together and get those converted that need to be converted I have asked Kirk to take over the user program area. This will free Dave Maynard who was worrying about this when not in the middle of bugs and other changes for other needed tasks. 2

We need to decide how to handle the class 1 programs. I basically think they ought to be commands in new or existing subsystems. Kirk will produce a proposal for discussion. For the class 2 programs we need to define the supported set of procedures. Charles has I believe an initial proposal here. We need to convert what needs converting and to set rules for the future for how programs get to become class 1 and who pays what if anything for that to happen. There is a mess here, which I feel responsible for not tackling sooner, and I ask everybody's support and help for Kirk as he works to straighten it out. 3

RWW 19-SEP-74 15:34 24000
reestablishing the linkage from software to documentation

(J24000) 19-SEP-74 15:34;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /NPG([ACTION]) DVN([ACTION]) KIRK([ACTION]) JMB([ACTION]) POOH([ACTION]) ; Sub-Collections: SRI-ARC NPG; Clerk: RWW;

RWW 19-SEP-74 15:34 24000

reestablishing the linkage from software to documentation

The rush to get NLS 8 up on Office 1 is causing serious problems for the documentation people as they are finding it difficult to keep up with last minute changes etc. Apparently the procedures for informing them that seemed to work before have fallen apart. Its important that they be informed about anything new or changed from what they have been told in the past. I would appreciate it if evryone would help here. Elizabeth please look at the interface from software to documentaion and let me know where things have broken down and if I need to do anything. Thanks dick

ACM 19-SEP-74 15:46 24001

testing

(J24001) 19-SEP-74 15:46;;;; Title: Author(s): ADRIAN C. MCGINNIS/ACM; Distribution: /JML([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: ACM;

ACM 19-SEP-74 15:46 24001

testing

this is just a test or practice runto see if i can do this, i hope it goes thru to you ok, if k not i'll have to run it over again, let's keep our fingers crossed, bye! 1

ACM 19-SEP-74 15:56 24002

here i go again!

(J24002) 19-SEP-74 15:56;;;; Title: Author(s): ADRIAN C. MCGINNIS/ACM; Distribution: /ACM([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: ACM;

ACM 19-SEP-74 15:56 24002

here i go again!

one more time at this and if it does not work, I'M GOING TO QUIT RIGHT NOW! 1

ACM 19-SEP-74 16:01 24003

testing 1-2-3

(J24003) 19-SEP-74 16:01;;;; Title: Author(s): ADRIAN C. MCGINNIS/ACM; Distribution: /JAKE([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: ACM;

ACM 19-SEP-74 16:01 24003

testing 1-2-3

well, here goes nothiing, let's keep our fingers crossed to see if this goes thru----hopefully in the very ner future, bye! 1

JEW 19-SEP-74 16:15 24004

Proposed Changes/Additions to L10 Signalling Primitives

(J24004) 19-SEP-74 16:15;;;; Title: Author(s): James E. (Jim) White/JEW; Distribution: /NPG([ACTION]) ; Sub-Collections: SRI-ARC NPG; Clerk: JEW; Origin: < WHITE, SIGPROP.NLS;11, >, 19-SEP-74 16:10 JEW ;;;; ####;

JEW 19-SEP-74 16:15 24004

Proposed Changes/Additions to L10 Signalling Primitives

For your consideration, and for subsequent discussion,

Proposed Changes/Additions to L10 Signalling Primitives

Introduction 1

The following are proposed revisions of and additions to the L10 signal machinery, to be made in connection with the development of L10i1. 1a

Proposed Changes/Additions to L10 Signalling Primitives

Exiting from a procedure 2

RETURNING NORMALLY 2a

"RETURN" ['(res $(', res) ')] "//" [outc] ; 2a1

This is the familiar RETURN primitive, and RES are, of course, the results of the procedure. OUTC is an expression whose value (a boolean) signifies whether the procedure succeeded (TRUE, the default) or failed (FALSE). A RETURN is irrevocable, and the issuing procedure instance is destroyed as a result of it. 2a2

ABORTING 2b

"ABORT" '(error [', errmsg] ') 2b1

This is the equivalent of the current L10 SIGNAL primitive. ERROR is an expression whose value (a non-zero integer) identifies the cause of the abort to the calling procedure. ERRMSG is an expression whose value (the address of a string, defaulting to zero) identifies the cause of the abort to the human user (assuming the message reaches him). Like a RETURN, an ABORT is irrevokable, and the issuing procedure instance is destroyed as a result of it. 2b2

REPORTING AN EVENT FOR INFORMATION ONLY 2c

"NOTE" '(event [', evntparm] ') 2c1

This is a new primitive. EVENT is an expression whose value (an integer) identifies an event which has occurred and of which one or more procedures along the control thread may wish to take note. EVNTPARM is an expression whose value (defaulting to the boolean FALSE) describes the event, and whose interpretation is EVENT-dependent. 2c2

Unlike RETURN and ABORT, NOTE does not destroy the issuing procedure instance. The run-time environment gives each catchphrase (explained later) along the thread of control, beginning with those of the current procedure, the opportunity to act upon the event. It then returns control to the issuing procedure. 2c3

REQUESTING HELP 2d

[help '_] "HELP" '(problem ['', pblmparm] ') 2d1

This is a new primitive. PROBLEM is an expression whose value (an integer) identifies a problem which has been encountered, and with which the issuing procedure requires help from one of the procedures along the control thread, in order to continue. PBLMPARM is an expression whose value (defaulting to the boolean FALSE) describes the problem, and whose interpretation is PROBLEM-dependent. 2d2

Like NOTE, HELP does not destroy the issuing procedure instance. The run-time environment gives each catchphrase along the thread of control, beginning with those of the current procedure, the opportunity to provide the requested help, until either help is provided or the last procedure indicates that it cannot provide it. The run-time environment then returns control to the issuing procedure, indicating, via the outcome (as in RETURN) of the HELP "procedure", whether or not help has been provided. 2d3

Handling exiting procedures 3

DEFINING A CATCHPHRASE 3a

['(name ')] "EVER" block ; 3a1

This statement defines a block of code BLOCK called a "catchphrase" (with optional name NAME) to be given control whenever a procedure called by the current procedure gives up control (provided that the catchphrase is both enabled and still defined at the time). 3a2

The run-time environment mantains a catchphrase stack onto which a frame is pushed whenever an EVER statement is executed. The stack thus contains zero or more frames for each procedure along the control thread, including the current procedure. When a signal is generated, the run-time environment passes control to the topmost catchphrase in the stack. If it UNWINDs (as explained later), control is passed to the next catchphrase in the stack, and so on up the thread of control. 3a3

Globals available upon entry to catchphrase 3a4

The following globals are set by the run-time environment and are available upon entry to every catchphrase: 3a4a

FAILURE - TRUE or FALSE, depending upon whether or not the signal resulted from a failure RETURN, 3a4a1
ERROR - the error code or FALSE, depending upon whether or not the signal resulted from an ABORT, 3a4a2
EVENT - the event code or FALSE, depending upon whether or not the signal resulted from a NOTE, 3a4a3
PROBLEM - the problem code or FALSE, depending upon whether or not the signal resulted from a HELP, 3a4a4
SIGNAL - the contents of FAILURE, ERROR, EVENT, or PROBLEM, whichever is not FALSE, 3a4a5
SIGPARM - the parameter passed via NOTE or HELP, or the address of the error message passed via ABORT, or FALSE, 3a4a6

Collectively, these globals make it possible for the catchphrase to do the following: 3a4b

1) Separate signal types via a CASE statement: 3a4b1

```
EVER CASE signal OF                                    3a4b1a
   = error: ...                                        3a4b1a1
   = event: ...                                        3a4b1a2
   ENDCASE;                                            3a4b1a3
```

2) Test for a particular class of a paticular type of signal with a simple IF statement: 3a4b2

```
EVER IF note = newfileloaded THEN                      3a4b2a
   BEGIN                                               3a4b2a1
   *message* _ "Loading file ", *[sigparm]*, ',;       3a4b2a2
   dismes (2, smessage);                               3a4b2a3
   END;                                                3a4b2a4
```

Exiting a catchphrase 3a5

The BLOCK of code which constitutes the catchphrase may be any single statement or BEGIN-END block. In particular, it may be or contain one of the following statements: 3a5a

To resume the originating procedure
(after a NOTE or HELP only) 3a5a1

"RESUME" [parm] ; 3a5a1a

This statement resumes execution of the originating procedure at the instruction immediately following the NOTE or HELP. RESUME-ing after a HELP implies that the requested help, described by the optional parameter PARM (an expression that defaults to a boolean with value FALSE), has been provided. 3a5a1b

To resume the current procedure
(after an ABORT or failure RETURN only) 3a5a2

"IGNORE" ; 3a5a2a

This statement resumes execution of the current procedure at the instruction immediately following the procedure call. The values of the globals ERROR and FAILURE are left unchanged, and hence the OUTCOME construct (explained later) can be used in-line to determine that the procedure did not succeed. 3a5a2b

To proceed up the control thread
(after a NOTE, HELP, ABORT, or failure RETURN) 3a5a3

"UNWIND" ; 3a5a3a

This statement causes the signal to continue up the thread of control. If the last procedure issues an UNWIND in response to a NOTE or HELP, the run-time environment will resume the issuing procedure, in the latter case with an indication that the requested help could not be provided by any procedure along the thread of control. 3a5a3b

To proceed up the control thread in a different manner
(after an ABORT or failure RETURN) 3a5a4

By means of the RETURN or ABORT statement, 3a5a4a

The compiler effectively (but not necessarily physically) brackets each catchphrase with the following statements: 3a5b

```
EVER IF failure OR error THEN IGNORE;                    3a5b1
   ...catchphrase...                                     3a5b1a
DROP;                                                    3a5b2
IF failure THEN RETURN // FALSE ELSE UNWIND;             3a5b3
```

where it's understood that the values of FAILURE and ERROR used in the computation are those which existed upon entry to the catchphrase. 3a5c

A catchphrase alternative 3a6

It is often useful to be able to handle failure RETURNs and ABORTs in-line, rather than by means of a catchphrase. We therefore let the construct: 3a6a

```
"OUTCOME" '( block ')                                    3a6a1
```

denote a boolean whose value, computed after BLOCK is executed, is given by: 3a6b

```
failure OR error                                         3a6b1
```

DELETING A CATCHPHRASE 3b

```
"DROP" [name/"ALL"] ;                                    3b1
```

This statement deletes one or more prevously-defined catchphrases -- either the most recently defined catchphrase (if no argument is specified), a particular one (if NAME is specified), or all catchphrases defined by the current procedure. DROP is a NOP when applied to a disabled catchphrase (which is explained below). 3b2

Bracketing a block of code with complimentary EVER and DROP statements gives the block its own signal machinery, independent of and on top of that placed in force by the already-executed code within the current procedure; the block is treated (as far as signals are concerned) as a separate procedure. 3b3

DEFINING A CATCHPHRASE FOR A SINGLE PROCEDURE CALL 3c

It is sometimes necessary to define a catchphrase whose lifetime is only a single procedure call. The compiler, therefore, as a convenience to the programmer, treats a procedure call like the following: 3c1

```
[res '_] proc '( [arglist] [': reslist] ["//" block] ') ;          3c1a
```

as shorthand for: 3c2

```
"EVER" block ;                                                     3c2a
[res '_] proc '( [arglist] [': reslist] ') ;                       3c2b
"DROP" ;                                                           3c2c
```

With this notation, the programmer can conveniently specify special handling instructions for a single procedure call, as in the example below: 3c3

```
IF NOT OUTCOME (delfil (jfn // IF failure OR error THEN            3c3a
IGNORE)) THEN
   dismes (2, $"File cannot be deleted.");                         3c3ai
```

INHIBITING A CATCHPHRASE 3d

```
("ENABLE" / "DISABLE") [name/"ALL"] ;                              3d1
```

This statement disables (or re-enables) one or more prevously-defined catchphrases -- either the most recently defined catchphrase (if no argument is specified), a particular one (if NAME is specified), or all catchphrases defined by the current procedure. 3d2

More specifically, the DISABLE statement increments by one a tally associated with the specified catchphrase(s), and the ENABLE statement decrements it by one. The catchphrase is considered disabled whenever its tally (initialized to zero when the catchphrase was defined) is non-zero. 3d3

Bracketing a block of code with complimentary DISABLE and ENABLE statements protects the rest of the procedure from changes made to the specified signal machinery from within the block. 3d4

ACM 19-SEP-74 16:45 24005

come to amelia's place

(J24005) 19-SEP-74 16:45;;;; Title: Author(s): ADRIAN C. MCGINNIS/ACM; Distribution: /ACM([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: ACM;

ACM 19-SEP-74 16:45 24005

come to amelia's place

the reception's greast. If you are a tech writer or doctor, lactch on to her, eight months back she merged with data products corporation, she is turing ou some of the greatest advanced equipment in personel communications. 1

KIRK 19-SEP-74 21:53 24006

Output Journal bug

(J24006) 19-SEP-74 21:53;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /BUGS([ACTION]) ; Sub-Collections: SRI-ARC BUGS;
Clerk: KIRK;

KIRK 19-SEP-74 21:53 24006

Output journal bug

Control-O in output journal quickprint says "Error" and seems to leave <PRINTER>(IDENT)FILENAME.1;1 open so that a second attempt at quickprint results in the message "<PRINTER>(IDENT)FILENAME.1;1 is busy"

1

KIRK 19-SEP-74 22:11 24007

Bugs should go directly to mods and by-pass fdbk

(J24007) 19-SEP-74 22:11;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /NPG([INFO-ONLY]) RWW([INFO-ONLY]) SRL([
INFO-ONLY]) DVN([INFO-ONLY]) ; Sub-Collections: SRI-ARC NPG;
Clerk: KIRK;

KIRK 19-SEP-74 22:11 24007

Bugs should go directly to mods and by-pass fdbk

It would be very easy to create an ident MODS and have items sent to the group ident BUGS automatically go to the MODS file. This way suggestions can be "automatically" classified. Also, it could eliminate a considerable delay since we do not have the man-power to update fdbk daily. Currently, it can be weeks before a bug even gets brought to the attention of a programmer. Arrangements would have to be made for items sent to MODS which are not really bugs or which will not be fixed. These will have to be moved to the appropriate place in FDBK but this should require considerably less effort than the current set-up. If I hear no objections, I will create the IDENT MODS and place it in the group ident BUGS. This still leaves the idents NP and FDBK for other-than-bugs feedback. 1

KIRK 19-SEP-74 23:04 24008

Bug with viewspecs in jump to name command

(J24008) 19-SEP-74 23:04;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /BUGS([ACTION]) ; Sub-Collections: SRI-ARC BUGS;
Clerk: KIRK;

KIRK 19-SEP-74 23:04 24008

Bug with viewspecs in jump to name command

With split screens, Jump to name allows you to bug any word in any window and then searches for the name in the window where the OK is hit (which is as it should be except maybe when you are tryin to load the file into an empty window that way). The bug occurs when you happen to bug the word in a different window from the one containing the file you wish to search. It does the search properly, but applies the viewspecs from the window containing the bugged word changing the viewspecs in the window containing the file where the search took place and was displayed.

BOOGA

(J24009) 20-SEP-74 09:08;;;; Title: Author(s): ADRIAN C. MCGINNIS/ACM; Distribution: /SLJ([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: ACM;

ACM 20-SEP-74 09:08 24009

BOOGA

after trying miranda, sandy, sandra,johnson, smg, spg, smj, sass, SLA, J2088, HELP, nixon, -----i finally got thru to you, nothing much to say, just keep on trucking! addios amigo. 1

RWW 20-SEP-74 09:11 24010

My L 10/11 Nightmare

(J24010) 20-SEP-74 09:11;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /DIA([ACTION]) NPG([ACTION]) DCE([ACTION]) ; Sub-Collections: SRI-ARC NPG; Clerk: RWW;

RWW 20-SEP-74 09:11 24010

My L 10/11 Nightmare

In thinking about my night mare of month after month going by of Don's working on L 10/11 because of all the new features that everybody might legitimatly want. The following rule of thumb seemed to pop up as usefjl. The critical resource is Don's time relati;e to everyone elses as a group. There are no brownie points to ARC for ongoing L 10 development. There are lots of brownie points for getting a working frontend to NSW on time with lots of well designed and debugged features, more sexy goodies in NLS needed by the world etc. These are all things tht Don could helP with if he weren't doing L 10/11. Basically Don and the NPG should intuitively feel that any new language feature should improve our productivity, maintainability, peace of mind or other significant aspect of our working lives quite significantly relative to Don's efforts, say an order of magnitude greater than effort required to put in would be right level. I really would like to see the L 10/11 effort finished by the middle of Novembe at the latest. 1

JAKE 20-SEP-74 09:35 24011

Bright Boy Brings Old Bag Bliss

(J24011) 20-SEP-74 09:35;;;; Title: Author(s): Elizabeth J. (Jake) Feinler/JAKE; Distribution: /ACM([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JAKE;

JAKE 20-SEP-74 09:35 24011

Bright Boy Brings Old Bag Bliss

You're doing great - your messages are coming through!

1

ACM 20-SEP-74 09:48 24012

sample

(J24012) 20-SEP-74 09:48;;;; Title: Author(s): ADRIAN C. MCGINNIS/ACM; Distribution: /ACM([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: ACM; Origin: < ADRIAN, JM,NLS;1, >, 20-SEP-74 09:24 ACM ;;;;####;

sample

this is a sample journal message. 1

it is double your trouble to chew tobaacco. 2

more whipping to a horse is like cotton picking in 1837. 3

sshhh! a growing number of men and women know they are being sexually cheated, or cheating themselves. 4

history is more than the sum of human acts. 5

the eyes of hunger cannot see beyond the next bit of food. 6

gin not only makes a better dry martini, it makes a better everything. 7

sample

(J24013) 20-SEP-74 09:51;;;; Title: Author(s): ADRIAN C. MCGINNIS/ACM; Distribution: /ACM([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: ACM; Origin: < ADRIAN, JM,NLS;1, >, 20-SEP-74 09:24 ACM ;;;;####;

sample

this is a sample journal message. 1

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NDM 20-SEP-74 12:04 24015

Proposal for Syntax of COPY SEQUENTIAL Command

(J24015) 20-SEP-74 12:04;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /KIRK([ACTION]) CHI([INFO-ONLY]) JCN([INFO-ONLY
]) RWW([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: NDM;
Origin: < MEYER, COPYSEQ.NLS;1, >, 20-SEP-74 11:59 NDM ;;;;####;

NDM 20-SEP-74 12:04 24015

Proposal for syntax of COPY SEQUENTIAL Command

Hopefully more descriptive, doesn't over emphasize old algorithm, don't have to know to terminate levadj field with space to get the options (as currently).

Proposal for Syntax of COPY SEQUENTIAL Command

```
"COPY" "SEQUENTIAL"                                                    1
   <"file from"> source _ LSEL(#"OLDFILELINK")                         1a
   <" to follow"> dest _ DSEL(#"STATEMENT")                            1b
   level _ LEVADJ                                                      1c
   <"using">                                                           1d
      ( "ONE" <"<CR> to end stmnt">                                    1d1
      / "TWO" <"<CR> to end stmnt"> ["JUSTIFIED"]                      1d2
      / "ASSEMBLER" )                                                  1d3
```

JML 20-SEP-74 13:23 24016

ARC Personnel Data now Lives in a New Place

(J24016) 20-SEP-74 13:23;;;; Title: Author(s): Jeanne M. Leavitt/JML; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JML;

JML 20-SEP-74 13:23 24016

ARC Personnel Data now Lives in a New Place

I have combined the two files in my directory ARC and JARCM into one. You can link to leavitt,arc,orientation which briefly describes the new setup; to leavitt,arc,home for home-type information, and to leavitt,arc,work for work-type information. Please continue to send me update information; I love it. 1

JML 20-SEP-74 16:58 24017

You are Effective Enough by Now

(J24017) 20-SEP-74 16:58;;;; Title: Author(s): Jeanne M. Leavitt/JML; Sub-Collections: SRI-ARC; Clerk: SLJ;

JML 20-SEP-74 16:58 24017

You are Effective Enough by Now

Ann Weinberg would like to read The Effective Executive by Drucker.
Could one of you who have an ARC copy bring it in to her or to me?
Thanks Awfully.

1

NDM 21-SEP-74 13:39 24020

DDSI Run: Primer, Format library, (office-1,day,paper,3),
(office-1,placko,collins1,)

(J24020) 21-SEP-74 13:39;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /DVN([INFO-ONLY]) DDSI([INFO-ONLY]) ;
Sub-Collections: SRI-ARC DDSI; Clerk: NDM; Origin: < COM,
TEMP,NLS;1, >, 21-SEP-74 13:37 NDM ;;;;####;

NDM 21-SEP-74 13:39 24020

DDSI Run: Primer, Format library, (office=1,day,paper,3),
(office=1,placko,collins1,)

I have sent the following files to DDSI today. The tape used had no number, and was the last of our tapes. I will ask DDSI to assign it a number, and to return all tapes to ISI. 1

<COM> 21-SEP-74 13:34:52 2

PGS 2a

(LHD)PAPER.COM;1 21 3

(NDM)FIXEDPRIM.COM;1 32 4

COLLINS1.COM;1 2 5

FORMAT0.COM;1 3 6

FORMAT1.COM;1 3 7

FORMAT10.COM;1 3 8

FORMAT11.COM;1 3 9

FORMAT2.COM;1 4 10

FORMAT3.COM;1 3 11

FORMAT4.COM;1 3 12

FORMAT5.COM;1 3 13

FORMAT6.COM;1 3 14

FORMAT7.COM;1 4 15

FORMAT8.COM;1 4 16

FORMAT9.COM;1 3 17

18

KIRK 21-SEP-74 16:11 24021

bug with displaying spaces in the seventy-second character position when invisibles are turned on.

(J24021) 21-SEP-74 16:11;;;; Title: Author(s): Kirk E. Kelley/KIRK; Distribution: /BUGS([ACTION]) ; Sub-Collections: SRI-ARC BUGS; Clerk: KIRK;

bug with displaying spaces in the seventy-second character position
when invisibles are turned on.

no space is displayed. 1

KIRK 21-SEP-74 16:14 24022

followup on space display bug

(J24022) 21-SEP-74 16:14;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /BUGS([ACTION]) ; Sub-Collections: SRI-ARC BUGS;
Clerk: KIRK;

KIRK 21-SEP-74 16:14 24022

followup on space display bug

The problem is when bugging that space, the bugmark does not appear. 1

KIRK 21-SEP-74 17:15 24023

Two new pieces of documenation

(J24023) 21-SEP-74 17:15;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /POOH([ACTION]) DVN([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: KIRK;

KIRK 21-SEP-74 17:15 24023

Two new pieces of documenation

I am working on two new pieces of documentation which you should add to the list of available documentation for NLS-8. They are: "Basic information necessary to teach yourself how to use DNLS" and "Basic information necessary to teach yourself how to use TNLS". 1

KIRK 21-SEP-74 22:03 24024

set tty command prompts T/A:

(J24024) 21-SEP-74 22:03;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /BUGS([ACTION]) ; Sub-Collections: SRI-ARC BUGS;
Clerk: KIRK;

KIRK 21-SEP-74 22:03 24024

set tty command prompts T/A:

needs to be changed,

1

KIRK 21-SEP-74 23:10 24025

Vertical Split in the bottom of a Horizontal bug

(J24025) 21-SEP-74 23:10;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /BUGS([ACTION]) ; Sub-Collections: SRI-ARC BUGS;
Clerk: KIRK;

KIRK 21-SEP-74 23:10 24025

Vertical Split in the bottom of a Horizontal bug

Deleting the vertical split causes a line to be over-writen and can get you into a place where the whole bottom window is overwrittn with the top window. Action in bottom window works except for Deleting or Moving Edges....

1

KIRK 22-SEP-74 00:34 24026

Default name delemiters NULL NULL?

(J24026) 22-SEP-74 00:34;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /DSM([ACTION]) CHI([ACTION]) FDBK([INFO-ONLY])
JHB([INFO-ONLY]) JMB([INFO-ONLY]) ; Sub-Collections: SRI-ARC;
Clerk: KIRK;

KIRK 22-SEP-74 00:34 24026

Default name delemiters NULL NULL?

Default name delimiters were to be changed to NULL NULL. Has this decision been changed unknown to me or was it just overlooked? 1

KIRK 22-SEP-74 01:27 24027

Questionmark puts angle brackets around funny things.

(J24027) 22-SEP-74 01:27;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /BUGS([ACTION]) KEV([ACTION]) JMB([INFO-ONLY])
; Sub-Collections: SRI-ARC BUGS; Clerk: KIRK;

KIRK 22-SEP-74 01:27 24027

Questionmark puts angle brackets around funny things.

Somtimes questionmark puts angle brackets around things that should not have them (for example, level adjust in the Move command questionmark contains <LEVEL-ADJUST>, <[VIEWSPECS]> ... These should be changed to correspond to the rest of the questionmark messages and to Help conventions, i.e, without the angle brackets and OPTION instead of square brackets.

1

JCN 22-SEP-74 09:10 24029

To EJK on Your early Use of Preview

(J24029) 22-SEP-74 09:10;;;; Title: Author(s): James C. Norton/JCN;
Distribution: /EJK([INFO-ONLY]) JHB([INFO-ONLY]) DLS([
INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JCN;

JCN 22-SEP-74 09:10 24029

To EJK on Your early Use of Preview

Ed: Thanks for your comments on your early exposure to NLS-8 Preview. I'm not sure you got the message that we broubht it up at Office-1 JUST for the architects use to get them started with the caution that there are still bugs in the version they got. When they were here, we gave them some of the first documentaton we have ready..there's more, including a primer, que card, command list and a set of teaching stuff that wil help. The version of preview at office-1 is NOT even the final one. Duane encouraged you to try it I guess since you are into training...GOOD but without even the documentation we have ready now, I can see it's a strain. I think the users will have a much better crack at it with the documentation we are preparing and the training we plan. On the other hand, there are many reactions we expect on details of the design that will help us as it evolves...and in your message there ma well be some hints we can use..BUT please note: You are and early bird not introduced as we intend. Like the <>create...the documentation will tell users. I would certainly agree it's cryptic without a clue. Don't feel my note here is defensive...really not..just wanted to be sure the situation about your early use is clear..at least from my standpoint. Duane and Jim Bair and you and I will have to discuss the best course to help RADC users at cutover....which will be sometiime after October 1..Til later...good luck Jim

1

JCN 1-OCT-74 02:38 24031

The SRI-ARC Workshop Utility Service: What and Why

Here's a document that may be useful in our marketing effort, I'd be interested in comments from any of you, I think we should have a COM version, perhaps formatted differently, The proposals for second yea service may have some of the ideas incorporated herein, but will reflect the second-year aspect of the service, how to buy, etc, Jim

TABLE OF CONTENTS STATEMENT

I INTRODUCTION

2

The Augmentation Research Center (ARC) at Stanford Research Institute (SRI) has developed, over a period of years under government sponsorship, a general-purpose interactive augmentation system centering about what we now call an "Augmented Knowledge Workshop," abbreviated below as "Workshop." The goal of ARC's work has been to evolve a prototype Workshop system that will significantly improve the performance of individuals and teams engaged in knowledge-work activities, where the Workshop "system" involves daily use of coordinated tools, procedures, methodologies, and languages. 2a

For further background, see [9], [15], and other references in Section VIII. 2b

II THE ARC "COMMUNITY PLAN"

3

ARC is a one-organization community of researchers and system developers, supported by several different contracts. The research and development activities of ARC are aimed at exploring the possibilities for augmenting individuals and groups in the performance of knowledge work with the help of computer aids. These aids range from offline batch to online real-time in nature. Exploratory development and operation of augmentation systems have been our substantive work. 3a

ARC's Initial Research and Development Strategy 3b

The researchers within ARC do as much of their work as possible using the range of capabilities offered. Thus they have served not only as researchers, but also as the subjects for the analysis and evaluation of the augmentation systems that they have been developing. Consequently, an important aspect of the augmentation work done within ARC is that the techniques being explored are implemented, studied, and evaluated with the advantage of intensive everyday use. We call this research and development strategy "bootstrapping." 3b1

In our experience, complex man-machine systems can evolve only in a pragmatic mode, within real-work environments where there is an appropriate commitment to conscious, controlled, and exploratory evolution. For over ten years the evolution of our "augmented knowledge Workshop" system has developed within such an environment. 3b2

The Next Stage in ARC's Research and Development Strategy 3c

The next stage application is now beginning. We are involving a wider group of people so that we can begin to transfer the fruits of our past work to others, and so that we can obtain feedback needed for further evolution from a wider spectrum of applications than is possible in our Center alone. We are providing Workshop support service to selected groups who are willing to take extra trouble to be exploratory, but who: 3c1

1) are not necessarily oriented to being Workshop system developers (they have their own work to do), 3c1a

2) can see enough benefit from the system's application and from the experience of trying it so that they can justify the problems they will encounter as "pioneering" users, and 3c1b

3) can accept our assurance that reliability, system stability, and technical application help will meet their conditions for risk and cost. 3c1c

Establishing a Workshop Utility and providing the type of service work proposed herein are part of ARC's long-term commitment to pursue the continued development of augmented knowledge workshops in a pragmatic, evolutionary manner. Our last few years of work have concentrated on the means for delivering support to a distributed community, for providing teleconferencing and other basic processes of collaborative dialogue, etc.--consciously aiming toward having experience and capabilities especially applicable to support remote and distributed groups of exploratory users for this next stage of wider-application bootstrapping. 3d

III ELEMENTS OF THE WORKSHOP UTILITY SERVICE

4

The service includes: 4a

Providing training as appropriate in the use of the ARC online system (NLS): Display NLS (DNLS), Typewriter NLS (TNLS), and Deferred Execution (DEX) software subsystems. 4a1

Providing technical assistance to subscribing-organizations' "Workshop Architects" in the formulation, development, and implementation of augmented knowledge work procedures within their selected offices. 4a2

This technical assistance includes help in the development of NLS use strategies suitable to each organization's environment, procedures within each organization for implementing these strategies, and possible special-application NLS extensions (or simplifications) to handle the mechanics of particular user needs and methodologies. 4a3

The service also includes (and is based upon) the availability 16 hours a day, 6 days a week of Workshop Utility computer service via the ARPANET from a PDP 10 TENEX system operated by a commercial facility management company, Tymshare, Inc, based in Cupertino, California. We plan to extend the hours of system availability durng the second year of the service. 4b

IV DISCUSSION OF THE WORKSHOP UTILITY SERVICE 5

Objective 5a

The focus of our efforts is on working with subscribing organizations' personnel in the mutual development and use of procedures, methodology, software features, and other online tools; and on the training of users that will allow their exploratory use of augmented workshop systems. This objective has the following key components: 5a1

1) Building a user group (a community of individuals and organizations) whose members will find real value in applying the service, and whose participation will contribute to their organizations' goals both directly (by making the users' own activities more effective) and indirectly (by accelerating the maturation and acceptance of augmented knowledge Workshop techniques). 5a1a

2) Developing ARC's know-how and capability for integrating innovation with new-development transfer. 5a1b

Scope of the Workshop Utility Service 5b

We consider it now appropriate for the technology, as currently developed, to be used by people from a number of organizations in their day to day work over an extended period of time. 5b1

The types of Workshop services that we are beginning to support at varying levels of capability are described in [15] under the headings: 5b2

Collaborative Dialogue 5b2a
Document Development, Production, And Control 5b2b
Research Intelligence 5b2c
Community Handbook Development 5b2d
Computer-Based Instruction 5b2e
Meetings And Conferences 5b2f
Community Management And Organization 5b2g
Special Knowledge Work By Individuals And Teams 5b2h

Our present capabilities in the above areas are briefly indicated in [9] and [15]. For each area, there is an immediate applicability of the basic NLS provisions for composing, modifying, studying, publishing, collaborating, etc., and we have additional special provisions specifically supporting almost every area. We are dedicated to

continuing the evolution of each area in a persistent, year-after-year strategy where the profile of evolutionary effort expended at any given time over the array of application specialties is to be responsive to the profile of application needs and values of the user community. 5b3

Technology Transfer 5b4

We are beginning to transfer technology from our local group of experienced users to a wider group of inexperienced, geographically separate users. This technology consists of online software capabilities, a coordinated repertoire of online-assistance tools, associated concept and language additions dealing with the tools and with the information organization and task processes associated with their use, new aspects to intragroup organization and working methodology. Training a group in use of this new technology is necessary to the transfer, and to help others learn to train people in the new technology requires a transfer of the additional technology used to support the training. 5b4a

The process of technology transfer is not simple, judged by our and others' experiences. We base our "Community Plan" strategy upon our understanding that there are at least two main requirements for a successful transfer process that proceeds at a reasonable speed and cost: 5b4b

1) The group originating the technology and having the experience, enthusiasm, and initial commitment to its value must follow through with training and application support of the end user groups until a critical mass of equivalently experienced and enthusiastic end users has developed. 5b4b1

2) The end user groups must each have at least one properly placed, active supporter of the transfer process. We have been using the term "local Workshop Architect" for this role. 5b4b2

We give particular emphasis to this second requirement--that each coherent group planning to integrate the proposed services into its working life should have at least one member serving as a "Workshop Architect." The function of this person is to be familiar in detail with both the needs of his or her organization and the capabilities we are proposing. The Architect knowing his group's needs and our capabilities, will help introduce a Workshop system into his organization (in

appropriate evolutionary stages), meeting these needs, ARC personnel work closely with the Workshop Architect--in training him, in initially giving him significant help in his role, and in a continuing exchange of technical information. 5b4c

The labor-funding levels in our service proposals to clients are based on the assumption that when a client group is allocated a portion of the Utility Online Services, a corresponding allocation of direct technical support will go primarily to its Workshop Architect. Most of the responsibility for integrating the Workshop service into his organization or community is handled by this person. 5b4ci

For any group of users we expect evolutionary growth of their Workshop service application, in both quantity and range. This growth will take guidance and support of the sort that in the commercial computer world would be offered by the applications specialists and "systems engineers." These people work with the end user organizations in integrating the manufacturer's or service company's technology into its operations. To follow through with our Community Plan, it is essential that ARC offer a similar service. This will be one of our biggest challenges in further developing the Workshop Utility Service. 5b4d

Services Offered 5b5

The Workshop Utility service consists of two components: computer support and people support. 5b5a

Computer Services 5b5b

The Underlying Computer Service Support 5b5b1

We offer a Workshop Utility version of ARC's online system (NLS), serviced over the ARPANET (or by direct telephone lines for non-ARPANET users), at least 16 hours a day, six days a week. NLS features are described in the documents listed in Section VIII. 5b5b1a

This service is provided by a computer system operated and managed by a commercial timesharing utility company (Tymshare, Inc.), rather than from a system directly operated by ARC. There are two important reasons for this arrangement: 5b5b1b

1) A commercial firm has the experience, facilities, leverage on vendors, and redundant equipment that make possible more reliable service than can be produced in our research and development environment. 5b5b1b1

2) It will be possible to expand the service in a more flexible manner in increments of whole or partial machines as usage grows. 5b5b1b2

Service Partitioning 5b5b2

We are currently using a computer-based "group allocation" scheme for partitioning online access and service between groups of users. This guarantees each group its fair share of access to system resources while preserving both adequate responsiveness and independence for each group to plan its own usage loading. 5b5b2a

File Privacy 5b5b3

The Workshop Utility provides (via the ARPANET) the necessary standard TENEX software and facility operating procedures to ensure reasonable privacy of file access. NLS additionally provides to users the ability to specify which other users may have

access to any specific file. However, the visibility and availability of planning information and other recorded dialogue in ARC's currently open Journal System provides some of the more significant potential of our Workshop. 5b5b3a

ARC online-service personnel will access clients' user files at a client's request only, as required from an operational standpoint; however, other users of the Workshop Utility Service are denied read, write and list access to a client's files, unless he specifically releases files for general use. 5b5b3b

People Support Services 5b5c

We are still learning about the requirements for people support services (in amount and nature) required for a successful Workshop Utility service, particularly in the direct client support category. 5b5c1

Direct Client Support Services 5b5c2

The clients' users must be trained to varying levels of competence, depending upon the nature of their jobs and the tasks they perform. Some new procedures and methods are being developed and learned to allow effective use of the system in users' working environments. Specifying these procedures requires ARC help in analyzing each group's needs and present operations. 5b5c2a

Therefore the following types of services are required: 5b5c2b

Assistance to each client in training their initial users to a beginning level of proficiency. 5b5c2b1

Assistance in training Utility clients to make special use of the system for applications that are peculiar to their user environments. 5b5c2b2

Assistance to Utility clients in developing related documentation, procedures, records, and methods as needed locally to support their special use of the system. 5b5c2b3

Help for the above areas may come in several forms: 5b5c2c

Sessions at SRI for training and application-system design. 5b5c2c1

Brief residency of SRI personnel at client sites to offer analytic or design help and training. 5b5c2c2

"Circuit riders" who periodically visit client sites to discuss problems, receive feedback on how to improve the service, and offer training or analytic help. 5b5c2c3

Indirect Client Support Services 5b5c3

The entire operation, including the interface between the Utility and the clients, requires competent administration. 5b5c3a

Documentation of the basic user features of the system and of their application techniques needs to be complete and must have various special versions tailored to particular types of users. 5b5c3b

The version of NLS that runs on the Utility must have effective maintenance and quality assurance. A systematic means of integrating new and useful features from the development version of the system into the version running on the Utility is being provided. 5b5c3c

Clerical support of various types is needed. 5b5c3d

V SUBSCRIBING ORGANIZATIONS 6

Present Subscribers

[Funded "slots": each about $40k/year level] 6a

RADC slots: 5 Rome Air Development Center (Air Force) 6b

Over 30 users at RADC concentrating on management system use, software engineering, and document production with the goal of matching the capabilities of NLS and its related methodologies to Air Force "knowledge-worker" needs. 6b1

Bell Canada 1 Business Planning Group 6c

About 10 users at Bell concentrating on online communications and document production with the goal of gaining first-hand experience with these new techniques and assessing the possibilities for and impacts on communications services that may be provided in the future. 6c1

ARPA 5 General ARPA use and National Software Works 6d

Many ARPA users use USC-ISI and BBN-TENEX computer systems for online message service (SNDMSG, READMAIL, TECO, and RD). Over 50 directories have been established at OFFICE-1 for purposes of backup for those needs and as a step toward the gradual introduction of NLS into ARPA offices. Over 35 ARPA people have started using NLS in their work during the past few months. We expect an increasing use in program management activities by ARPA people, using techniques based on the capabilities in NLS and on specially developed methodology. In addition, the ARPA/Air Force National Software Works (NSW) program is just beginning and will grow into a significant effort with NLS Office-1 use as a core for many developmental and communication functions. 6d1

CBI 1 ARPA: Computer-Based Instruction Community 6e

ARPA-sponsored research contractors in the CBI community are beginning to use NLS as the core service in the design of their community's online information needs. 6e1

Energy 2 ARPA: SRI Energy Project 6f

The ARPA/SRI Defense Energy Information System (DEIS) design effort has been using NLS for communication and general file handling. 6f1

NIC 1 ARPA: Network Information Center Users 6g

This is the set of ARPA Network Information Center (NIC) users who were previously been served through the SRI-ARC computer. Their specialized online NIC service is now being provided from OFFICE-1 (over 40 user sites). The data base is being produced and accessed through NLS. 6g1

Seismic 2 ARPA: Seismic Data Mgt System Development 6h

The Seismic Data Management System Development (SDMS) effort, part of the ARPA VELA program, is beginning to use NLS as the basis of dialogue among participants in the VELA program and as the basis for a set of files that will aid users of the Seismic Data system to find information about resources that will enable them to use the data being collected by the system. 6h1

BRL 1 Ballistic Research Laboratories (Army) 6i

BRL is starting to explore application of Workshop technology to their operations. Document production, team dialogue, and personal information management are most likely initial areas of use. 6i1

Hudson 1 Hudson Institute (ARPA subcontract) 6j

Hudson is starting to explore application of Workshop technology to the online and hardcopy production of foreign country profile documents under an ARPA contract. NLS will also provide a communications link with their ARPA project monitors. 6j1

NSRDC 1 Naval Ship Research and Development Center 6k

NSRDC is starting to explore application of Workshop technology to their operations. Document production, team dialogue, and personal information management are most likely initial areas of use. 6k1

SRI 1 Stanford Research Institute 6l

SRI management is starting to explore application of Workshop technology to their own operations. Document production, distributed project team dialogue, and personal information management are most likely initial areas of use. 6l1

NSA 1 National Security Agency 6m

NSA is starting to explore application of Workshop technology to their operations related to the design and building of the NSAnet. Document production, distributed project team dialogue,

information center services and personal information management are most likely initial areas of use. 6mi

Other Prospective Applications: 6n

AFAA	Air Force Audit Agency	6o
CIN	Citizen Involvement NetWork, Inc.	6p
DDC	Defense Communications Agency	6q
DDC	Defense Documentation Center	6r
DL-OSH	Dept of Labor-Occup. Safety & Health NIOSH-related	6s
DOT	NE Corridor Study and other applications	6t
IBM	Active in Structured Programming - RADC related	6u
NBS	National Bureau of Standards - previous users	6v
NIOSH	Interest both at SRI and at NIOSH: documentation	6w
NSW contractors	Support after Jan 1/75 for several slots	6x
PTI	Public Technology, Inc.	6y
SRI-ARC	Development support after Jan 1/75 about 8 slots	6z
USGS	U.S. Geological Survey distributed researchers	6a@

VI ACCOUNTING AND BILLING

7

Basic Contractual Arrangements: 7a

Clients are charged on the basis of direct and indirect services rendered. 7a1

The basic charge is $40,000 per year for each single "user-job-slot" access to the Office-1 computer at all times the system is currently scheduled to be available for use (16 hours/day, 6 days/week). This also covers direct and indirect people services. 7a1a

Direct charges related to training and advising clients 7b

Training and consulting with clients and their users are performed from ARC's Menlo Park site, at the clients' sites, and at times from other locations (as ARC staff are travelling) using the ARPANET facilities. Such assistance is provided in planned day-long sessions, in relatively short, but fruitful terminal and/or telephone links, and in written dialogue transmitted through the computer system (SNDMSG and Journal). 7b1

As additional subscribers join the user community, costs related to these activities will be charged directly to each client contract. 7b2

Indirect (common) costs of facility and its operation 7c

Software maintenance and coordination with Tymshare software staff, administration and day-to-day operational supervision and analysis of the service, special documentation for users, and Journal and other file management are activities shared by all users. Due to the complex nature of this advanced technology, we have found that considerable effort is required to make the service run smoothly, although the effort required is decreasing as better methodology is developed and as we grow more effective in these new roles. 7c1

Costs related to these indirect activities are being charged to a common account with each client contract being charged for its share on a "percentage of total client-user guaranteed access" basis. 7c2

Access guarantee, its nature and effect 7d

The Office-1 Workshop computer system guarantees users login access according to the proportion of overall funding their

organizations have provided. For instance the RADC allocation group is guaranteed 5 logged-in jobs all 16 hours each day. 7d1

In addition, to encourage more efficient use of overall system resources when other groups are not using their full allocations, additional RADC users (and other users) may login on an "off-quota" status. If users from the other groups subsequently login to fill their own allocations, the most recently logged in off-quota users are logged off by the system (one-by-one) after a warning message and time period for each. This arrangement appears to result in higher use of the total resources with an evening-out effect between client groups over periods of a week or more. 7d2

In addition, up to 2 users may at all times "elog" in for periods up to 7 minutes for quick message reading and sending sessions. This is becoming important to users who are relying more and more heavily upon the system for their daily work. 7d3

Another system feature is "autologout." Jobs that have no terminal input or system output in a 15 minute period are automatically logged off with adequate notification. This arrangement has worked to ensure that only active jobs are logged in, resulting in better utilization of the allocated job slots. 7d4

VII SUMMARY COMMENTS 8

ARPA and other government agencies have provided a considerable amount of funding for the development of the ARC Workshop technology during the past ten years. The Workshop Utility Service provides an effective medium for transfer of this technology to government, commercial, and educational organizations, thereby returning useful results from the investment. As the community of using organizations grows, this return will become increasingly more significant. It is ARC's goal that these effects will be widespread in our society, both through direct use of the Workshop Utility and from use of related systems incorporating some aspects of the technology being developed here. 8a

One of the most significant resources being developed by the user community is the common Journal dialogue data base. As this grows in size and interconnectedness, it will become a very rich collection of information, aiding continuing community members and providing more efficient introduction to the technology and other information on a wide range of subjects to new members. At present, there are over 11,000 Journal entries. It is the shared nature of this data base and the sharing of both system and people resources that will accelerate the introduction of these techniques. As the community grows in size, we must find new, appropriate ways for handling shared costs and other business matters. 8b

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15 ARC 14724, D. C. Engelbart, R. W. Watson, J. C. Norton, "The Augmented Knowledge Workshop," AFIPS Proceedings National Computer Conference, June 1973.

16 ARC 14851, D. C. Engelbart, "Design Considerations for Knowledge Workshop Terminals," AFIPS Proceedings National Computer Conference, June 1973.

KIRK 22-SEP-74 18:02 24032

Typical oNLine Systems thinking

(J24032) 22-SEP-74 18:02;;;; Title: Author(s): Kirk E. Kelley/KIRK; Distribution: /NP([ACTION]) JMB([INFO-ONLY]) JHB([INFO-ONLY]) JCN([INFO-ONLY]) NPG([INFO-ONLY]) ; Sub-Collections: SRI-ARC NP NPG; Clerk: KIRK;

KIRK 22-SEP-74 18:02 24032

Typical oNLine Systems thinking

Why aren't Output Journal and Print Journal named Output Sendmail and Print Sendmail? 1

JMB 22-SEP-74 18:36 24033

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

(J24033) 22-SEP-74 18:36;;;; Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /RWW([ACTION]) JCN([ACTION]) JHB([ACTION])
DVN([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: JMB;
Origin: < BECK, LISTOLDNEW.NLS;67, >, 22-SEP-74 18:01 JMB ;;;;####;

JMB 22-SEP-74 18:36 24033

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

This list translates all OldNLS commands into NLS-8. Per RWW, it will be journalized to KWAC on Monday 23-SEP-74 if I don't hear any disapproval or suggested modifications.

JMB 22-SEP-74 18:36 24033

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

THE NLS-8 EQUIVALENTS OF THE NLS-7 (Old NLS) COMMANDS 1

NOTE: NLS-8 commands are in Base subsystem, or in all subsystems, unless otherwise labeled by [SUBSYSTEM].

1a

NLS-7	NLS-8	
--- NLS-7 ---	--- NLS-8 ---	2
append	Append Statement	3
break statement	Break Statement	4
copy character	Copy Character	5
copy word	Copy Word	6
copy number	Copy Number	7
copy visible	Copy Visible	8
copy invisible	Copy Invisible	9
copy link	Copy Link	10
copy text	Copy Text	11
copy statement	Copy Statement	12
copy branch	Copy Branch	13
copy plex	Copy Plex	14
copy group	Copy Group	15
delete character	Delete Character	16
delete word	Delete Word	17
delete number	Delete Number	18
delete visible	Delete Visible	19
delete invisible	Delete Invisible	20
delete link	Delete Link	21
delete text	Delete Text	22
delete statement	Delete Statement	23

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

execute identification status <TNLS>
---------- 38a

[Sendmail] Show Record (for Ident) 38a1

<All other Ident functions will not be part of default users' versions of NLS-8 (per CHI)> 38b

execute insert sequential ---------- Copy Sequential 39

execute journal ---------- Goto Sendmail 40

distribute document <TNLS> --------- [Sendmail] Forward 40a

hardcopy distribution <TNLS> ------- [Sendmail] Offline 40b

insert command form ---------- Insert Sendmail (form) 40c

reenter ---------- Quit To Sendmail 40d

<works only in same NLS session; journal work is not saved after Logout> 40d1

submit
---------- 40e

[Sendmail] Statement 40e1

[Sendmail] Branch 40e2

[Sendmail] Plex 40e3

[Sendmail] Group 40e4

[Sendmail] Message 40e5

[Sendmail] File 40e6

[Sendmail] Offline 40e7

authors ---------- [Sendmail] Authors 40f

clerk
---------- 40g

<NO EQUIVALENT--Clerk is automatically assumed to be logged-in user> 40g1

comments ---------- [Sendmail] Comments 40h

distribution	[Sendmail] Distribute	40i
go	[Sendmail] Send	40j
interrogate	[Sendmail] Interrogate	40k
keywords	[Sendmail] Keywords	40l
number	[Sendmail] Number	40m
obsoletes document(s)	[Sendmail] Obsoletes	40n
place link	[Sendmail] Insert Link	40o
process command form	[Sendmail] Process (sendmail form)	40p
status	[Sendmail] Show Status	40q
subcollection(s)	[Sendmail] Subcollections	40r
title	[Sendmail] Title	40s
updates document(s)	[Sendmail] Update	40t
execute logout	Logout	41
execute marker fix	Mark Character	42
execute marker list	Show Marker (list)	43
execute marker release	Delete Marker	44
execute marker release all	Delete All (markers)	45
execute name delimiter display	Show Name (delimiters)	46
execute name delimiter statement		47
Set Name (delimiters in) Statement		47a
Reset Name (delimiters in) Statement		47b
execute name delimiter branch		48
Set Name (delimiters in) Branch		48a
Reset Name (delimiters in) Branch		48b

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

goto programs deinstitute ---------- [Programs] Deinstitute 88

goto programs execute (program) ---------- [Programs] RUn Program 89

goto programs institute ---------- [Programs] Institute Program 90

goto programs l10 (user program compile) ---------- 91

[Programs] ComPile L10 91a

goto programs pop ---------- [Programs] Delete Last (program) 92

goto programs reset ---------- [Programs] Delete All (programs) 93

goto programs status ---------- [Programs] Show Status 94

goto query <TNLS> ---------- <NO EQUIVALENT> 95

goto sort group ---------- Sort Group 96

goto sort plex ---------- Sort Plex 97

goto sort branch ---------- Sort Branch 98

goto use (measurements) ---------- <NO EQUIVALENT> 99

insert character ---------- Insert Character 100

insert date ---------- Insert Date 101

insert date time ---------- Insert Time (and date) 102

insert word ---------- Insert Word 103

insert number ---------- Insert Number 104

insert visible ---------- Insert Visible 105

insert invisible ---------- Insert Invisible 106

insert link ---------- Insert Link 107

insert text ---------- Insert Text 108

insert statement ---------- Insert Statement 109

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

jump (to) ahead <DNLS> ---------- <NO EQUIVALENT> 110

jump (to) down <DNLS> ---------- Jump (to) DoWn 111

jump (to) end (of item) <DNLS> ------- Jump (to) End (of Branch) 112

jump (to) head <DNLS> ---------- Jump (to) Head 113

jump (to) item <DNLS> ---------- 114

Jump (to) Item 114a

<DNLS> Jump (to) Address (relative to) 114b

jump (to) file ahead <DNLS> ---------- <NO EQUIVALENT> 115

jump (to) file return <DNLS> --------- Jump (to) File Return 116

jump (to) link <DNLS ---------- Jump (to) Link 117

jump (to) origin <DNLS> ---------- Jump (to) Origin 118

jump (to) predecessor <DNLS> --------- Jump (to) Predecessor 119

jump (to) return <DNLS> ---------- Jump (to) Return 120

jump (to) successor <DNLS> ---------- Jump (to) Successor 121

jump (to) tail <DNLS> ---------- Jump (to) Tail 122

jump (to) up <DNLS> ---------- Jump (to) Up 123

load file ---------- Load File 124

move character ---------- Move Character 125

move word ---------- Move Word 126

move number ---------- Move Number 127

move visible ---------- Move Visible 128

move invisible ---------- Move Invisible 129

move link ---------- Move Link 130

move text ---------- Move Text 131

move statement ---------- Move Statement 132

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

move branch	Move Branch	133
move plex	Move Plex	134
move group	Move Group	135
null (file)	Create File	136
output assembler (file)	Output Assembler	137
output compiler	[Programs] Compile File	138
output device COM	Output Com	139
output device printer (file)	Output Printer	140
output device sequential (file)	Output Sequential File	141
output device teletype <TNLS>	Output Terminal	142
output device XCOM	Output Com Test	143
output file	Update File Compact	144
output quickprint (file)	Output Quickprint	145
output sequential	Output Sequential File	146
print CA <TNLS>	<TNLS> Print Rest	147
print journal <TNLS>	<TNLS> Print Journal (mail)	148
print branch <TNLS>	<TNLS> Print Branch	149
print statement <TNLS>	<TNLS> print statement	150
print plex <TNLS>	<TNLS> Print Plex	151
print group <TNLS>	<TNLS> Print Group	152
quit	Quit Nls	153
replace character	Replace Character	154
replace word	Replace Word	155
replace number	Replace Number	156
replace visible	Replace Visible	157

replace invisible	Replace Invisible	158
replace link	Replace Link	159
replace text	Replace Text	160
replace statement	Replace Statement	161
replace branch	Replace Branch	162
replace plex	Replace Plex	163
replace group	Replace Group	164
substitute	Substitute	165
transpose character	Transpose Character	166
transpose word	Transpose Word	167
transpose number	Transpose Number	168
transpose visible	Transpose Visible	169
transpose invisible	Transpose Invisible	170
transpose link	Transpose Link	171
transpose text	Transpose Text	172
transpose statement	Transpose Statement	173
transpose branch	Transpose Branch	174
transpose plex	Transpose Plex	175
transpose group	Transpose Group	176
update (file)	Update File	177
view (set) <DNLS>	Set Viewspecs	178
viewspecs change <TNLS>	Set Viewspecs	179
viewspecs reset <TNLS>	Reset Viewspecs	180
viewspecs status <TNLS>	Show Viewspecs	181
xset character	Force (Case) Character	182

DOCUMENTATION: NLS-8 EQUIVALENTS OF NLS-7 (Old NLS) COMMANDS

xset word ---------- Force (Case) Word 183

xset visible ---------- Force (Case) Visible 184

xset invisible ---------- Force (Case) Invisible 185

xset link ---------- Force (Case) Link 186

xset text ---------- Force (Case) Text 187

xset statement ---------- Force (Case) Statement 188

xset branch ---------- Force (Case) Branch 189

xset plex ---------- Force (Case) Plex 190

xset group ---------- Force (Case) Group 191

xset mode lower ---------- Force (Case) Mode Lower 192

xset mode capital ---------- Force (Case) Mode Upper 193

xset mode initial ---------- Force (Case) Mode First 194

SP ADDRESS <TNLS> ---------- <TNLS> Jump (to) Address 195

LF <print next statement> <TNLS> ---- <TNLS> LF 196

; <comment> <TNLS> ---------- ; <comment> 197

. <print location of CM> <TNLS> ----- <TNLS> . 198

\ <print statement> <TNLS> ---------- <TNLS> \ 199

/ <print context of CM> <TNLS> ------ <TNLS> / 200

" <print back statement> <TNLS> ----- <TNLS> " 201

NDM 23-SEP-74 12:08 24034

Air Force Formatting Programs, first try

(J24034) 23-SEP-74 12:08;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /RWW([INFO-ONLY]) DVN([INFO-ONLY]) JCN([
INFO-ONLY]) EKM([INFO-ONLY]) HGL([INFO-ONLY]) CHI([INFO-ONLY
]) ; Sub-Collections: SRI-ARC; Clerk: NDM; Origin: < MEYER,
AFCOM,NLS;3, >, 23-SEP-74 12:03 NDM ;;;;####;

NDM 23-SEP-74 12:08 24034

Air Force Formatting Programs, first try

Content analyzer programs intended to produce standard AF formats; close comparison of proofs with specs will show the minor adjustments to format necessary.

NDM 23-SEP-74 12:08 24034

Air Force Formatting Programs, first try

These are two content analyzer programs which should produce the standard Air Force COM publication format and the standard Air Force Fiche format. These are my first attempts. Close comparison of their results with the Air Force specs will probably show that minor adjustments in the format are necessary. 1

```
FILE afcom      % (L10,) (meyer,afcom.ca,) %                                    2

   %puts in directives and leading spaces to fit AF standard
   publication form.                                                            2a

      Buffer pages required: 1                                                  2a1

      Content Analyzer.  Run on all statements including origin.                2a2

      Author: NDM %                                                             2a3

   DECLARE num, ch, i ;                                                         2b

   DECLARE TEXT POINTER ptr;                                                    2c

   (afcom) PROCEDURE (sw) ;                                                     2d

      REF sw ;                                                                  2d1

      FIND *ptr ;                                                               2d2

      CASE (num _ sw,swclvl ) OF                                                2d3

         =0: %origin%                                                           2d3a

            BEGIN                                                               2d3a1

            FIND SE(ptr) *ptr;                                                  2d3a2

            ST ptr ptr _ "      ", ".Text[ManNum]=", '", "AF 0=0",
            '", "; .Text[Ch]=", '", '", "     .Hi=", '", "25 SEP 74
            .ManNum;", '", ',, '", ".ManNum;25 SEP 74", '", "  .F=",
            '", ".Ch;=0", '", "; ", "   ", " " ;                               2d3a3

ch _ 0 ;                                                                        2d3a4

END;                                                                            2d3a5

=1: %no first indenting%                                                        2d3b

BEGIN                                                                           2d3b1
```

```
ST ptr ptr _ "" ;                                                    2d3b2

ptr _ getsUb(ptr) ;                                                  2d3b3
ST ptr ptr _ ",Text[Ch]=", '", STRING(ch_ch+1), '", ";" ;            2d3b4
END;                                                                 2d3b5
=2: %no first indenting%                                             2d3c

ST ptr ptr _ "" ;                                                    2d3c1
=3;                                                                  2d3d
BEGIN                                                                2d3d1
num _ 2 ;                                                            2d3d2
REPEAT CASE (100) ;                                                  2d3d3
END;                                                                 2d3d4
=4;                                                                  2d3e
BEGIN                                                                2d3e1
num _ 5 ;                                                            2d3e2
REPEAT CASE (100) ;                                                  2d3e3
END;                                                                 2d3e4
=5;                                                                  2d3f
BEGIN                                                                2d3f1
num _ 8 ;                                                            2d3f2
REPEAT CASE (100) ;                                                  2d3f3
END;                                                                 2d3f4
=6;                                                                  2d3g
BEGIN                                                                2d3g1
num _ 10 ;                                                           2d3g2
```

```
REPEAT CASE (100) ;                                              2d3g3
END;                                                             2d3g4
=100; %exit condition%                                           2d3h
BEGIN                                                            2d3h1
CCPOS ptr;                                                       2d3h2
CASE READC OF                                                    2d3h3
='=, ='_ ;                                                       2d3h3a
BEGIN                                                            2d3h3a1
FIND [LD] < 2CH > ;                                              2d3h3a2
i _ CCpOS; %CCpOS gets set back to 1 by ST%                      2d3h3a3
ST ptr ptr _ ",.IRest=", STRING(num), '; ;                       2d3h3a4
num _ MAX (0, num-i) ;                                           2d3h3a5
ST ptr ptr _ ",.GSp=", STRING(num), ";" ;                        2d3h3a6
FIND SE(ptr) "ptr ;                                              2d3h3a7
ST ptr ptr _ "" ;                                                2d3h3a8
END;                                                             2d3h3a9
ENDCASE                                                          2d3h3b
ST ptr ptr _ ",.GSp=", STRING(num), ";" ;                        2d3h3b1
END;                                                             2d3h4
ENDCASE %maximum indenting%                                      2d3i
REPEAT CASE (num _ 6) ;                                          2d3i1
RETURN(FALSE);                                                   2d4
END.                                                             2d5
FINISH                                                           2e
```

```
        FILE affiche     % (L10,) (meyer,affiche.ca,) %                    3

%puts in directives and leading spaces to fit AF standard FICHE
form.                                                                      3a

Buffer pages required: 1                                                   3a1

Content Analyzer.  Run on all statements including origin.                 3a2

Author:  NDM %                                                             3a3

DECLARE num, ch, i ;                                                       3b

DECLARE TEXT POINTER ptr;                                                  3c

(affiche) PROCEDURE (sw) ;                                                 3d

REF sw ;                                                                   3d1

FIND *ptr ;                                                                3d2

CASE (num _ sw,swclvl ) OF                                                 3d3

=0: %origin%                                                               3d3a

BEGIN                                                                      3d3a1

FIND SE(ptr) *ptr;                                                         3d3a2

ST ptr ptr _ "      ", ",Text[ManNum]=", '", "AF 0=0", '", ";
,Text[Ch]=", '", '", ";     ,Hi=", '", ",ManNum;, 25 SEP 74(Fiche
1),", '", ";   ,F=", '", ",Ch;=0", '", ";  ", "   ", " ", "
" ;                                                                        3d3a3

    ch _ 0 ;                                                               3d3a4

    END;                                                                   3d3a5

  =1: %no first indenting%                                                 3d3b

    BEGIN                                                                  3d3b1


    ST ptr ptr _ "
    " ;                                                                    3d3b2


    ptr _ getsub(ptr) ;                                                    3d3b3

    ST ptr ptr _ ",Text[Ch]=", '", STRING(ch_ch+1), '", ";" ;              3d3b4
```

```
    END;                                                        3d3b5
=2; %no first indenting%                                        3d3c
    ST ptr ptr _ "
    " ;                                                         3d3c1
                ENDCASE %exit condition%                        3d3d
                   BEGIN                                        3d3d1
                   FIND ptr [NP] [LD] < CH ;                    3d3d2
                   i _ CCPOS - 1 ; %CCPOS gets set back to 1
                   by ST%                                       3d3d3
                   ST ptr ptr _ ",IRest=", STRING(i), ";" ;     3d3d4
                   FIND SE(ptr) "ptr ;                          3d3d5
                   ST ptr ptr _ "" ;                            3d3d6
                   END;                                         3d3d7
             RETURN(FALSE);                                     3d4
             END,                                               3d5
             FINISH                                             3e
```

NDM 23-SEP-74 15:46 24035

Report on ISI's Editor in their Military Message System

(J24035) 23-SEP-74 15:46;;;; Title: Author(s): N. Dean Meyer/NDM; Distribution: /RWW([INFO-ONLY]) CHI([INFO-ONLY]) EKM([INFO-ONLY]) KJM([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: NDM; Origin: < MEYER, ISIED,NLS;1, >, 23-SEP-74 15:36 NDM
;;;;####;

Report on ISI's Editor in their Military Message System

Reference: AN EDITOR TO SUPPORT MILITARY MESSAGE PROCESSING PERSONNEL, Jeff Rothenberg, USC-ISI/RR-74-27; August 1974. 1

Their report describes the user interface to ISI's editor system in their military message system. It describes an editor with limited capabilities, but with what they claim is a very simple and intuitive interface. 2

The simplicity comes from the philosophy of: 1) using keys to represent commands or modes, and 2) editing by simply overwriting. 2a

Their editor has a few nice capabilities that may be meaningful in the NLS environment. Note that these are their claims in this report, and I have no idea of the extent to which these claims are successfully implemented and useable. 3

II.A One can move the view up or down one screenfull, keeping enough of the previous view (2 lines) to maintain context. 3a

III.A.2 They use the word "FIND" for our Jump to Content or Jump to Word. 3b

If one surrounds the text by spaces, the system assumes you want a word (whether it is surrounded by spaces, punctuation, etc. in the actual text). Case doesn't matter if you type in all lower case; they try to be intuitive about what the user really wants. 3b1

E.g. " will be " would match "will<CR>be" but not "will. Be". If there is a capital in your string, it will match only that word with the same case characters. 3b1a

There is also a "FINDEXACT". 3b2

They also have what we might call a "Jump to Content Last" (like Next but searching backwards in a file from current position). 3b3

IV.A Their equivalent of Substitute reports the number of hits BEFORE it goes ahead and makes the substitutions, allowing one last check and confirmation. 3c

Furthermore, one can specify the context of a string without replacing the context; REPLACE <left> [<text>] <right> BY <string> where the brackets represent strings and only the <text> is replaced. 3c1

One can ask that the substitute be done only only the first

hit, or interatively as our Substitute. On the iterative replace, one can optionally confirm each hit independently. 3c2

The word and case matching rules of a FIND apply to their REPLACE (Substitute) as well. REPLACE word BY item will also replace Word by Item and WORD by ITEM. 3c3

IV.B They maintain a system-wide lexicon of misspellings and typographical errors. It wasn't clear that this is being used for an automated spelling corrector or whatever presently. 3d

IV.A One can UNDO the last edit made (repeatedly I would assume). 3e

III.A.3 One can set a placemark (like a marker) that exists only so long as that user has the file open, and only for that user. He can Jump to Placemark Last, or assign them names and return at random. 3f

III.B While entering text, one can back up over the just typed text without erasing, make corrections like insert, delete, or overstrike, then continue adding text to the end. 3g

IV.C.3 Their default output format is part of each user's profile. 3h

IV.A Reviewers can attach comments to any part of a document, or to the document in general. They attach a weight as they do so ("minor", "content", or "crucial" change). Certain classes of people can only make general comments. 3i

The author can then view his document with or without the annotations. He can optionally ask to see only annotations of a given level and/or by a given reviewer. He can ask that they be displayed marked in some way (changes in brackets or boldface...) or just integrated into his view of the paper. 3i1

The author can accept (and hence incorporate) all changes of a given level by a given reviewer. 3i2

KIRK 23-SEP-74 16:34 24036

Bug in load program

(J24036) 23-SEP-74 16:34;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /BUGS([ACTION]) ; Sub-Collections: SRI-ARC BUGS;
Clerk: KIRK;

KIRK 23-SEP-74 16:34 24036

Bug in load program

It got the ,subsys; file with the same name as the one I was trying to load only in the <programs> directory. It got the ,cml; file from my directory. I used altmode after typing three letters. The name of the program is FORMAT. The proper versions are in my directory, shouldn't it look there first? 1

KIRK 23-SEP-74 17:59 24037

Help format conventions meeting

(J24037) 23-SEP-74 17:59;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /DVN([INFO-ONLY]) JMB([INFO-ONLY]) POOH([
INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: KIRK;

KIRK 23-SEP-74 17:59 24037

Help format conventions meeting

I would like to have a Help format conventions meeting with DvN, JMB, and POOH. I think a general review of the standards would be appropriate at this time to refresh our memories. This might also be a way for POOH to become familiar with (and have some say in) them. Currently there are (at least) two different standard formats for a command description. My experience has overwhelmingly been that the formats for the most basic editing commands (Move, Copy, Delete, Transpose, Insert, etc...) don't work. They confuse the user more than they help. I think all the formats currently used should be examined along with new ideas taking in consideration new help command viewing and new syntax and example generating capabilities and possibilities. The only time DvN, JMB, and KIRK can all get together is next monday. I would pick monday afternoon (Sept. 30, 1:30) because I think it would be harder for me to get up (and be coherent) before noon that it would for Dirk afternoon. Dirk, if this is not true, set the meeting for Monday morning. 1

KIRK 24-SEP-74 15:30 24043

Bug with move file in NLS

(J24043) 24-SEP-74 15:30;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /KEV([ACTION]) FDBK([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: KIRK;

KIRK 24-SEP-74 15:30 24043

Bug with move file in NLS

When using the move message command, I get the message File Not Online ... Copy message works fine. NDM says the problem is a bug in the Move file command in nls that occurs with TXT files. Is this true? If so, will you (Ken) be fixing it? 1

KIRK 24-SEP-74 20:02 24044

I can't get rid of split screen

(J24044) 24-SEP-74 20:02;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /BUGS([ACTION]) ; Sub-Collections: SRI-ARC BUGS;
Clerk: KIRK;

KIRK 24-SEP-74 20:02 24044

I can't get rid of split screen

Occurs after a second edge is inserted perpendicular to the first and then deleted leaving a vertical split. Must reset to get rid of the split. 1

JAKE 24-SEP-74 20:59 24049

Contact Report: NIC Discussion with Craig Fields, ARPA IPTO

(J24049) 24-SEP-74 20:59;;;; Title: Author(s): Elizabeth J. (Jake) Feinler/JAKE; Distribution: /JCN([ACTION] let me know your comments on all this, if any) SRI-ARC([INFO-ONLY]) ; Sub-Collections: NIC SRI-ARC; Clerk: JAKE; Origin: < FEINLER, NIC-FIELDS,NLS;6, >, 24-SEP-74 20:51 JAKE ;;;;####;

JAKE 24-SEP-74 20:59 24049

Contact Report: NIC Discussion with Craig Fields, ARPA IPTO

The following is a summary of a meeting between myself and Craig Fields held at ARPA-IPTO, September 10, 1974, during which NIC policies and procedures were discussed: 1

I. PROTOCOLS AND RFCs 1a

There are currently no copies of the Protocol Notebook available for distribution, and current NIC funding does not cover distribution of individual documents such as separate protocols and RFCs. This problems was discussed with Craig with the following outcome: 1a1

A. CURRENT PROTOCOLS 1a1a

The Protocol Notebook as it existed on June 30, 1974 will be deposited as a single item with DDC (Defense Documentation Center), and DDC will in turn send copies to NTIS (National Technical Information Service) where the notebook will be available for purchase without restriction. This procedure will make the old protocols available but will not include new or revised ones. New or revised protocols will be issued as separate RFCs. 1a1a1

B. RFCs 1a1b

In the future RFCs will be treated as publications of the Network Working Group (NWG). Fields designated Jon Postel as the new co-ordinator of this group, replacing Steve Crocker who is leaving ARPA. As co-ordinator Jon will be in charge of RFCs, including assignment of RFC numbers. RFCs will, in general, be handled in the same manner as publications of other working groups. The NIC will refer all requests for RFCs to Postel, and he will co-ordinate their publication and distribution. 1a1b1

Two copies of each RFC will, however, be deposited with the NIC for reference purposes. 1a1b2

C. FUTURE OR REVISED PROTOCOLS 1a1c

Postel will act as liaison to notify the NIC of any RFCs that constitute new or revised official protocols. These will be assembled by the NIC into a volume that will be deposited once a year with DDC and NTIS in hardcopy. NIC will not distribute this volume, it will merely assemble it for deposit with DDC and NTIS. All requestors of protocols who are not NWG members will be referred to NTIS. 1a1c1

II. OTHER DEPOSITORY ITEMS 1b

Some discussion was carried on as to whether separate protocols, group notes, selected RFCs, and other NIC documents should be deposited with DDC and NTIS. Craig felt that many of these items should be deposited with DDC and NTIS, and that these agencies could then be responsible for hardcopy distribution. I pointed out that DDC requires 10 copies of each document submitted. The NIC would have to reproduce these multiple copies and fill out the necessary accompanying forms that request cataloging information. There are currently no funds or people available in the NIC contract to handle these chores. 1b1

Craig indciated that he might be able to make extra money available to cover the cost of preparing documents from the NIC collection for deposit with DDC and NTIS, and that at some later date the NIC might consider presenting an estimate of what this would cost. 1b2

My own view is that this approach does not attack the fundamental problem which is that the key network dialog is not available on the network. Depositing items with DDC and NTIS only provides partial backup and cuts down on hardcopy distribution. This approach does not replace the need to have a readily accessible, online source of network dialog and indices to this dialog. 1b3

No decision was made as to further action. NIC will try to address the problem after the Directory, Resource Handbook, and Arpanet book chapter have been published, if time permits. 1b4

III. RESOURCE HANDBOOK 1c

We discussed time frame, format, and procedures for producing the Resource Handbook. Craig would like to see a hardcopy draft before publication. He will look over the introductory section outlining general Arpanet information, and make additions or corrections where needed. There was general agreement that the compact, handbook format will be more usable than the current loose-leaf format. ARPA no longer wants guest account numbers and passwords included in the Resource Notebook, so login sections will be written as general-case procedures. 1c1

I mentioned late October or early November as a target date for publication, but noted that this might slip due to time needed for ARPA approval, time needed for making the many changes now

occurring on the Network, and time needed to rewrite sections pertaining to guest accounts and paswords. 1c2

We agreed upon the following distribution scheme for the Resource Handbook. One copy each will be sent automatically to Liaison and Principal Investigators. Other authorized users of the Arpanet may have a copy per gratis, if they request it in writing on official host letterhead. This policy will be announced to the Liaison and PIs, and they can then notify their users. 1c3

The NIC will distribute up to 1000 copies of the Resource Handbook under the current contract. If more are needed, costs will be negotiated with IPTO. 1c4

We also discussed the pros and cons of making the Resource Handbook available through DDC or NTIS, or of the NIC charging a fee for each copy sent to persons other than Liaison and PIs. No decisions were reached except to consider alternatives for future discussion. 1c5

IV. HOSTNAMES 1d

I discussed the problems involved in tracking down what hosts are on the network and where they are located. This now takes an inordinate amount of time, and needs to be a much simpler procedure. Craig designated Alex McKenzie as the person who will notify the NIC that a new host is on the network (instead of Chuck Pierce at RML). This will help considerably. If Alex cannot identify an unknown host, the NIC should check with Craig. (Presumably Alex can do likewise.) 1d1

Craig also reconfirmed that the NIC officially handles hostname registration for the net and monitors the Network Liaison list (i.e., liaison must register with the NIC to be considered official and each Liaison is required to supply a host write-up for the Resource Notebook). There will be no more than one liaison per host; however, the same person can serve as Liaison for more than one host. 1d2

V. NETWORK LIAISON FOR ARPA-TIP AND ARPA-DMS 1e

Craig Fields will be the new Liaison for ARPA-TIP replacing Steve Crocker. Dr. Licklider will be considered Principal Investigator for ARPA-TIP. Connie McLindon becomes Liaison for ARPA-DMS with Steve Lukasic as Principal Investigator for ARPA-DMS. 1e1

NOTE: Connie had some question about these changes on her

visit to SRI in sept, and wants to clear these choices with Lukasic. 1e1a

VI. ARPANEWS 1f

We discussed format and procedures for production of the Arpanews. Craig would like to have this publication live entirely online with the reader taking responsibility for producing his own hardcopy. We both agreed that the publication should consist primarily of short news items, and should not contain editorial material or lengthy articles. I presented my idea for a bootstrap experiment to produce the Arpanews by using a teleconferencing approach with the object being to produce a specific product, the Arpanews, while at the same time investigating methodology and techniques for collaborative network interaction. Craig liked the idea and approved the use of the NIC slots by an Arpanews editorial board not to exceed fifteen, and including myself, Jim Norton, and members of the ICCC Committee on Teleconferencing (Larry Day, Christopher Evans, Kjell Samuelson, Murray Turoff, Ken Bowles, Roger Hough, Jacques Vallee, Peter Kirstein, and myself). Since then Jean Iseli, Duane Stone, and Frank Brignoli have also been included, and Fields (and hopefully Doug) would like to observe. 1f1

Ground rules are that this editorial board will contribute to ARPA-related work for the NIC (in this case the Arpanews), all will work in a single directory controlled by Feinler, and no heavy work will be done during prime time. 1f2

NOTE: Most of these people already have access to the network or to NLS and have their own directories elsewhere. 1f2a

In addition to the editorial board, which would decide on format, approach, and news-gathering policies, we agreed to ask each host and the co-ordinator for each large network project to appoint an Information Contact. These contacts will funnel news items to the NIC for inclusion in the Arpanews. 1f3

The whole idea behind this approach is to form a bootstrap community of experts interested in network dialog procedures and at the same time to produce a NIC product, the Arpanews, by tapping outside help. The Utility will hopefully get useful feedback from its customers who are involved (several have expressed an interest in producing their own newsletters, and also in experimenting jointly with network dialog procedures). ARC will have a chance to interact with other existing network dialog programs and experts in a bootstrap community approach. 1f4

VI. ACCESS TO THE ARPANET, THE IDENT SYSTEM, AND THE ARPANET DIRECTORY 1g

We discussed the whole snafu of names being left out of the Arpanet Directory. I pointed out that we have difficulty knowing who are authorized Arpanet users, and who are not. NIC also has the problem of knowing when to REMOVE an individual from the ident system. ARPA plans to tighten up access to the Arpanet considerably and acknowledges that knowing who are authorized Arpanet users is a problem. They define an authorized user to be one of the following: 1g1

1. ARPA employees using the Arpanet for management use. 1g1a

2. ARPA contractors and their employees using the Arpanet for official use. 1g1b

3. Paid DOD personnel using the Arpanet for R & D purposes. 1g1c

3. paid national security agencies personnel using the Arpanet for R & D purposes. 1g1d

I described the current NIC procedure of checking each entry with the individual. In addition, we both felt there needs to be someone who authorizes individuals at each host, and who also indicates which individuals should no longer have access. Craig recommended that the following procedure be adopted: 1g2

Before an Arpanet Directory is published each individual will be given a chance to verify his own ident entry. At the same time the principal investigator at each host will verify that all individuals associated with that host are, in fact, bona fide Arpanet users and are still there. If not verified by the PI, the names will be removed from the Arpanet Directory. IPTO will specify who can have associate status, and all others (i.e., those not associated with a User, Server, Tip, or Associate) will be non-Arpa-authorized entries (NIC usually terms these individuals INDEPENDENT in the identfile. The Independent category includes utility customers who are not also Arpanet contractors, and members of network working groups not associated with any host or ARPA-authorized associate group. 1g2a

NIC will not enter any new individual into the Arpanet Directory until a letter is received on official host letterhead giving the PI at the corresponding host, the ARPA office with which their contract is associated, the contract number, and what use is being made of the network vis a vis

the contract. The individual must also supply the proper input data. This policy will be announced jointly by NIC and ARPA in a memo. ig2b

NOTE: Utility customers who are not also ARPA contractors would not be affected by this policy and entries would be made as ARC sees fit, probably by request from Jim Norton. Membership in a network special interest group does not necessarily make an individual an authorized Arpanet user. Also, no name should be added to a network working group unless the co-ordinator approves the entry first. ig2b1

ARPA (particularly Steve Lukasic) was quite concerned that so many names were left out of the last Arpanet Directory. ARPA is also concerned about supplying documentation and other Arpanet services to non-authorized users. Craig felt the above policy would tighten access up considerably. It will make the identfile easier to manage, but indicates that there should be one editor of the identfile instead of many people writing on it at will. NIC would have to carefully check to see that entries in the ident system were clearly labeled as to who is an authorized Arpanet user, and who is not. (This we try to do now, but do not have a verification process, so consequently have dirty data. This new approach would provide a verification process). ig2c

KIRK 24-SEP-74 21:06 24050

Sendmail Number Assign command problems

(J24050) 24-SEP-74 21:06;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /BUGS([ACTION]) ; Sub-Collections: SRI-ARC BUGS;
Clerk: KIRK;

KIRK 24-SEP-74 21:06 24050

Sendmail Number Assign command problems

1. It says "illegal string designation after assigning the number and then does not show up in status. 2. After using the Number Assign command and quitting out of sendmail before sending the item, that number is lost from usage forever. Correct? 1