KJM 13-NOV-74 17:06 24537

Documentation of New IDENT System

This file contains instructions on using the new ident subsystem.
The following steps are necessary to use it. 1

1. Loading the subsystem 2

   Execute Programs 2a

   Load Program identification 2b

   Goto <subsystem> Identification 2c

2. Getting a record to work on 3

   Load record-ident 3a

   or 3b

   Add <record for> (Individual / Group / Organization) 3c

      The Add command prompts for all useful fields in the order listed below. To leave the remaining fields empty give a CD. To specify a single field as empty, type SP or SP BS as the contents. The order of prompts is: 3c1

      Individual 3c2

         Name 3c2a

         Ident 3c2b

         Organization 3c2c

         Phone 3c2d

         Hardcopy mail address 3c2e

         Network mail address 3c2f

         NLS mail address 3c2g

         Delivery 3c2h

         Groups 3c2i

         Function 3c2j

         Capabilities 3c2k

         Subcollections 3c2l

Comments 3c41

3, Changing fields in the record 4

Make any changes desired to the new or loaded ident record, Each field has a command that changes its value, These commands are: 4a

<>Approve (see #5 below) 4a1

<>Capabilities 4a2

<>Comments 4a3

Coordinator 4a4

Delivery 4a5

Hardcopy 4a5a

Network 4a5b

<>NLS 4a5c

<>Expand 4a6

Function 4a7

<>Groups 4a8

Ident 4a9

<>Independent (to set the organization field for an individual) 4a10

<>Mail 4a11

Hardcopy 4a11a

Network 4a11b

<>NLS 4a11c

Membership 4a12

Name 4a13

Organization 4a14

Phone 4a15

Remove 4a16

Record 4a16a

Field 4a16b

Comments 4a16b1

Function 4a16b2

Mail 4a16b3

Hardcopy 4a16b3a

Network 4a16b3b

<>NLS 4a16b3c

Phone 4a16b4

<>Secondary 4a16b5

Subcollections 4a16b6

<>Secondary 4a17

<>Subcollections 4a18

4. Checking status of a record 5

Any time you're at command level you can check the status of the loaded record or of any other record using 5a

<>Status (for the loaded record) 5b

or 5c

Show Record record-ident (for a specified record) 5d

In addition, in the Show Record command you can specify as an option (i.e., preceeded by <CTL>u) any field listed under #3 above. Note that Independent and Remove are not fields, but rather operate on other fields. The field is specified as a command as in #3 above except that the mail command words are: 5e

<>NLS 5e1

Host 5e1a

User 5e1b

Net 5e2

Host 5e2a

User 5e2b

Hardcopy 5e3

If no field is specified the entire record is shown, 5f

5. Setting approval 6

The approval field can be set to indicate that an identwheel has checked and approved the contents of the loaded record. The command is 6a

<>Approve 6a1

6. Updating 7

When satisfied with the loaded record, update it to the IDENT,MASTER file using the command 7a

Update 7a1

If a <CTL>u is typedbefore the CA, the update is performed later. Otherwise it is done immediately. 7b

7. Verifying the ident file 8

The whole IDENT,MASTER file can be checked for consistency and I-don't-know-what-all using the command 8a

Verify 8a1

KJM 13-NOV-74 17:06 24537

Documentation of New IDENT System

(J24537) 13-NOV-74 17:06;;;; Title: Author(s): Karolyn J. Martin/KJM; Distribution: /KIRK([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: KJM; Origin: < MARTIN, IDENT.NOTES;3, >, 13-NOV-74 16:59 KJM ;;;;####;

NLS a Line at a Time

Quick Thoughts -on the problem of Half-duplex line at a time terminals. 1

The Goal should be to present a usable, consistent interface to the user. The specification of the user interface in CML should be independent of the user's terminal type. 2

Outline of a possible Implementation. 3

Relation between Terminal type and User profile: 3a

It is my contention that certain aspects of a users profile are dependent upon the current terminal type. Specifically a terminal type of the half-duplex, line at a time class will force the following settings in his user profile. 3a1

Feedback mode _ None 3a1a

Recognition mode _ Demand (recommended but perhaps not forced) 3a1b

Prompt mode _ Demand (new prompting mode explianed below) 3a1c

Interpreter Implementation 3b

The Interpreter must obviously know that he dealing with a half-duplex,line at a time terminal. It does not see any input at all until the user types a <CR>. When this happens the interpreter stores the line in a buffer. He then starts dealing out the characters one at a time to all the alternatives which haven't folded yet. If all the characters have been dealt out and no one has Bingo yet then you prompt the user for the current set of alternatives. This is called demand prompting. Notice that the user only gets prompting when he has only partially specified a command. The user can also obtain prompting at any time by simply hitting <CR> before at complete command has been specified. 3b1

If all the characters have been dealt out and only one guy has Bingo then the user wins and you call the proper procedure to process the command, without giving any feedback to the user execpt perhaps something like "..." meaning working . If somebody gets Bingo before all the characters have been dealt out you mark the position in the input stream at which this happened and continue dealing. The interpreter can no longer just throw away characters which no one wants as is presently done when we throw up a question mark. If when all the characters have been dealt out only one guy has Bingo then we assume this is the proper command and process it. If no one now

has Bingo then we might consider throwing up a message like "Ignoring <remianing part of input stream that didn't parse> OK?" and let the user decide if this is a valid command. 3b2

Help modes 3c

The user should be able to type "?<CR>" and get listing of his current alternatives. 3c1

The user should be able to type some other special character followed by <CR> and the interpreter would type back to him the current parsing of the input with commands completed, noisewords inserted, specified selection functions reeplaced by their values, and a prompt for the current alternatives. For example if we are using <"Z> for this help mode, and the user types: 3c2

"INS NUM 25 <"Z><CR>" 3c2a

The interpreter should type back to him: 3c3

"Insert Number 25 (to follow) ;A" 3c3a

Delimiters and Control Characters 3d

It seems to me that the only way to nicely handle the problem of delimiting parameters is to let the interpreter handle it it a way which is dependent upon the terminal type (or class). This enables the delimiter problem to be independent of the CML specification so that the grammer doesn't have to change with the terminal type. It does force the user to specify the commands differently depending upon the type of terminal he is using but I don't think that this is necessarily bad. I also think that this is unavoidable if we are going to suppport line at a time terminals. 3d1

The delimination of arguements can be handled several ways. Currently this is typically done by using a control character which is user specified. The problems arise when the terminal does not a large enough character set to afford to allocate delimiter characters which thus must specially handled when entered as arguements. This tends to degrade the appearence of the system to the user. It is very awkward for a user for example to have to be constantly typing something like <"V><CR> to enter a <CR> in as text. 3d2

One possible solution is to have optional code in the selection routines which is invoked when the users terminal type belongs to a given class. The purpose of this code would be to use

syntactic analyses to delimit arguements wherever possible, instead of simply looking for the delimiting control character. For example an LSEL of type NUMBER could easily keep swallowing characters until it came to character which not legal in a number. I do not know whether it is possible to delimint address expressions, and links, syntactically. I will look into this. The problem of delimiting text entities is more difficult . The choices are using a reserved character or perhaps letting the user specify the delimiter for each text entity that is entered. That is by entering text by typing <delimiter><text body><delimiter> where <delimiter> is any character which does not occur in the text. We may want exclude <space> from the set of legal delimiting characters to allow for free field input from line at time terminals. 3d3

DSM 8-NOV-74 17:41 24538

NLS a Line at a Time

(J24538) 8-NOV-74 17:41;;;; Title: Author(s): David S. Maynard/DSM; Distribution: /CHI([INFO-ONLY]) RWW([INFO-ONLY]) DSM([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: DSM;

JMB 18-NOV-74 15:55 24539

How to Index the Command Summary (per Kirk)

File resides at: <userguides, commands,> Index will have to be done at night because it takes a while.

JMB 18-NOV-74 15:55 24539

How to Index the Command Summary (per Kirk)

Goto Programs <CR> 1

Load Program T: Publish <CR> 2

Goto (subsystem) <>Publish <CR> 3

PUB: C: Index Group (at) 1 (through) 461 4

This should make a statement for each word (not an, the, etc.) with statement numbers for all its occurrences. However, I don't know for sure where it will write the statements. Please put the Index to follow statement 461 (before DEFINITIONS). If it bombs out because the group is too big--try doing a smaller group at a time. 5

Then move the directive to turn statement numbers off from DEFINITIONS forward to INDEX (so they'll turn off starting with Index). 6

Also, can the Index have a special footer or something marking those pages "INDEX"? I think the strange-looking stuff of the Index should be somehow visually distinct from the strange-looking stuff that's syntax. 7

JMB 18-NOV-74 15:55 24539

How to Index the Command Summary (per Kirk)

(J24539) 18-NOV-74 15:55;;;; Title: Author(s): Jeanne M. Beck/JMB; Distribution: /DVN([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: JMB;

JAKE 18-NOV-74 19:40 24540

NIC/QUERY

I have received complaints from Rich Woodard and Robert Jurick from Wright Patterson AFB about the fact that query is not available at OFFICE-1. I have spoken to JDH and JCN about this but so far the program has not appeared. Can someone give me an estimate on when it might come up at Office-1 so that I can let the WPAFB people know what to expect. 1

JAKE 18-NOV-74 19:40 24540

NIC/QUERY

(J24540) 18-NOV-74 19:40;;;; Title: Author(s): Elizabeth J. (Jake) Feinler/JAKE; Distribution: /FEED([ACTION]) RWW([INFO-ONLY]) JCN([INFO-ONLY]) JDH([INFO-ONLY]) DSM([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JAKE;

KIRK 18-NOV-74 20:52 24541

The latest in a series of proposals for non-NIC class 1 userprograms

User subsystems 1

sendmes proposed to be in the subsystem SNDMSG with the commands 1a

STRUCTURE (at) DESTINATION OK: 1a1

Message (at) TEXT-CONTENT OK: 1a2

Title: CONTENT OK: 1a3

Distribute to CONTENT OK: 1a4

makeref proposed to be a command in the Bibliography subsystem: 1b

Create References (for file using format number:) CONTENT OK: 1b1

delcol Proposed to be a command in the Edit subsystem: 1c

Delete Column (at) DESTINATION OK: 1c1

deldir, format, and showdir, are in the FORMAT user-subsystem. 1d

Delete (Directives in) STRUCTURE (at) DESTINATION OK 1d1

Reset Directive (Filter) OK 1d2

Set Directive (Filter) OK 1d3

Format File (at) DESTINATION (using Format #) CONTENT (Title:) CONTENT (Author Ident(s):) CONTENT (Journal Number:) CONTENT (Formatting File) 1d4

Format File (at) DESTINATION (using Format #) CONTENT 1d5

index, toc, and wordcount are to be in the Publish subsystem as 1e

Index STRUCTURE (at) DESTINATION OK: 1e1

Make Table (of contents for file) OK 1e2

Count (visibles in) STRUCTURE (at) DESTINATION OK 1e3

(count visibles not yet implemented) 1e3a

address 1f

Insert (address to follow) STRING DESTINATION OK (Input ident) CONTENT OK 1f1

The latest in a series of proposals for non-NIC class 1 userprograms

addtext implemented as the Insert subsystem, Command to use it from another subsystem: 1g

Execute Insert Front/Back STRUCTURE (at) DESTINATION (the text) CONTENT OK/<Filtered VIEWSPECS OK> 1g1

append implemented as the Append subsystem, Command to use it from another subsystem: 1h

Execute Append Group (at) DESTINATION (through) DESTINATION (join with) CONTENT OK 1h1

Content analyzer patterns 2

jform3 2a

delsp 2b

sriform 2c

lowercase 2d

delname 2e

Sort Keys 3

sortnocase 3a

sortrev 3b

sortnum 3c

sortnmskip 3d

REL files 4

letter runs as a rel file as it did in NLS-7 4a

KIRK 18-NOV-74 20:52 24541

The latest in a series of proposals for non-NIC class 1 userprograms

(J24541) 18-NOV-74 20:52;;;; Title: Author(s): Kirk E. Kelley/KIRK; Distribution: /NDM([ACTION]) RLL([ACTION]) JHB([ACTION]) JCN([ACTION]) EKM([INFO-ONLY]) RWW([INFO-ONLY]) DSM([INFO-ONLY]) DVN([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: KIRK;

DVN 18-NOV-74 23:11 24542

Trial Preface of DCA Paper COM'd and sent to ISI

You wll be happy to hear that your file titleetc got as far as ISI last night. 1

DVN 18-NOV-74 23:11 24542

Trial Preface of DCA Paper COM'd and sent to ISI

(J24542) 18-NOV-74 23:11;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /JOAN([ACTION] dpcs notebook please) SRL([INFO-ONLY]) ; Sub-Collections: DPCS SRI-ARC; Clerk: DVN;

DVN 19-NOV-74 08:26 24543

ASAS

This is a correction to 24454.

ASAS

LINK RACK ;;SINCE (5-NOV-74 00:00) 1

(,#a:ctr) (directory,) (fiche,) 1a

(,#j:ctr) (newprim,:;SINCE(28-JUL-74 00:00);kK) 1b

((,#jr:w) (newmess,,t) 1c

(,lit) 1d

(odp,#x) 1e

:(userguides,locator,5:xebn) 1f

TOP(userguides,locator,1:xn) 1g

(,play) (mylin,) 1h

Real Alphabetic sort: (programs,sortalphabetic,) 1i

(documentation,help, systems:xeb) (documentation,help, :;["DHvN"] AND ["...."];k) 1j

(documentation,manual,do:xebb) 1k

(documentation,final,:xeb) 1l

(twocc,new) 1m

sendmail crapname:< (vannouhuys)[Send-mail],PC;1 > 1n

Journal documents (most recent first) 2

KIRK 18-NOV-74 20:52 24541
The latest in a series of proposals for non-NIC class 1 userprograms
Location: (GJOURNAL, 24541, 1:w)
*****Note: [INFO-ONLY] *****
2a

JMB 18-NOV-74 15:55 24539
How to Index the Command Summary (per Kirk)
Location: (GJOURNAL, 24539, 1:w)
*****Note: [ACTION] *****
2b

Comments: File resides at: <userguides, commands,> Index will have to be done at night because it takes a while. 2b1

SLJ 10-NOV-74 00:01 24454
Let's Call A Spade A Spade ...
Message: Just consider: We might call a common garden spade: a personalized earth-moving equipment module; a mineralogical mini-transport; a personalized strategic tellurian command and control module; an air-to-ground interface contour adjustment probe; a leveraged tactile-feedback geomass delivery system; a man-machine energy-to-structure converter;

2c

a one-to-one individualized geophysical restructurizer; a portable unitized earthwork synthesis system; an entrenching tool (Firesign Theater); a zero-sum dirt level adjuster; a feedback-oriented contour management probe and digging system; a gradient disequilibrator; a mass distribution negentroprizer; a dig-it-all system; and extra-terrestrial transport mechanism.....Spades, not words, should be used for shovelling. But words should help us unearth the truth.
--excerpt from Dream Machines/Computer Lib
*****Note: [INFO-ONLY] *****

2d

LAC 7-NOV-74 12:07 31279
Info from DVN on COM prices and procedures
Location: (MJOURNAL, 31279, 1:w)
*****Note: [INFO-ONLY] *****

2e

Comments: This is a pointer at information about DDSI COM and hardcopy procedures and prices. Bill asked me to cend him a copy as he couldnt find his orriginal copy of the information. 2e1

KIRK 6-NOV-74 18:45 24433
Publish user-subsystem has Index and TOC. Not Format.
Message: Check out the Publish user-subsystem and let me know what you think. I erred by calling "Format" in a previous message.
*****Note: [INFO-ONLY] *****

2f

MEH 6-NOV-74 17:39 24431
My Thoughts about Recording Written Dialogue, and a Suggestion.
Ref: 24393, 24404.
Location: (MJOURNAL, 24431, 1:w)
*****Note: [INFO-ONLY] *****

2g

MEH 6-NOV-74 17:28 24430
My thoughts about recording dialogue, and a suggestion: ref: 24393, 24404.
Location: (MJOURNAL, 24430, 1:w)

*****Note: [INFO-ONLY] *****

2h

DCE 25-OCT-74 09:05 24320
More care about spelling in our written communications
Location: (MJOURNAL, 24320, 1:w)
*****Note: [ACTION] *****

2i

(Info) Journal documents for information only (most recent first) 2j

KIRK 11-OCT-74 00:38 24196
Line lengths in NLS
Location: (JJOURNAL, 24196, 1:w)
*****Note: [INFO-ONLY] *****

2k

JAKE 10-OCT-74 23:51 24195
Trip report - future plans for the Arpanet
Location: (JJOURNAL, 24195, 1:w)
*****Note: [INFO-ONLY] *****

21

Comments: This is the proper text for a journal item you received a few days ago which inadvertently contained ACMs initial file. Sorry for the mix-up, Jake. 211

NDM 10-OCT-74 18:01 24189
Viewspec Cards: COM formatted
Location: (JJOURNAL, 24189, 1:w)
*****Note: [INFO-ONLY] *****

2m

Comments: Since the directives that the journal put in will screw up this file (formatted to 1/1000"), you must create your own work file from what was originally my file. I.e. copy from my origin on into a new file. DO NOT PRINT THE JOURNAL FILE DIRECTLY. 2m1

KIRK 10-OCT-74 17:30 24188
More last-minute mods to NLS-8
Message: Since "Jump (to) File Named TYPEIN" is essentially the same thing as "Jump (to) File <SPACE> TYPEIN", and "Jump (to) File <SPACE> BUG" is more easily done with "Jump (to) File BUG" and <SPACE> is a non-intuitive, inconsistant "commandword", the following things should have been done when the Jump to Name command was added: ALT should have been armed when specifying the FILE entity by TYPEIN. The "Jump (to) File <SP>" command should be deleted. Charles agrees these changes should be made, so I

updated the help information accordingly when I added the New command,
*****Note: [INFO-ONLY] *****

2n

JMB 6-OCT-74 19:18 24170
Trouble documenting a command when I can't find out the story - the Protect command
Location: (JJOURNAL, 24170, 1:w)
*****Note: [INFO-ONLY] my present means of receiving news on changes aren't working*****

2o

EJK 4-OCT-74 09:26 31121
Comments on New NLS
Location: (JJOURNAL, 31121, 1:w)
*****Note: [ACTION] *****

2p

FDBK 30-SEP-74 16:17 24104
User Feedback Decisions leading to NLS-8,2
Location: (JJOURNAL,24104,1:w)
*****Note: [ACTION]
(Secondary Distribution Copy from KIRK)*****

2q

Comments: This document contains the status of user feedback decisions for NLS-8,2. It is over 50 pages long, we advise you NOT to print it. Read it online. For the new features and bug fixes, see the Documented branch. For those suggestions that have been rejected, see the Rejected branch. The items scheduled to be done in the next version are in <NLS,MODS,>. Those items which remain as Needs & Possibilities are in <FEEDBACK,FDBK,FUTURE>.
Secondary Distribution Copy

2q1

FDBK 3-OCT-74 23:47 24161
User Feedback Decisions leading to NLS-8,3
Location: (JJOURNAL, 24161, 1:w)
*****Note: [INFO-ONLY] *****

2r

Comments: This document contains the status of user feedback decisions for NLS-8,3. It is over 50 pages long, we advise you NOT to print it. Read it online. For the new features and bug fixes, see the Documented branch. For those suggestions that have been rejected, see the Rejected branch. The items scheduled to be done in the next version are in <NLS,MODS,>.

Those items which remain as Needs & Possibilities are in <FEEDBACK,FDBK,FUTURE>. 2r1

RLB2 2-OCT-74 12:02 24120
WHAT IS A SIMPLE DRAWING?
Location: (JJOURNAL, 24120, 1:w)
*****Note: [INFO-ONLY] *****
2s

EJK 30-SEP-74 10:33 31104
Feedback on NNLS
Location: (JJOURNAL, 31104, 1:w)
*****Note: [ACTION] *****
2t

RLB2 30-SEP-74 12:10 24096
DISPLAYS FOR NLS GRAPHICS CAPABILITY
Location: (JJOURNAL, 24096, 1:w)
*****Note: [INFO-ONLY] *****
2u

JAKE 30-SEP-74 09:52 24093
Trip Report - Future Management and Programs of the Arpanet
Location: (JJOURNAL, 24093, 1:w)
*****Note: [INFO-ONLY] *****
2v

KIRK 28-SEP-74 01:28 24087
Syntax could be better
Message: I think we made a big mistake when we decided to describe the syntax in terms of how you specify something (CONTENT, SOURCE, DESTINATION) instead of what you need to specify (STATEMENT, CHRACTER, etc.) when we decided we didn't have room to put both. I'm journalizing this for the record in hopes that it can be rectified someday.
*****Note: [INFO-ONLY] *****
2w

ACM 26-SEP-74 14:07 24066
Trip Report - Arpanet Book Discussion
Location: (HJOURNAL, 24066, 1:w)
*****Note: [ACTION] *****
2x

DIA 26-SEP-74 09:23 24060
New (Experimental) version of L10 Compiler
Location: (HJOURNAL, 24060, 1:w)
*****Note: [INFO-ONLY] *****
2y

ASAS

FDBK 25-SEP-74 14:16 24054
User Feedback Decisions leading to NLS-8,1
Message: <HJOURNAL, 24051,> contains the status of user feedback decisions for NLS-8,1. It is over 100 pages long, we advise you NOT to print it. Read it online. For the new features and bug fixes, see the Documented branch. For those suggestions that have been rejected, see the Rejected branch. The items scheduled to be done in the next version are in <NLS,MODS>. Those items which remain as Needs & Possibilities are in <feedback,fdbk,future>.
*****Note: [INFO-ONLY] *****

2z

EKM HGL CHI RWW 25-SEP-74 16:57 24056
NLS Task Shopping List for NSW
Location: (HJOURNAL, 24056, 1:w)
*****Note: [INFO-ONLY] *****

2a@

JAKE 25-SEP-74 16:16 24055
A Plea and a Proposal
Location: (HJOURNAL, 24055, 1:w)
*****Note: [ACTION] *****

2aa

JAKE 25-SEP-74 12:06 24053
ARPA Book Chapter Outline
Location: (HJOURNAL, 24053, 1:w)
*****Note: [INFO-ONLY] *****

2ab

FDBK 24-SEP-74 23:37 24051
User Feedback Decisions leading to NLS-8,1
Location: (HJOURNAL, 24051, 1:w)
*****Note: [INFO-ONLY] *****

2ac

JAKE 24-SEP-74 20:59 24049
Contact Report: NIC Discussion with Craig Fields, ARPA IPTO
Location: (HJOURNAL, 24049, 1:w)
*****Note: [INFO-ONLY] *****

2ad

EJK 24-SEP-74 09:47 31090
Comments on NNLS 24 Sep 74
Location: (HJOURNAL, 31090, 1:w)
*****Note: [ACTION] *****

2ae

(dosomething) 3

RWW 11-SEP-74 08:42 23938
ARC Participation in the Design of an SRI Text Handling System
Location: (HJOURNAL, 23938, 1:w)
*****Note: [INFO-ONLY] *****

3a

NDM 7-AUG-74 09:30 23742
Visit with Bill Carlson
Location: (GJOURNAL, 23742, 1:w)
*****Note: [INFO-ONLY] *****

3b

DSM 29-JUL-74 16:15 23692
Modifications Planned to NLS for OFFICE-1 before October 1st.
Location: (GJOURNAL, 23692, 1:w)
*****Note: [INFO-ONLY] *****

3c

JEW 29-JUL-74 19:23 23694
Preview of Inter-Host/Inter-Fork Procedure Call Protocol
Location: (GJOURNAL, 23694, 1:w)

3d

Comments: For those interested in contributing to the design of the protocol to be used in the NLS split. This document is incomplete and unpolished, but should indicate the direction in which I'm headed. Now is the time to offer suggestions. 3d1

CHI 28-JUL-74 16:35 23689
NSW software plan for 29-July to 1-October-74
Location: (GJOURNAL, 23689, 1:w)
*****Note: [INFO-ONLY] *****

3e

RWW 23-JUL-74 13:11 23667
Suggested Changes to Help System
Location: (GJOURNAL, 23667, 1:w)
*****Note: [INFO-ONLY] *****

3f

JEW 19-JUL-74 14:23 23649
FTPFRK (2,0) Programmer's Guide
Location: (GJOURNAL, 23649, 1:w)
*****Note: [INFO-ONLY] *****

3g

Comments: Feel free to pass this along to anyone you think might benefit from it. 3g1

ASAS

EAR 11-JUL-74 09:20 23596
NSW Microfiche Format
Location: (GJOURNAL, 23596, 1:W)
*****Note: [INFO-ONLY] *****

3h

Comments: These are sendmessages preserved for future reference.

3h1

RWW 9-JUL-74 15:06 23555
Notes on Talk with Tom Humphrey on SRI Text System
Location: (GJOURNAL, 23555, 1:W)
*****Note: [INFO-ONLY] *****

3i

DIA 30-MAY-74 09:44 23165
New Line Processor program description for Users
Location: (GJOURNAL, 23165, 1:W)
*****Note: [INFO-ONLY] *****

3j

Comments: Contains switch and light meanings and error reporting procedures.

3j1

NDM 20-AUG-74 09:50 31011
Comments on Output Processor Section in Final Report
Location: (GJOURNAL, 31011, 1:W)

3k

DCE 21-AUG-74 07:52 23831
NLS Version Numbers
Location: (GJOURNAL, 23831, 1:W)
*****Note: [INFO-ONLY] *****

31

(fortherecord)x(userguides,commands,)

4

DCE 9-AUG-74 19:01 23756
Possibility of Providing Report Development Support for DoD Inter-Netting Study Group
Location: (GJOURNAL, 23756, 1:W)
*****Note: [INFO-ONLY] *****

4a

Comments: Summary background discussion; tentative possibilities

4a1

dir

5

Delete Plex (vannouhuys,directory,1) 5a

Copy Directory vannouhuys(vannouhuys,directory,)d All N Time Read N Size N Date Read N Number Accesses N Size N Sort Read N Group Deletion 5b

Substitute Text Plex (vannouhuys,directory,1)
n pgsSize in Pages n RdLast ReadnAccessesNo, of Accesses (reads + writes)yn 5c

Jump Link (directory,:x) 5d

Update File Old 5e

Show Disk 5f

docyoudear 6

Connect Directory documentationkwcs 6a

Delete Plex (documentation,directory,1) 6b

Copy Directory documentation(documentation,directory,)d All N Time Read N Size N Last N Date Read N Number Accesses N Size N Sort Read NGroup Lastn 6c

Substitute Text Plex (documentation,directory,1)
n pgsSize in Pages n RdLast ReadnAccessesNo, of Accesses (reads + writes)yn 6d

Jump Link (directory,:x) 6e

Update File Old 6f

Show Disk 6g

(documentation,xhelp,how :xes) (documentation,howto,),#x:w)
(septline, #x) 7

comdir 8

Connect Directory com 8a

Delete Plex (com,directory,1) 8b

Copy Directory com(com,directory,)d All N Time Read N Length N Last N Date Read N Number Accesses N Size N Sort Read N Group Lastn 8c

ASAS

Substitute Text Plex (documentation,directory,1)
n pgsSize in Pages n RdLast ReadnAccessesNo, of Accesses (reads + writes)y 8d

Jump Link (directory,:x) 8e

Update File Old 8f

Show Disk 8g

mess 9

Mov Ple (newmess,1) (oldmess,) 9a

Jum Lin (oldmess,) 9b

Upd Fil Old 9c

Got Pro Loa Pro message 9d

Jum Lin (vannouhuys,newmess,) 9e

Got Mes 9f

Mov Mes vannouhuys,message,txt; 9g

Sor Mes 9h

Qui To Bas 9i

Update Fil Old 9j

(startupx) 10

Execute Programs 10a

Set Buffer 8 10b

Execute Programs 10c

Exe Pro Loa Pro mouse 10d

(archive) 11

author Journal documents written 12

DVN 18-NOV-74 23:11 24542
Trial Preface of DCA Paper COM'd and sent to ISI
Message: You wil be happy to hear that your file titleetc got as

far as ISI last night,
*****Note: Author Copy*****

12a

DVN 15-NOV-74 08:51 24520
Writeup on Accideetal TIP Reset
Message: Following conversations withAlex Mckensie, I have rewritten the sectionon this problem as it appears in <vannouhuys,novguide,4gib> et, seqs, I have passed copies for review to Jim Bair and Norton, McKensie has some interest in the problem and is willing t have users call when it happens atleast until they understad it, but not to have that be an intructionin the manual, Network control center can tell you the inercept character set at a given port,
*****Note: Author Copy*****

12b

DVN 14-NOV-74 11:04 24514
Allocating Joan's Time
Message: Martin is laying a substantial amount of typing and editing work on Joan, She has plenty to do for Development and things like maintianing some of the notebooks get shoved back, I'm sure Martin needs the work, and I don't think we should be too rigid about not doing things for Applications, but I think Joan needs some quidelines in setting priorities and people who as for her help need to know about them,
*****Note: Author Copy*****

12c

DVN 14-NOV-74 11:01 24513
Bundling Sendmessages and Responsibility for Authorship
Message: I believe in procedures such as those described in (mjournal,24393,) but problems arises when you have a bundle of sendmessages by various authors, First, it is easey to acknowledge authorship only of authors known to the ident system, A more serious problem arises with other authors' intent, On at least one occasion I jornalized just such dialogue and acutely vexed Dean and moderately vexed our good outside friend Duane Stone by immortalizing messages they thought were not ready for posertity, I had, as it happened asked their permision, but misundestood their reply in sendmessages (now lost), All this has made me super careful about getting autohr's consent, Being super careful can take months,
*****Note: Author Copy*****

12d

DVN 14-NOV-74 10:52 24512
Journal Problem: Ungraceful Failure after Sendmail Abort
Message: Monday night I started to journalize a group in my file

ASAS

<mylin, >, I got, correctly I believe, the message that I had gone over my file space. I deleted some files, reset, and tried again, this tme without error messages. Two journal items resulted:<mjournal,24471,> sent at 8:09 which is my initial file and <mjournal,24473,> sent at 8:14 which is the right group. Of course it is barely possible that I accidentally instructed sendmail to send my initial file, but, since that would mean both that I had sent the wrong thing and used a different command (File instead of Group) it raises the question of wehther the journal system somehow decided on its own to send my initial file. For the next day or so I could not send journal items and got the message "vanNouhuys [SENDM,,,etc. is not an NLS file". Perhaps if the suggestion to retain the sendmail status, with notification to the user (24482),which I strongly support, had been operating I would have known what was goin on.
*****Note: Author Copy*****

12e

DVN 14-NOV-74 09:26 24511
Can the Network Control Center Help with Unexpected Changes iin the TIP Intercept Character?
Message: I am writing a users' guide for our Lineprocessor that assumes connection to a TIP. I hear from the field that from time to time something (noise on the telephone connection?) inadvertantly resets the intercept character. It's a rare occurence (once a week or less maybe in regular use) but when it happens it's a bind for our naive and even our expereinced users because in the context of other input it's very hard to realize what is happening. I can tell them to check for what is happening by sending a linefeed (in which case the TIP replis "BAD") but then there is no way that I can see for them to learn the current intercept character so they can reset the TIP. Can they call the Network Control Center and ask you to tell them their intercept character? If so are you game for such calls? If not, can you suggest some other course?
*****Note: Author Copy*****

12f

Comments: Copy of a message sent to Alex McKensie and others 12f1

DVN 11-NOV-74 22:14 24473
Visit Log: Richard Smith of SRI Economics with Reference to a Text Editor for R.R. Donnelley
Location: (MJOURNAL, 24473, 1:w)
*****Note: Author Copy*****

12g

DVN 11-NOV-74 22:09 24471
Visit Log: Richard Smith of SRI Economics with Reference to a Text

Editor for R.R. Donnelley
Location: (MJOURNAL, 24471, 1:w)
*****Note: Author Copy*****

12h

DVN 11-NOV-74 21:50 24470
Responses to Coments on User's Gudie
Message: (vannouhuys,novguide,1a4) The Quick Reference Gudie is what is called around ARC the cue card...I thought I should call it by the name printed on it. (vannouhuys,novguide,4d1b3) A brace is that funny wiggling thing like two tildes on end, I think it is clear on the terminal.
*****Note: Author Copy*****

12i

Comments: I wrote this thursday, hadn't gotten around to sending it.

12i1

DVN 11-NOV-74 19:24 24469
Response To 24454
Message: Right on.
*****Note: Author Copy*****

12j

DVN 8-NOV-74 15:20 24451
The Dictionary Has Two p's.
Message: See (vannouhuys,novguide,"equipped")
*****Note: Author Copy*****

12k

DVN 7-NOV-74 22:51 24440
Conversations about COM with George Lithograph
Location: (MJOURNAL, 24440, 1:w)
*****Note: Author Copy*****

12l

DVN 7-NOV-74 17:02 24438
Request to Journalize Draft on Journal System
Message: Carlson for Lukasic (sp?) has asked for some information on the Journal. Among other things I would like to send him your draft (documentation,final,6b) as support. Why don't we journalize it, clearly marked DRAFT, so we get a nice, familiar format and can get at it easilly again, since I note it has been used this way a couple ot times before.
*****Note: Author Copy*****

12m

DVN 7-NOV-74 16:46 24437
One More thought about Journal Deliveryy

DVN 19-NOV-74 08:26 24543

Message: As a step toward (documentation, final,,6b6c4) and the rest of that plex, what the journal should do is enter in everyone's initial file an author,keword, and arrival data catalog of journal items sent to her or that she sent.
*****Note: Author Copy*****

12n

DVN 6-NOV-74 10:39 24425
400 Cockrels
Message: A lady just called frm Tabor farms who said that Mrs Jeanne Beck at a different xtension had ordered 400 cockrels and since SRI owed them $268 from 1973 from previous orders of cockrels she wanted them to pay up befoe she shipped more. I thought there was a mistake and shunted her to the extension number she had. But, Jeanne, if you have been ordering cockrels, it's time to pay up.
*****Note: Author Copy*****

12o

DVN 6-NOV-74 10:22 24424
Locator Has Lost the Journal Indices
Message: They may be on line, but a sampling of links in locator takes me to files that say they are not online.
*****Note: Author Copy*****

12p

DVN 4-NOV-74 22:12 24406
References and Thoughts about Output to COM from Office-1
Location: (MJOURNAL, 24406, 1:w)
*****Note: Author Copy*****

12q

DVN 4-NOV-74 09:04 24394
Response to Outline for Output Processor Primer
Message: Jeanne, your outline looks neat to me. I would be sure to include a scenario of making a format via the format system.
*****Note: Author Copy*****

12r

Comments: This comments on (hjournal,24389,) 12r1

DVN 1-NOV-74 21:41 24386
Edition II of DCA Paper
Message: I spent some time Friday afternoon talking on the phone with Susan about the DCA paper. Mostly we got some ODP directives straightened out. She also mentioned that Lyons had sought local printing for Edition II see--vannouhuys,oldmess,#dcasc) and gotten a minimum of 15 days for 100 copies; couldn't we do as well? I think we might. It would take some forwarning of DDSI.

DVN 19-NOV-74 08:26 24543

The paper would be ready early next week (they are still editing). It might be necessary for me (or Dean) to go to DDSI and watch what came out and make corrections via a terminal there and bring the file down again if necessary, but that might be worth while for that paper.
*****Note: Author Copy*****

12s

DVN 31-OCT-74 09:42 24368
Your Help with <vannouhuys,septline,>
Message: It looks neat tom me, I am going to circulate this version to Don and Martin.....While we're at it, I would appreciate your thoughts on a draft of a brief document on TNLS addressing, in <hamilton,tnlsaddressing,>.
*****Note: Author Copy*****

12t

DVN 31-OCT-74 09:11 24367
Question about Conformation of the Lineprocessor User's Guide to Specificatons
Message: Particularly in organization, the Lineprocessor User's Guide does not conform to the specifications set out in (journal,24335,1b. Don, since 24335 was the first I learned of those specifications but I have spoken to you several times in the intervening weeks, I wonder if you think the guide fulfilles users' needs except as we noted in our last conversation?
*****Note: Author Copy*****

12u

DVN 30-OCT-74 08:54 24361
Watching
Message: How nice to know you are still watching us from afar....I have deleted my citation to your message that gave the DCA publication scheudle and the online journal catalogs are a shambles, could you send it to me again?...There is some chance I will be in Washington next week for the Demo, but I think the odds are against it.
*****Note: Author Copy*****

12v

DVN 28-OCT-74 21:51 24343
The Need for a Way to Create Formatted, Sequential Files Suitable for Printing at Terminals at Other Sites
Message: It sometimes happens that we want to pass a file through the formatting steps of the Output Processor for transmisson to some one who will print it out at a terminal as a sequential file, e.g. as part of a sendmessage. A file created by the command Output Printer contains some control characters intended for our line printer that make it unsuitable for printing at a terminal.

A procedure exists for passing this file through Sendprint to scrub out the control characters, but it is awkward to use and creates a file that may contain long lines which TENEX then wraps around with a double star. It appears that if the output teletype command could aternatively output to a file, that file would be suitable for this use.
*****Note: Author Copy*****

12w

DVN 28-OCT-74 09:21 24334
Please Send Sample XGP Fonts
Message: Glad to hear XGP can change type sizes. Please do send samples of all available fonts.
*****Note: Author Copy*****

12x

DVN 25-OCT-74 13:39 24326
Conversation with Connie McLindon about ARPA and ISI-XGP
Location: (MJOURNAL, 24326, 1:w)
*****Note: Author Copy*****

12y

DVN 25-OCT-74 13:22 24325
Functional Documents and Journal Numbers
Location: (MJOURNAL, 24325, 1:w)
*****Note: Author Copy*****

12z

DVN 24-OCT-74 22:17 24318
More On Journal Citations
Location: (MJOURNAL, 24318, 1:w)
*****Note: Author Copy*****

12a@

DVN 24-OCT-74 20:13 24317
The Salesman from George Lithograph Will be Here Tmorrow
Message: When Walter Bass was still here, ARC spoke to George Lithograph, a local firm with a good reputation in the printing field, about doing our COM work. Recently they aquiredd a new COM device, a Singer 6000, and remembered us enough to have a salesman call. I have an appointment with him tomorrow at 2:30, and I'm sure he would be glad to talk with anyone who want to join us. He has asked for and I intend to supply a sample tape of our output(jjournal,12214,) and our specifications(journal,14093,).
*****Note: Author Copy*****

12aa

DVN 24-OCT-74 09:28 24293
Is Aything Happening on COMing the DCA Paper?

DVN 19-NOV-74 08:26 24543

ASAS

Message: Is anything happening? Since I don't presently have anything else to go to COM, I'm not planning to send the file you made tonight unless I hear from you otherwise.
*****Note: Author Copy*****

12ab

DVN 24-OCT-74 09:04 24292
Is Documentation Holding Up NLS-8?
Message: I feel I have lost touch with why NLS-8 has not come up as the running system at Offie-1. If it is waiting for documentation I would like t know about it. The state of documentation is essentially as described in (mjournal,24247,2) except that a draft of the two-page document (mjournal,24247,2h) now exists and a draft of the revised viewspec cards (JRNL22, J24266:gw) and (journal,jrn122,j24262) is in review.
*****Note: Author Copy*****

12ac

DVN 24-OCT-74 08:41 24290
Faileur to Properly Journalize the NSW Proposal
Message: It's my fault that the NSW proposal is not online under its correct number (23352). It was originally printed with the number preassigned to Mil and a simulated journal header for publicatioin purposes. Sometime in September Dick asked Joan to journalize it corrctly. She tried to do so with my help, but the Journal system was suffering from a bug at the time so that when it failedto act on our request for Mil's preassigned number and instead gave us a new number, it did not give an error message. Some time later we discovered we had failed. I did not get arround to trying again unil, as a matter of fact, yesterday. The journal will normally grant access to a preassigned number either if the number is assigned to an author or if th sender is connected to the assignee's directory. Of course Mil is not an author and I discovered yesterday that her directory no longer exists. I expect this journal item will reach Dave Hopper and he will advise m how to proceed. When I hear from him I will journalize the proposal under the right number forwith.
*****Note: Author Copy*****

12ad

DVN 23-OCT-74 11:22 24269
For A user otion to Turn off Journal notification
Location: (JOURNAL, JRNL22, J24269:gw)
*****Note: Author Copy*****

12ae

Message: 12ae1

I think the feature of the journal interrupting your work to

DVN 19-NOV-74 08:26 24543

tell you when it delivers is a pain in the ass; there should be a useruption to defend users against it. Nor do I like delivery itno the classes Information and action. It is bad enough trying to force items into those blunt catagories when you send them. 12aeia

DVN 23-OCT-74 09:10 24266
Revised Viewspec Cards
Location: (JOURNAL, JRNL22, J24266:gw)
*****Note: Author Copy*****

12af

Comments: If you have suggestions, please let me know. 12af1

Message: 12af2

Jeanne Beck hasbrought the little viewspec/Keyset cards up to date and made some changes in the fomat, improvements as I see it. I amseneding the revision thrugh the review process, but with luck everyone will OK it and we can send the file to DDSI thursday night. The draft is in <userguides,viewspeccard,> and some further explanation is in (journal,jrn122,j24262) 12af2a

DVN 21-OCT-74 19:39 24263
Alba Amicorum
Message: Could yo do me the favor of asking Caroline what "alba amicorum" might mean in the context of Christian religious books?
*****Note: Author Copy*****

12ag

DVN 18-OCT-74 13:49 24247
MINUTES OF DOCUMENTATION MEETING OF 10-14-74: Status of Documentation, Plans for Introductory Hardcopy for Help, Plans for Something for Learners to Read.
Location: (MJOURNAL, 24247, 1:w)
*****Note: Author Copy*****

12ah

DVN 17-OCT-74 21:26 24242
Missing Indeces: All the Links in the Attached Group Yield the Message File Not Online
Location: (MJOURNAL, 24242, 1:w)
*****Note: Author Copy*****

12ai

DVN 17-OCT-74 12:53 24237
Proposal Posibility: Output Processorr Direct to XGP [To add this item to DPCS subcollection]

ASAS

Message: See <mjournal,24134,>
*****Note: Author Copy*****

12aj

SRI-ARC 16-OCT-74 16:22 23912
NLS-8 Command Summary [as of 6-OCT-74]
Location: (MJOURNAL, 23912, 1:w)
*****Note: Author Copy*****

12ak

DVN 16-OCT-74 16:09 24234
Minutes of Documentation Meeting of October 7; Command Summary, Userguides, Help and Syntax, Proofing
Location: (MJOURNAL, 24234, 1:w)
*****Note: Author Copy*****

12al

DVN 16-OCT-74 14:54 24233
Primer, DCA Internetting Study Drafts, Font Test Tape to DDSI
Location: (MJOURNAL, 24233, 1:w)
*****Note: Author Copy*****

12am

DVN 16-OCT-74 09:10 24228

Message: mes watson,message,txt;
*****Note: Author Copy*****

12an

DVN 15-OCT-74 13:42 24220
The Next Move In DPCS for Montgomery
Message: Naturally I am interested in the possibilitiesof NLS publications services to the people in Montgomery, What is the next move?
*****Note: Author Copy*****

12ao

DVN 10-OCT-74 21:47 24192
Role of Nucleator
Message: Doug, and I and Nielsen have substantially agreed that I will be a nucleator, There are some budget considerations incompletely resolved but the general plan now is that my time committed to such work will graudally rise from its present 10-15% to about 50% in January and probably more later, We will have to think carefully how we can most effectively use the remainder of my time, Neilsen is anxious that I not do anything that makes me appear to ARC as an outsider, I have not taken any action on replacement until things clarify a bit more,

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

12ap

DVN 10-OCT-74 20:03 24190
Anthropomorphism Can Aid Clarity
Location: (JJOURNAL, 24190, 1:w)
*****Note: Author Copy*****

12aq

DVN 10-OCT-74 08:16 24180
Dean's Priorities
Message: I cast my vote for a revised OP Users' Guide first, We have about30 of these guys left and give them out almost daly, (We have a good supply of a slightly deffective printing of the same version,) second the bibliographic subsystem,
*****Note: Author Copy*****

12ar

DVN 9-OCT-74 09:29 24172
Journal Confounds Bugs with Dreams
Message: I am a member of a group exploring possibilities of controling dreams, One of the techniques is to tell anyone who appears in your dreams about the dream, Recently Elizabeth Michael appeared in some of my dreams, Since she was travelling and I had to send her some information about demonstration files anyway, I reported my dream to her in a journal item, In one of its rare moments of humour the journal gave the same name (24170) to two items, the dream and an item by Jeanne Beck reporting a bug, The dream has the higher version number so people loading the item get the dream, Try (jjournal,24170,nls:1,1:w) if you want to learn about the bug,
*****Note: Author Copy*****

12as

DVN 8-OCT-74 20:37 24170

Location: (JJOURNAL, 24170, 1:w)
*****Note: Author Copy*****

12at

DVN 30-SEP-74 22:21 24105
Information on Printing Through COM
Location: (JJOURNAL, 24105, 1:w)
*****Note: Author Copy*****

12au

numbers 13

22128 13a

(documentation) 17b

Privacy:(ijournal,10341,) 17b1

(vannouhuys,qmr,:xb) 17b2

(documentation,help,help *control-q>kwcs 17b3

(documentation,help,)jjsyzygyg 17b4

(documentation,snort, mmb)jjsyzygyg 17b5

(bbn-tenex,walace,doit) 17b6

(imlac,imlac-users-guide,:xb) 17b7

(documentation,dimex,)ergsdnb 17b8

(hjournal,10088,) 17b9

(hjournal,10035,) 17b10

DPUG 17b11

(userguides,op-dirlist,1) 17b11a

(userguides,op-direxp,1) 17b11b

(userguides,op-dirindex,1) 17b11c

(userguides,op-intro,1) 17b11d

(userguides,op-valop,1) 17b11e

AKW paper: (Ijournal,14724,1) 17b12

Co-ordinate Services paper: (Mjournal,12445,1) 17b13

(journalref) 17c

(journal,jrn121,j23320) 17c1

(journal,jcat,j13001:;[");WA"];kxr) 17c2

(nic,locator,2 :xmbb) 17c3

Recent Entries:(journal,tjcat,1:xbbrrD) (journal,tjcat,:;[" Bair "];kxbbrr) 17c4

```
   (tejournal,jnjn40620,nip;1,1)                                    17c5

(initials)                                                           17d

     (norton,jcn,:mx)                                               17d1

     (stone,dls,author:ctr)                                         17d2

     (bbn-net,njn,author:ctr)                                       17d3

     (bair,jhb,author:ctr)                                          17d4

   (engelbart,dce,author:ctr)                                       17d5

   (identfile,idents,master,kwac)
   (identfile,idents,master,3:;["Ge"]10$150CH "BBN";kg)
   (identfile,idents,master,3:;["Ge"] AND[ "BBN"];kg)               17d6

   (identfile,idents,master,"Kruz")
   (identfile,idents,master,3:;["Ge"]10$150CH "BBN";kg)
   (identfile,idents,master,3:;["Ge"] AND[ "BBN"];kg)               17d7

jprogram)                                                            17e

     (hopper,kpgms,:x)                                              17e1

   (cutprog,:x) (cutprog,tryone)                                    17e2

     (nic,keysorts,:xb)                                             17e3

    (norton,jcn,programs :xb)                                       17e4

    (edprogs,:x)                                                    17e5

   (user-progs,makeref,)                                            17e6

   (user-progs,append,)                                             17e7

   (user-progs,letter,)                                             17e8

   (user-progs,-contents,)                                          17e9

(play)                                                               17f

     (zymurgy,:o)                                                   17f1

      (taxon,:x)                                                    17f2

     (mylin,:x)                                                     17f3
```

(agentann,16) 17f4

(documentation,mickey,) 17f5

(documentation,jane,) 17f6

17f7

(trainingaids) 17g

(nic,locator,2i;xbb) 17g1

(auerbach,syllabus,;x) 17g2

(train,;;SINCE(29-Mar-73 9:50);k) 17g3

(structures,) 17g4

(taxon,;x) 17g5

(apple,) 17g6

(where,) 17g7

(headfoot, ;xrm) 17g8

(jernigan,a=nictnls,) 17g9

17h

NLSControlCharacters 18

CA="D,|;ECHO=|; 18a

Give editor Lee Work a copy of the humphry report 19

ASAS

(J24543) 19-NOV-74 08:26;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /DIRT([INFO-ONLY]) ; Sub-Collections: SRI-ARC DIRT; Clerk: DVN; Origin: < VANNOUHUYS, DVN,NLS;535, >, 12-NOV-74 08:20 DVN ;;;;####;

DCE 19-NOV-74 08:45 24544

Expected visit, 20 Nov 74, from Professor Schweppe (Sp?), U. of Kansas

1530 arrival: ADAG/NSW-like interests. RWW, please assign co-host for me.

DCE 19-NOV-74 08:45 24544

Expected visit, 20 Nov 74, from Professor Schweppe (SP?), U. of Kansas

On Monday, Professor Earl Schweppe (Sp?), University of Kansas called Phyllis Winkler in Stanford's Computer Science Dept. He called from San Diego, ACM meeting, and asked her to set up appointments with Professor Knuth and with me. He is set to see Knuth from 2 to 3 on Wed, 20 Nov, and to visit ARC at 3:30. 1

Tuesday morning (19 Nov), he called me, from locally. He explained a bit about his interests: 2

At one time he had been very interested in special keyboards, and had communicated with me about keysets, etc. Never visited. He was never supported for that, but continued to be interested. 2a

Now he is working toward creating an experimetal, high-performance CRT display terminal that he hopes to use to facilitate programming. He carries in the trunk of his car his own "intelligent" terminal (no further specs gleaned) that he'll be happy to show us. 2b

He mentioned something about wanting to provide aids to programmers, mainly they sounded like some of the special features that we were thinking of providng COBOL people under our NSW work. He is submitting proposal to ARPA for support. 2c

I aimed him toward Bill English, Bill Duvall, and Smokey Wallace at PARC (of which he hadn't been aware). 3

I could guess that with his partiular interests, he could be much better off linking in to the NSW world, and developing hardware and tools compatibly complementary to what is there. At least, it would seem that he is most appropriately hosted by ADAG. I'll be ready to greet him and have a short talk; I'll want an ADAG person to join us and be ready to take over (RWW, please draft a volunteer). 4

DCE 19-NOV-74 08:45 24544

Expected visit, 20 Nov 74, from Professor Schweppe (Sp?), U. of Kansas

(J24544) 19-NOV-74 08:45;;;; Title: Author(s): Douglas C. Engelbart/DCE; Distribution: /RWW([ACTION]) SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: DCE;

RLL 19-NOV-74 11:51 24546

SUG: Unify the output file commands and insert (copy) file commands

prompted by the latest addition: OUTPUT TERMINAL FILE command.

RLL 19-NOV-74 11:51 24546

SUG: Unify the output file commands and insert (copy) file commands

Now that we have an OUTPUT TERMINAL FILE, SEQUENTIAL FILE, etc. as well as the COPY SEQUENTIAL FILE ... USING, commands, I think a natural would be an OUTPUT [to a] SEQUENTIAL FILE USING (TERMINAL/ONE/TWO/ASSEMBLE/REMOTE,..) and an INSERT SEQUENTIAL FILE USING command so that we can have a reasonable way of going from NLS to TXT files and back again to NLS files with some assurance of maintaining the structure. 1

It is also rather confusing to have an OUTPUT TERMINAL FILE command and a output remote command, the need for both is real but the proliferation of commands must be reduced by the usual method, that is, use the available verbs and nouns. I think the 'using' option would be one way of doing this. The disadvantage is that the command becomes messy (copy seq using is already messy) 2

This also gives some symmetry to the command structure. 3

RLL 19-NOV-74 11:51 24546

SUG: Unify the output file commands and insert (copy) file commands

(J24546) 19-NOV-74 11:51;;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /FEED([ACTION]) FDBK([ACTION]) NDM([INFO-ONLY]) JCN([INFO-ONLY]) ; Keywords: OUTPUT sequential file; Sub-Collections: SRI-ARC; Clerk: RLL;

JBP 19-NOV-74 12:45 24547

new output processor directives

i would lie to hvae three new output processor directives:
1) Grab this branch ,GB;
2) Grab all blanches below level m ,GBBLVL=m;
3) Grab all statement above level m the next n lines ,GSALVL=m,n;
--jon,

1

JBP 19-NOV-74 12:45 24547

new output processor directives

(J24547) 19-NOV-74 12:45;;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /FEED([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: JBP;

EKM 19-NOV-74 13:02 24548

Sequential Files

We are trying hard to understand the problems associated with interfacing sequential files, produced on a variety of terminals and systems, into the NSW environment.

It would be helpful to us if you would let us know how the last file we created for you conforms or differs from your desires.

During this phase we need close feedback as we think through the problems and issues in this sticky area.

T 1

EKM 19-NOV-74 13:02 24548

Sequential Files

(J24548) 19-NOV-74 13:02;;;; Title: Author(s): Elizabeth K. Michael/EKM; Distribution: /WEC([ACTION]) EAR([ACTION]) HGL([INFO-ONLY]) RWW([INFO-ONLY]) DSM([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: EKM;

Last night I tried to run the index program on the group 1,461 in (userguides,commands,) a file of 19 data pages and 520 statements. After 59 minutes CPU time and about four and a half hours clock time it said: 1

```
ILLEGAL INSTRUCTION    R0 =     0
     at      777777 =     777777
Illegal instruction executed
   R1/     R2 =     2
   R2/     35 =     35
    R3/     FFILEPA+24 =      320
    S/     776006,,701006 =     776006,,701006
    M/     776006,,701006 =     776006,,701006
```

1a

It left an empty partial copy in my initial file. 1b

I don't think that if Index fails on a file this size we can say that it works. 1c

(J24549) 19-NOV-74 13:50;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /FDBK([ACTION]) DIRT([INFO-ONLY]) ; Sub-Collections: SRI-ARC DIRT; Clerk: DVN;

DVN 19-NOV-74 14:07 24550

New Names and Addresses for DDSI

John Ferdig has left DDSI, Sherry Dulbs has replaced him as the person who handles picking up and mailing the tapes. DDSI's current address for the record is : 2217 Purdue Street Los Angeles (213) 477-1401. 1

DVN 19-NOV-74 14:07 24550

New Names and Addresses for DDSI

(J24550) 19-NOV-74 14:07;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /DPCS([INFO-ONLY]) ; Sub-Collections: SRI-ARC DPCS; Clerk: JOAN;

DVN 19-NOV-74 14:52 24551

Distribution Groups of People Interested in Documentation

For a long time there has been a group for journal distribution and subcollection purposes called DPCS. The present membership is: JHB RLB2 POOH TLH JML KIRK DLS JAKE NDM DVN DCE JCN RWW and CHI. Walter Bass was, and Elizabeth Micheal is coordinator. It has been used for all sorts of items related to documentation, from specs and proposals to gripes and small working notices. It has one of the few subcollections that has actually ever been catalogued separately. The other day Frank Brignoli suggested he might want to be on such a distribution, and you will note Duane Stone has been a memeber of DPCS for a long time. It seems to me appropriate to consider dividing the group into a repository for ARC working papers, still DPCS, and a new group of distirbuted people, for which I suggest the acronym DCOM (documentation community). I am interested in several of the KWACs sharing information with each other and with me in this area, and I suggest that, with Jim Norton's approval, an explanatory inviation be ciruclated to them. Norm Nielsen and perhaps Tom Humphrey are other possible members.

DVN 19-NOV-74 14:52 24551

Distribution Groups of People Interested in Documentation

(J24551) 19-NOV-74 14:52;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /JCN([ACTION]) JOAN([ACTION] dpcs notebook please) DPCS([INFO-ONLY]) ; Sub-Collections: SRI-ARC DPCS; Clerk: DVN;

KIRK 19-NOV-74 17:05 24552

The index userprogram

The current index user-program is not now, and as far as I know, never has been advertised to work on large files (100 statements or so). It is an experimental program that does work (at the beat of it's own drummer) for smaller chunks of large files but there is an NLS number of statements limitation not to mention the disk space limitation (we may have reached 0 pages while DIRK's index was being run).

KIRK 19-NOV-74 17:05 24552

The index userprogram

(J24552) 19-NOV-74 17:05;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /DIRT([INFO-ONLY]) FEEDBACK([INFO-ONLY]) ;
Sub-Collections: SRI-ARC DIRT FEEDBACK; Clerk: KIRK;

SRL 20-NOV-74 05:42 24553

Problem with Jump to Link

I got a message back from feedback this morning. There is some problem with the catalog entry name - furthermore you shouldn't see such a link...
This is kind of cryptic - if you want more info ask feedback. By the way the apple was great!

1

SRL 20-NOV-74 05:42 24553

Problem with Jump to Link

(J24553) 20-NOV-74 05:42;;;; Title: Author(s): Susan R. Lee/SRL; Distribution: /ELF([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: SRL;

DVN 20-NOV-74 08:38 24554

Index Command not User-Program

I was inexact in speaking of index program in my recent note to feedba ck, I was using the index command in the subsystem created by the publish user program, The system did not remark on undefined globals, 1

DVN 20-NOV-74 08:38 24554

Index Command not User-Program

(J24554) 20-NOV-74 08:38;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /HGL([INFO-ONLY]) KIRK([INFO-ONLY]) FDBK([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: DVN;

RWW 20-NOV-74 08:48 24555

Note on NSW Scenario

We have not heard any response on the note requesting an NSW wide design document. If I do not hear from them in a day or so I will call them. We should continue on ours. In some respects we are in a better position than they are to see the big picture as we are working on Frontend, Protocols, and a major tool. I would appreciate it very much if you could reorganize the draft I saw, if you haven't already, to use NLSstructure to distinguish the various levels under discussion. For example, level one for statements on user actions (one statement per action), level two for systm actions to saisfy user action, one statement per action, and level three for commentary - alternatives justification, open issues etc. 1

There is also a need for a document that describes our model of what a NSW tool is, this could be a separate section but is probably bbest ass a separate document. Thanks Dick 2

RWW 20-NOV-74 08:48 24555

Note on NSW Scenario

(J24555) 20-NOV-74 08:48;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /CHI([ACTION]) JBP([ACTION]) JEW([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: RWW;

RWW 20-NOV-74 08:57 24556

Note on Dirk Move Timing

I just want to record my understanding of the process by which Dirk will move out of ARC to DPCS community work. We have heavy documetation needs that Dirk is uniquely qualified to deal with and it will seriously hurt our NSW efforts if he should move out before we have found and trained a replacement for him specifically. We are beginning to search for such a replacement. It is my assumption that Dirk will be able to move out as fast and in the corresponding percent as we, mostly he, can train a replacement. It is also my assumption that until July we can count on some minimum amount of Dirks time, say one fourth as some of the things we need to do tie in nicely with needs of a DPCS community.

RWW 20-NOV-74 08:57 24556

Note on Dirk Move Timing

(J24556) 20-NOV-74 08:57;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /DCE([INFO-ONLY]) DVN([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: RWW;

DVN 20-NOV-74 09:17 24557

Users Should Know What Publish Can and Can't Do

Comment on 24552.

DVN 20-NOV-74 09:17 24557

Users Should Know What Publish Can and Can't Do

If that is the case, then not only should the limitation of the Index Command appear in an effects branch in Help, but they should be brought to the users attention when she tries to use the subsystem say as a message that comes up when it is loaded or noise words in the command, "Index (not more than 100 statements)", or perhaps the comand should be Index Not (more than 100 statements). 1

DVN 20-NOV-74 09:17 24557

Users Should Know What Publish Can and Can't Do

(J24557) 20-NOV-74 09:17;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /DIRT([INFO-ONLY]) DLS([INFO-ONLY]) FDBK([INFO-ONLY]) ; Sub-Collections: SRI-ARC DIRT; Clerk: DVN;

RWW 20-NOV-74 09:21 24558

Hole in the Documentation Area Between Applications and Development

We have the same situation with documentation that we have with software, namely the time has come to move on the our other NSW responsibilities. 1

Applications needs someone(s) on their side for documentation that can play the same type of role Dave Hopper is playing for software. Documentation has all the same types of attributes as software, it has bugs, it can need further clarification, it can be incomplete etc. Applications needs someone to maintain the Help data base and various hardcopy, locator forms that its clients use, development only feels responsible for creating documentation at some acceptable level commensurate with its funding to document new things it is creating. 2

For NSW we need to move on by January 1,1975 to creating a Help data base for the Frontend, documenting new NLS features, creating special documentation to support the Training packages we need to develop for NLS use by COBOL programmers, NSW documetation people, secretaries. There is clearly an overlap here with training on the Applications side and special documentation needs of Applications and we should get together and discuss these and try to prevent any overlap or duplication. Our needs are for things to be delivered in July, Applications may have more immediate needs, that they will have to service with their staff or find ways to fund increases in ours. 3

RWW 20-NOV-74 09:21 24558

Hole in the Documentation Area Between Applications and Development

(J24558) 20-NOV-74 09:21;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /JCN([ACTION]) DCE([INFO-ONLY]) DVN([INFO-ONLY]) JHB([INFO-ONLY]) POOH([INFO-ONLY]) JMB([INFO-ONLY]) RLL([INFO-ONLY]) SRL([INFO-ONLY]) JDH([INFO-ONLY]) CHI([INFO-ONLY]) EKM([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: RWW;

RWW 20-NOV-74 09:29 24559

Note on Frontend Needs by Next NSW Meeting

By the next NSW meeting Dec 9-10 I would very much like to have fairly final forms of design documents for the OSI and Higher Level Frontend functions. I would also like to be definitely finished with the L 10 compiler and be able to say that we are actively using it , loading code produced and executing it. I am very worried about the fact that new goodies keep coming along to be inserted and that the thing seems too open ended. You guys must exercise real restraint and finish that task so we can actually get a frontend working by July. Every new goodie has excellent motivation for its insertion, but I am afraid that it is an essentially inexhaustable list. Thanks Dick

RWW 20-NOV-74 09:29 24559

Note on Frontend Needs by Next NSW Meeting

(J24559) 20-NOV-74 09:29;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /CHI([ACTION]) DIA([ACTION]) KEV([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: RWW;

RWW 20-NOV-74 12:42 24560

Please be sure to include Stone and Wingfield on NSW documents

Just a note to remind people to include Duane Stone and Mike Wingfield on the distribution of working papers for NSW as well as Crocker, Crain, carlson, Balzer et al, I think the general NSW Distribution list in Postels directory may be too large for many things and we should see who should be on a shorter one, Charles please check to see if Duane (Stone @office-1 or DLS) and Mike (wingfield@office-1 or MAW) got the Frontend issues, L10, and scenario documents and if not please forward to them, Similarly Jim Jon please check to see that they got the PCP and any other important protocol documents, As major sponsers of out work they get asked by their management what we are doing and we can help them help us by keeping them informed, Thanks dick

RWW 20-NOV-74 12:42 24560

Please be sure to include Stone and Wingfield on NSW documents

(J24560) 20-NOV-74 12:42;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /NPG([ACTION]) JBP([ACTION]) DVN([ACTION]) POOH([ACTION]) JMB([ACTION]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) ; Sub-Collections: SRI-ARC NPG; Clerk: RWW;

DVN 20-NOV-74 14:09 24561

Please Add Norm Nielsen to the Ident File

Norman R. Nielsen,of SRI, non ARC, extension 2856,room J1053, ident NN or if that is not free NRN. Thanks. 1

DVN 20-NOV-74 14:09 24561

Please Add Norm Nielsen to the Ident File

(J24561) 20-NOV-74 14:09;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /MLK([ACTION]) JOAN([ACTION] please print a copy of this and mail it through the SRI mail to Norm Nielsen) ; Sub-Collections: SRI-ARC; Clerk: DVN;

This is to test what happens when
there is a formatted

title..

Test of the carriage return in a title 1

This is to test what happens when
there is a formatted

title..

(J24562) 20-NOV-74 14:34;;;; Title: Author(s): Kirk E. Kelley/WUC;
Distribution: /KIRK([ACTION]) ; Sub-Collections: WUC; Clerk: KIRK;

RLB2 20-NOV-74 15:31 24563

Visit of Stanford Design Class

On Wednesday 11/27 Professor Roth's Computer Aided Design class will visit arc for a demonstration of NLS. The demo is scheduled for 12:15 to one or two o'clock for 16 students. 1

RLB2 20-NOV-74 15:31 24563

Visit of Stanford Design Class

(J24563) 20-NOV-74 15:31;;;; Title: Author(s): Robert Louis Belleville/RLB2; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: RLB2;

proposals

1) fill out bid cost sheet and proposal clearance form 1

2) take to division office (Barbara Officer x2292) and ask her to assign the appropriate numbers. 2

3) give proposal to Gerry Oram L1047 x2830 for editing (let her know if it is really a rush situation--which obviously occurs occasionally) 3

4) After editing route for all signatures, DCE, Spencer Floyd, Bart Cox in division office...etc. they will often make additional edits . 4

5) Final edits should be made on-line at this point and when proposal is ready in final form, show it again to the author. 5

6) Take to Gerry Oram again and ask to have proposal printed 6

Gerry will give 7 copies to contract, 5 of these go the the prospective client, 2 are kept by contracts. 6a

(50 copies for smaller, 100 for large proposals.) Ask Gerry to let you know when it comes out of printing so you can go down and take a look at it--occasionally it comes out too light and must be printed again...use your judgment. 6b

Put extra copies of part 1 in closet near DCE's office. Give extra part 2 copies to JCN. 7

8) file master and one copy of complete proposal in secretarial office file. 8

SLJ 20-NOV-74 19:36 24564

proposals

(J24564) 20-NOV-74 19:36;;;; Title: Author(s): Sandy L. Johnson/SLJ;
Distribution: /JOAN([INFO-ONLY]) JCN([INFO-ONLY]) SLJ([
INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: SLJ; Origin: <
JOHNSON, PROPOSALS,NLS;5, >, 14-NOV-74 11:20 SLJ ;;;;####;

test

Ha who

JDH 21-NOV-74 05:37 24565

test

(J24565) 21-NOV-74 05:37;;;; Title: Author(s): J. D. Hopper/JDH;
Distribution: /HGL([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk:
JDH;

JDH 21-NOV-74 08:42 24566

test

ha

JDH 21-NOV-74 08:42 24566

test

(J24566) 21-NOV-74 08:42;;;; Title: Author(s): J. D. Hopper/JDH;
Sub-Collections: SRI-ARC; Clerk: JDH;

RLL 21-NOV-74 10:14 24567

Visit: Simpson (ONR) and Monteleon (NELC)

(DATE) 19-NOV-74 1

(BY) LIEBERMAN (RLL) 2

(ATTENDEES) Name of attendee - Organization acronym 3

Robert Lieberman (RLL) - SRI 3a

Roland Payne - SRI 3b

Randy Simpson - ONR 3c

Vic Monteleon - NELC 3d

George Emerson - NPG 3e

(MEDIUM) FACE-TO-FACE 4

(WHERE) SRI-ARC, Menlo Park CA 5

(ACTION-ITEMS) none 6

(DISTRIBUTION) JCN DCE 7

(REMARKS) 8

For approximately one hour I gave a demonstration of NLS. 8a

Initially Rolan of SRI gave me an introduction to the contract that his group has with ONR-NELC (Monteleon). 8b

SRI has a Navy contract (part of a large one) for the NAVY Task Force Command Center. 8c

Monteleon's project is to install new tools and methods for the tactical commanders on several ships. This includes hardware, procedures and software. 8d

The project that Monteleon is on is related to the Simpson project. 8e

Simpson's project is to specify new methods of tactical decision making of the commanders. In the past studies have come with methods that have not been incorporated into the fleet. Simpson's project is to find out how to move it into the fleet. 8f

Emerson is a student at the Naval Postgraduate School studying operation research. He is presently on a six month experience tour of duty at NELC. 8g

Visit: Simpson (ONR) and Monteleon (NELC)

After a conceptual introducton to our direction, I showed them several of the basic faciilities available with NLS. 8h

Overall impression was that they did not catch any of the concepts or the potential of implementing these. They seem to think that our features were of very limited value in their projects. I did not protest, but I think they are wrong. They have a distributed set of people (at least some are shore based) which have to make tactical decisions. They are concerned with the decision making tools and not with the interface that they must use to use these tools and methods. I think NLS would be perfect for such an interface. Of course the fleet based commanders would pose a problem since they have very special communications, (also, for example, the mouse might be very poor on a rolling ship.) I think this level of user should not be in our interest to support for several years and not until some additional development in the special area of sea based situations. 8i

Even the documentation aspects of NLS did not excite them. 8j

Management controls and large group collaboration were just a bit beyond their comprehension. 8k

The exception was Roland Payne (SRI) who make some good comments and tried to show where NLS might be of value to them. I believe he did catch on to some of the potential in our developments. 8l

I remarked to Simpson that we were interested in any results he might get in the decision analysis area. He had missed the ONR talk of 7 NOV. 8m

(DOCUMENTS) Hard copy given and received 9

(GIVEN) Date and documents given 9a

19 Nov 74 : Coordinated Information Services for a Discipline-or Mission-Oriented community (12445,) 9a1

(RECEIVED) Date and documents received 9b

None 9b1

RLL 21-NOV-74 10:14 24567

Visit: Simpson (ONR) and Monteleon (NELC)

(J24567) 21-NOV-74 10:14;;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /JCN([INFO-ONLY]) DCE([INFO-ONLY]) ; Keywords: visit; Sub-Collections: SRI-ARC; Clerk: RLL;

JHB 21-NOV-74 10:48 24568

Sendmail form

The command is screwy...it says insert sendmail form, should be status form. 1

JHB 21-NOV-74 10:48 24568

Sendmail form

(J24568) 21-NOV-74 10:48;;;; Title: Author(s): James H. Bair/JHB;
Distribution: /MAP2([ACTION]) RLL([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: JHB;

KIRK 21-NOV-74 14:12 24569

Users Should Know What Publish Can and Can't Do

Your suggestion that the Index command have noise words explaining it's effectts is a good one and I will putt tthem in as you request. The limitation is already documented in help. 1

KIRK 21-NOV-74 14:12 24569

Users Should Know What Publish Can and Can't Do

(J24569) 21-NOV-74 14:12;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /DIRT([INFO-ONLY]) ; Sub-Collections: SRI-ARC DIRT;
Clerk: KIRK;

NSW / NLS Plans

INTRODUCTION and SUMMARY 1

ARC's proposal for work on the NSW system (SRI No. ISU 74-132) contained three "core" task areas. One task area "NLS as an NSW Tool" contained a number of subtask areas that would: 1a

1) make NLS an example of a tool fully integrated into the NSW environment, 1a1

2) provide modifications and enhancements to NLS yielding user features of particular value to the initial NSW user community. 1a2

The list of tasks was based on our understanding of the needs at the time the proposal was written. The major proposed effort would have provided a special user interface and set of tools to aid the COBOL coding process. Later discussions at a meeting of NSW contractors and user representatives at the Air Force Data System Design Center indicated that NLS enhancements to the documentation/publication area, including the ability to provide simple line drawings and other graphic capabilities, might be more valuable. 1b

A document was prepared that expanded the list of possible NLS tasks toward these needs. Dick Watson, Harvey Lehtman, and Elizabeth Michael traveled to Washington, D.C. and Montgomery, Alabama to discuss and assign priorities to these tasks with Air Force Data Services Center and Data Systems Design Center personnel. Following three days in Washington, the SRI-ARC group went with Lt. Carlson to Gunter Air Force Base to discuss the program with Air Force Data Systems Design Center staff members. 1c

Our opportunity to talk with the people who are actually doing the work, both in the programming and the documentation areas, was very valuable and clarified the need for NLS enhancement of publications. 1d

The tasks enumerated below are relevent to that need and are intended for implementation during the first year of NSW. 1e

Additional tasks presented in the previous document have not been included here as they require resources beyond what is available for the first year. 1e1

Summary 1f

COBOL Programming in NLS and Remote Job Entry 1f1

COBOL programmers will be provided with a Remote Job Entry (RJE) tool enabling them to compile and execute their programs. The procedure package implementing this tool on

the B4700/PDP11 will, according to our current understanding, be written by ADR while the Frontend grammar will be written by the ARC Protocol and Frontend teams. The ARC NLS group will provide a file format converson package for the conversion of NLS files into a NSW standard COBOL source format. We will also provide within the NLS editor tool a subgrammar for canned JCL preparation and methods for inputting compiler output files into NLS file format. 1f1a

It will also be necessary to train the COBOL programmers in the use of NLS to prepare and edit source files most efficiently. For example, they might be instructed in the properties of the NLS file structure to create well-structured source files and in the use of content filtering techniques to aid in scanning files. 1f1b

File Structure and New NLS Entities 1f2

The NLS file structure will be modified to permit the inclusion of graphic entities and to make possible the creation of other new entity types. It will be generalized to include several types of data blocks instead of only text blocks as it does now. Each node will also be expanded to include a possible subtree of properties; thus a statement with graphical content will need to include both the linework and associated text. Some of the new entities possible are headings (as mentioned below for the document production system) and comments associated with the text of a statement. 1f2a

Graphics and the Graphics Work Station 1f3

A linework graphics facility will be added to NLS. This will involve an extension of the NLS file structure to provide for graphical entities and correspondences between the text and the graphical entities. A user interface must be designed to enable effective control of this highly structured information both directly by the user and through appropriate system organization. A workstation with high image quality and response speed must be chosen to make the graphics system both productive and desireable to use. It must also be possible to produce permanent records of all graphical output. In particular, it should be possible to simulate computer output to Microfilem (COM) output on a graphics workstation so that the user can see and correct his page layout. 1f3a

Document Production, the Output Processor and NLS 1f4

The document production facility on NLS will be expanded to make it more complete and to make it easier to use for standard types of Air Force documents and formats. A set of default directives will be defined and will be inserted by a new print command. In addition, an interrogate mode will be introduced that will question the user about the document format desired, in order to make the facility more easily used by infrequent or inexperienced users. 1f4a

Extensions to the document production facility will include a new entity, "heading", to handle heading information more easily. Underlining (when the printing device allows), full justification in monospaced fonts, and more complete tabular facilities (such as right-justified columns and columns lined up at a decimal point) will be added. Additional formatters will be added to the set already existing to allow automatic preparation of documents in certain frequently used formats, such as Air Force manual formats and Air Force microfiche format, complete with the proper handling of the document's index. A post-processor will be added to allow COM files to be processed on a variety of hardcopy devices, the first of which will be the TEKTRONIX 4610 associated with the 4012/4014-1 displays. And finally, facilities will be integrated into the documentation production system to allow several NLS files to be processed as a single document. 1f4a1

Sequential File Interface to NLS 1f5

Extensions will be added to NLS to facilitate conversions between NLS files and other NSW file formats. The formats to be treated first are those for offline word processors, for the B4700, and sequential files which are heavily used in the Network message system. These extensions to NLS will also facilitate conversion between sequential files which originate outside of the NSW environment, and NLS files. The user will be given mechanisms for specifying the parameters of the conversion algorithm, and a method of naming, storing and invoking a set these parameters to convert a given file. These files may originate from any of the NSW supported input devices including MCST's and other such devices that permit offline data collection, or from any sequential file on ARPA network. 1f5a

Interface Between NLS and Other Mail Facilities 1f6

The NLS Journal System will be extended to provide a smoother interface to the other mail facilities to be

available within the NSW-- SNDMSG and the simple message facility to be provided by the Works Manager. This will give the user working in an NLS file environment a way of managing all his communications (from both inside and outside of the NLS user community) in a consistent manner. It allows full use of the archiving, cataloging, online referencing, and retrieval facilities of NLS and the Journal for all communications. Other mail systems to be available initially to NSW users do not provide such extensive features. 1f6a

NLS for the Inexperienced User 1f7

A secretarial support facility will be added using the already-existing features of NLS. It will partially consist of a training package introducing personnel to use of the simplest and most useful features of NLS for common secretarial tasks. It will also provide instruction about more advanced features that might be needed in other applications. Interactive modules will be provided for processing both online and offline (U. S. mail) communication. The other part of the secretarial support package will be a system for inputting and performing simple editing on an offline device (much like a typewriter) of text to be later put online. The typed and edited text will be stored in offline digital cassette machines and will be put online when system load is low in order to make most efficient use of scarce computer resources. 1f7a

Creating an Initial Set of NSW Tools 1f8

One of the tasks of the NLS programming group will be the installation of a substantial portion of the NLS workshop as a set of tools fully incorporated into the NSW environment. The following subtasks are necessary: 1f8a

1. Cleanly separate the processes which will be handled by the NSW Frontend from the Backend procedure packages. 1f8a1

2. Write the grammars for the NLS tools initially to be included in NSW. 1f8a2

3. Create a file conversion package. (See Chapter 5 -- Sequential File Interface to NLS.) 1f8a3

4. Provide the interface to the Procedure Call Protocol. 1f8a4

This conversion of NLS into a set of NSW tools should serve as a prototype for other groups who wish to make tool

installations. It is also an important exercise to test many of the NSW system concepts in the Frontend, Protocols, and Works Manager. 1f8b

Chapter 1 -- COBOL Programming in NLS and Remote Job Entry 2

Part of the initial NLS development effort for the NSW will be creation of tools and techniques to aid COBOL programmers in their work. We originally considered the development of a sophisticated COBOL interface for NLS written in Command Meta Language (CML) with each major COBOL reserved word a keyword in the language. Structural indentation would have been enforced in such a system and basic syntactic checks would have been accomplished on input. After discussions with programmers and others at the AFDSDC in Montgomery and at the AFDSC in Washington, we realized that greater benefit in the first year could be obtained by extending the NLS system in for the document production area and instead, for the first year at least, using tools already in existence with minimal extensions for the COBOL production programmers in the NSW environment. A specialized training package for COBOL users is also neccessary. 2a

COBOL Users' Training Package 2b

The tools in the existing NLS workshop have proven valuable in aiding ARC programmers in designing, coding, debugging, and documenting their code. Whereas some of these tools such as the debugger are applicable only to the specific languages used at ARC, most current NLS tools and usage techniques will be valuable in the Air Force COBOL environment. Specialized training in the proper use of the available tools and in techniques of structured programming, for which NLS is particularly well suited, could further enhance the value of the system. 2b1

Online source level debugging techniques for COBOL could be developed in coming years making use of our experiences in cross machine debugging. 2b1a

In its present form, NLS can be used to create, structure, and edit COBOL source code; COBOL programs created in other media could be converted into NLS files for further edits. Facilities existing in NLS allow output of sequential files that can be sent over the ARPANET for compilation at sites that offer COBOL compiling tools. 2b2

Production of the sequential source file including the creation of the necessary Job Control Card images, connection to the network and the COBOL site, and retrieval of compiler output can be simplified with the addition of the proposed NSW RJE

tool described below which will interface to destination batch compiler tools such as the COBOL compiler on the B4700. 2b3

Replacing existing card-oriented tools with a much more sophisticated and powerful set of tools will require some changes in programming methods and training of personnel. Under this contract we propose to develop a training package. This package would include training in the use of NLS in typical tasks associated with the development and modification of COBOL programs. It would emphasize the use of NLS files to create structured, understandable COBOL code and will introduce the use of NLS content filtering techniques to study and analyze existing code. 2b4

Interface to NSW Remote Job Entry (RJE) Tool 2c

COBOL programmers will be provided with a Remote Job Entry (RJE) tool enabling them to compile and execute their COBOL programs on any machine in the NSW which uses the Works manager and conforms to NSW file handling and procedure call protocols. 2c1

The package of procedures implementing this function on the B4700/PDP11 will be written by ADR while members of the ARC protocol and Frontend teams will be responsible for the implementation of the grammar for the tool. At first only the COBOL compiler on the B4700 will be accessible in this manner; developments in future years may make other machines and language compilers available, possibly through a multiplexing tool which could deal with routing problems and with the task of invoking the proper file and JCL conversions for the destination machine. 2c1a

The ARC NLS group will be responsible for providing a file format conversion package which would be used to convert the source code file from NLS format into a NSW standard COBOL source format. (This latter file type may eventually have to be converted again into destination machine dependent form by another NSW conversion package when more than one compiler is available in the NSW environment under the control of the multiplexing tool.) Also provided within the NLS editor tool will be the subgrammar and procedure package for the insertion of appropriate Job Control Language (JCL). 2c2

While canned JCL, provided by the destination machine's staff, will be available, programmers will be able to use the standard editing capabilities to create their own special job control. 2c2a

The RJE tool, provided by ADR and the ARC Protocol and Frontend groups, will also permit the user to query the status of his jobs, provide the ability to abort previously submitted jobs, and permit the retrieval of diagnostic output from remote compilers. 2c3

Within NLS, an appropriate conversion package for this compiler output should be available. The implementation of a useable package would be made easier if the raw cmpiler output files were formatted into meaningful 72 column lines. 2c3a

Chapter 2 -- File Structure and New NLS Entities 3

Modification of the existing NLS file structure is necessary for the development of graphics entities mentioned in a separate section and makes possible the creation of other new types of sructural and data type entities. Additionally, the modifications must be upwardly compatible with NLS files which currently exist. The proposed design satisfies these requirements and opens up many possibilities for new types of NLS files oriented to specific tasks such as catalog production or incremental compilation of source code. 3a

These modifications involve: 3a1

1) Generalization of the data block types and the linking of these blocks into a property list. 3a1a

2) Addition of subtrees to data nodes in the structure. 3a1b

Property Lists 3a2

An NLS file now consists of a tree of ring elements which represents the structure of the file. A data block which contains the text of each statement is connnected to each ring element. At present only one text block can be connected to the ring element. The file structure will be generalized to include several types (each associated with a property value) of data blocks which may be grouped together in lists; such a list may then be associated with a particular structural node. Thus the current NLS file is a degenerate state of the proposed NLS files: all nodes currently have a one element list composed of a "statement text" property data block. Among other available properties will be "diagram" which will form the head of the graphics data structure. Each diagram, figure, chart, or graph in the file will be stored in one of these structures. 3a2a

Subtrees 3a3

In addition to the generalization of the data, the structure must also be generalized to include tree structures within a specific structural node. Specifically for graphics, subtrees must be provided to hold the text of the captions in the diagram, the linework and the template definitions. In this way, a structured diagram can be attached to a single statement in the overall file. 3a3a

New NLS Entitites 3b

The extended NLS file structure discussed above makes possible the addition of several new types of entities to the current NLS repertoire. 3b1

Among possibilites to be considered later are comments associated with statements which may be displayed under user control and the table entity. Initially, however, we propose the addition of only the Heading entity. 3b2

The heading entity would be a textual entity associated with an NLS structure which may be turned on by the user for portrayal on displays and in the output processor. In the output processor, directives will be available for the control of these entities which would permit special fonts and character sizes for all headings and special page placement regardless of structural level. (Currently one may have headings in the output processor, but they are more difficult to control and often have unwanted structural dependencies and relationships to other text.) 3b3

Chapter 3 -- Graphics and the Graphics Workstation 4

A workable graphics system will be provided for the NLS environment. A simple linework capability entails consideration of several important areas: 4a

Data Structures - Provision must be made for the inclusion of graphical entities within the NLS file structure, and for the transmission of these structures to and from other media. 4a1

User Interface - Provision must be made for the efficient control of graphics data structures by the user, both through a direct interactive interface and through a clean, concise system organization. 4a2

Workstation - Provision must be made for the development and support of a high quality workstation. Interactivity and image quality are of utmost importance to insure user acceptance and productivity. 4a3

Hardcopy - The production of permanent records of all levels of documentation deserves separate consideration. While linework frequently differentiates graphics form other forms of output, provision must be made for the inclusion of a facility to meet the many needs for hardcopy. 4a4

DATA STRUCTURES FOR GRAPHICS 4b

Modification of the existing NLS file structure for graphics (as well as other entities) takes two forms: 4b1

1) Generalization of the data block types and the linking of these blocks into a property list. 4b1a

2) Addition of hidden trees to structural nodes of NLS files for the storage of linework, text, and templates within the NLS file structure. 4b1b

These file structural modifications were discussed in an earlier section of this paper. 4b2

USER INTERFACE 4c

The NLS command set will be expanded to include command words for drawing and editing the diagrams. Drafting aids will be provided in the form of increasing and decreasing cursor

resolution and application of constraints to the cursor position such as "at the intersection", "left of", etc. 4c1

Templates can be drawn and applied by the user. Instances of templates may be scaled, translated, or rotated by 90 degree increments. Template libraries can be created and maintained by the user by use of the drawing and editing commands. 4c2

User-level routines will be able to create standard figures such as bar charts, axes, etc. 4c3

THE GRAPHICS WORKSTATION 4d

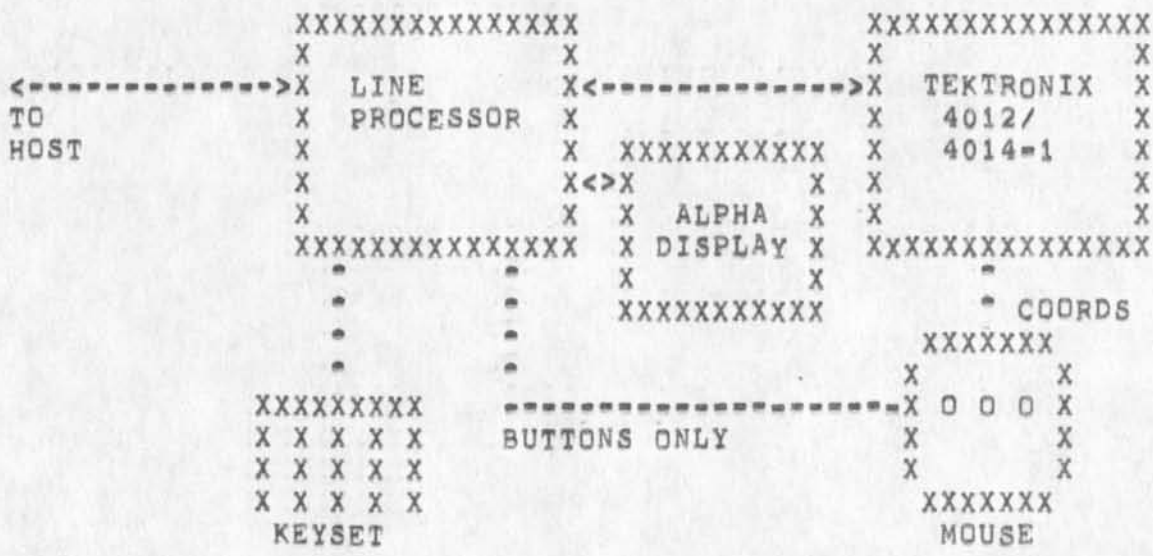
After careful consideration of the commericially avialable systems, we have decided to select the TEKTRONIX 4000 series display for the graphics workstation because of the: 4d1

1) Minimum cost of the 4012 among all commercially available units that meet specifications. 4d1a

2) Upward compatability with the larger 4014-1 which has added character capacity and finer resolution. 4d1b

3) High quality, reliability, and servicability of the TEKTRONIX units. 4d1c

The diagram below shows the relationship between the components of the workstation. Use of the alphanumeric display with the line processor frees the workstation from many of the limitations of the low cost storage tube. 4d2



CONFIGURATION OF THE GRAPHICS WORKSTATION

4d3

HARDCOPY FACILITY 4e

Graphics hardcopy will be provided through the TEKTRONIX 4610 copier, which connects directly to either the 4012 or 4014-1. Hardcopy may be requested either directly by a button on the device or through an NLS command associated with the Output Processor. 4e1

PROOFING COM 4f

A graphics workstation equiped with a TEKTRONIX 4014-1 and a 4610 copy unit can serve as a proofing station for COM output of material formatted with the NLS Output Processor. In this mode, files produced for COM could be displayed, page by page, for verification of overall format and content. Copies could serve as masters for limited production runs and working drafts. Fonts presented at the 4014 would simulate the actual COM output for draft purposes. 4f1

The 4014 provides 4 hardware drawn character sizes, each with fixed spacing. A left-right justification algorithm would simply insert spaces between words to fill out the line. Although the 4014 could paint out a software font set, this would require that definitions for each font available in each COM system interfaced to NLS formatters be obtained, coded and stored. Moveover, the elapsed time to draw the page would rise to several minutes from the 15 to 20 seconds required by the hardware character set. 4f1a

In general, 4014 COM proof output will provide an image of the page layout with some indication of highlighted text (underline and italics.) Notes beyond the right margin will provide information about type font, style, and size. (The 4014 provides about 50 characters to the right of the right margin in the smallest character size.) 4f2

Intermixed figures take two forms: 4f3

Diagrams and figures that will originate from another source will be indicated as rectangles of the correct size and placement. 4f3a

Diagrams defined by the graphics subsystem or stored within the NLS file structure will be drawn within the rectangle given by an output processor directive. 4f3b

Chapter 4 -- Document Production: The Ouput Processor and NLS 5

NLS now offers powerful editing tools and document formatting capability both for output to line printers and hardcopy terminals and for Computer Output to Microfilm (COM). We plan to add features both to the Output processor and to the NLS editor that will make document formatting and production easy and fast for both beginning and experienced users. 5a

Simplified Interface to the Output Processor 5b

A new PRINT command will be provided that inserts default output processor directives, automatically invokes the ouput processor for formatting, and prints the file. 5b1

We are considering an Interrogate mode that prompts the user to give information about the document format. 5b2

This subsystem would allow people who are infrequent or inexperienced users of the output processor to describe the document to the system and have the system insert the appropriate directives. 5b2a

Further evaluation of the need for and usefulness of this feature is necessary. It may be that the formatting programs dicussed below and the default directives will prove adequate. 5b2b

There is now a set of user programs designed to insert output processor directives in NLS files that produce finished documents in specific formats. 5b3

Several of the programs are designed to conform to Air Force specifications for particular manuals for both hardcopy and COM output. These need to be expanded to handle output to microfiche with the table of contents in proper Air Force sequence and format. New programs, designed for frequently used formats may be added as need is demonstrated. 5b3a

This system will be integrated with the training program for inexperienced users and with the other programs and subsystems presented to these users. 5b3b

New NLS entities 5c

The Output Processor will be changed to understand and format

correctly the new NLS entity, "Heading", described above. This may also suggest new directives specially for the heading. 5c1

The graphics entity will be processed for COM output to produce documents with mixed text and graphics. 5c2

A post processor for COM. 5d

This post processor will allow COM files to be processed on devices other than the DDSI Comp80. 5d1

The first such device will be the TEKTRONICS 4012 graphics display (moving later to the more powerful 4014) attached to a workstation line processor. This will allow the user to display page proofs that closely conform to the finished document. 5d2

We are currently talking with several manufacturers of COM hardware about printing documents produced by the output processor on their products. At this point it appears that we can most effectively handle a variety of such devices through a post processor rather than by putting device dependent code into the Output Processor itself. 5d3

Underlining capability for non-COM output. 5e

This feature is device dependent. Some, but not all, line printers permit over striking. Some, but not all, hardcopy terminals permit space suppression or backspacing. We are currently examining the set of terminals and printers that will be supported in the NSW environment. When this set has been defined and the hardware features of each understood we will be able to determine appropriate underlining conventions. 5e1

Full justification 5f

Justification (even left and right margins) by means of inserting spaces between words is possible on line printers, hardcopy terminals and displays. While we feel this produces unattractive documents that are difficult to read there appears to be sufficient demand for it to warrant adding the feature. Full proportional justification is, of course, available now using COM. 5f1

Permit a set of files to be processed with a single command to produce one document. 5g

This can actually be done now with an appropriate process commands branch as long as each file begins on a new page boundary. The capability should be integrated into NLS so it is easier to use and understand. 5g1

Training in the document production area will include 3 tasks. 5h

Documents will be prepared that offer guidelines to trainers in teaching people to use the Output Processor, the formatting subsystems, NLS features necessary for document productio, and appropriate procedures. 5h1

ARC personnel will conduct preliminary training sessions for Air Force personnel who will assume the on-going training task. 5h2

ARC personnel will be available for on-going consulting and question answering. 5h3

Changes to NLS editing system 5i

Tabs 5i1

The use of tab stops presents endless problems for users on every system we have encountered including NLS. We have identified a number of problems and are considering methods for handling each. 5i1a

Scope: It would be nice to specify the scope for a given set of tab stops and the parameters associated with each. The set could, for example, be specified in the user's profile and apply to all files when not overridden. He might wish to apply a different set to a particular file, to a branch within a file, or to a single statement. 5i1a1

Starting point: For some documents it is desireable to have tab stops measured from a fixed left hand margin regarless of indented structural elements in the text. For other documents, or portions of documents, it would be more appropriate to measure tab stops from the beginning of the statement taking structure indenting into account. 5i1a2

Justification: For most applications a user wants text left justified to a tab stop. That is, the first character typed after a tab character appears at the tab position. There are times when it would be nice to have

the text, typed after a tab, rightjustified (with a ragged left margin). 5i1a3

Setting and Viewing: Methods of setting and viewing tab settings for a particular scope must be provided and must take into account the type of terminal. 5i1a4

Input feedback: Whenever possible a literal string containing tabs should appear exactly as it will appear when displayed or listed at the terminal or on a printer. 5i1a5

It is our expectation that the new file structure, permitting property lists, will make implementing a new tab capability relatively easy. Before committing to provide this we need to define it more explicitly and examine the implications both for coding time and for run time system load. 5i1b

Tables 5i2

Although the property list feature can eventually be used for a sophisticated table creation facility, we do not have resources to implement this in the first year. Instead we will provide a 'table mode' to make creating and editing tabular material much easier. In "table mode" numbers entered following a tab to a tab stop would be rightjustified to the tab stop. A submode can be provided that would position a decimal point embedded in the number at the tab stop. 5i2a

Underlining 5i3

We will provide a command to underline characters and appropriate ways of recording the data in the file. Implementation of underlying will require adjustments from terminal to terminal and, possibly, special knowledge by the user of the hardware features of his terminal. As is the case with underlining Output Processed documents, exact protocols for underlining will be defined when the set of devices has been identified. 5i3a

Chapter 5 -- Sequential File Interface to NLS 6

The Problem 6a

NLS uses an internal file permitting random access. Before any file which originates from any other tool can be manipulated using NLS it must be translated into the NLS internal file structure. Transmission of text files over the ARPANET is accomplished by representing the file as a sequential file, which can be thought of as simply a character stream. Transmission of text files between tools in the NSW environment will be handled in a similiar manner using an NSW File System representation for sequential files. As a result, the problem of transferring files between NLS and other tools (both NSW and non-NSW tools) is the problem of translation between NLS files and sequential files. 6a1

Communication of files between NSW tools is complicated by the fact that each tool may utilize its own unique file structure. Under the current NSW design it is the duty of the Works Manager to monitor and arbitrate the transfer of files among tools. Each file under control of the Works Manager has associated with it an attribute called "Use Type". It is expected that there will be several generic Use Types. Some examples might be: 6a2

NLS,SRC 6a2a

COBOL,SRC 6a2b

COBOL,LIST 6a2c

360,REL 6a2d

TENEX,SAV 6a2e

TECO,SRC 6a2f

ANY,PRINT 6a2g

Use Types would be checked by the Works Manager when preparing a file for use as input to a tool. Inconsistencies between the Use Type of a file and the Use Type required by the tool are resolved by the Works Manager by invoking the proper conversion packages of the tools. The set of file manipulation primitives available to the Works Manager is known as the "File Package".

It is the responsibility of the File Package to provide conversion primitives for each "reasonable" Use Type pair. For example, the conversion between COBOL,LIST and ANY,PRINT is reasonable while conversion between TENEX,SAVE and 360,REL is not. 6a3

It is clearly the responsibility of each tool to provide conversion functions between its own internal file structure and each NSW file Use Type supported by that tool. Thus NLS must provide conversion functions for each file Use Type which is acceptable to NLS as input or as an output file format. These conversion algorithms should take into account the file Use Type and produce output files that are well structured. 6a4

The problem of translating a general sequential file into a well structured NLS file was not a major problem in an environment in which only NLS was widely used; thus, an adequate general solution is not currently available. The discovery of a solution is made more difficult by the large number of possible sequential file input formats. NLS presently employs a translation algorithm which does not allow sufficient user specification of the translation parameters. As a result, unless the input sequential file happens to correspond to the assumptions made by the translation algorithm the conversion rarely produces the desired result. 6a5

Individual users may currently create simple user programs which handle the task in specific instances, but even "simple" user programs require a level of expertise which is greater than desired. 6a5a

The inverse translation from an NLS file to a sequential file is handled very well by NLS because of the existence of a powerful set of formatting tools within NLS including the "Output Processor". It is relatively easy to produce a sequential file in almost any desired output format. 6a6

The interface between NLS and NSW message facility and the TENEX SNDMSG is decribed in a Chapter 6 of this document. 6a7

Proposed Solution 6b

A subset of all NSW file Use Types will be supported by NLS as acceptable input file formats. For each file Use Type in this set NLS will contain a translation algorithm which is capable of transforming any file of the given type into internal NLS format. Similiarly a subset of all NSW file types will be

supported as by NLS as valid output file Use Types. NLS will be capable of transforming any internal NLS file into any of the legal output file Use Types. 6b1

These conversion algorithms will be specific to a file Use Type. This may enable the NLS conversion algorithms to make use of certain a-priori knowledge about the contents and structure of the files. Thus for certain Use Types NLS will know exactly the right conversion techniques to use. For example, a Use Type of COBOL,SRC might imply that the file is a card image file with each line containing 80 characters followed by a carraige return. However for other Use Types, such as ANY,PRINT the Use Type implies nothing about the contents or format of the file. The problem of converting this type of file is analogous to that of a file coming in from outside the NSW environment, and is discussed below. 6b2

Extensions to the current NLS "Copy Sequential" and "Output Sequential" commands will attempt to deal with the general problem of interfacing NLS to sequential files. 6b3

The input translation algorithm performs two major functions. The algorithm must partition the sequential file into NLS statements (currently a 2000 character maximum), and also determine the proper structural relationships between these statements. At present the user has only very limited control over this algorithm. For instance the user may specify that either one carriage return or two successive carriage returns delimit a statement. However if the input file does not conform to either of these conventions the user has little chance of obtaining a decent NLS file without resorting to a special user program. 6b4

This problem will be solved by providing more user control over the translation algorithm. NLS will allow the user to specify a content analysis pattern to use for statement delimination. Thus any pattern that can be expressed using the very powerful NLS content analysis language can be used to delimit a statement. 6b5

A similiar technique will be used to give the user more control over the hierarchical structure of the NLS file produced. NLS will allow the user to optionally specify an ordered set of content analysis filters called level filters. If a statement passes the first level filter it becomes a level one statement. Each statement is tested against the level filters starting with the level one filter. The first filter which passes the

statement determines the level of the statement. The user may also specify three default filters called same-level, up-level, and down-level. In the case that the statement does not pass any of the numbered level filters it is applied against the three default filters to determine its level relative to the preceeding statement. 6b6

It is our belief that these extensions to the input translation process will provide a much more powerful interface to the sequential fle world. For example it should be relatively straight forward to define a complete set of content analysis filters which would be applicable to any document which adhered to a given standard format, such as the Air Force Technical Document Format. This set of filters once defined could be named and invoked by name to process any document conforming to the associated standards. 6b7

Chapter 6 -- Interface Between NLS and Other Mail Facilities

7

NLS contains a "Dialog Support System" which is used extensively by NLS user communities. The central feature of this system is the Journal. Among the features the Journal provides are automatic distribution of documents, automatic cataloging of Journal documents, and retrieval of documents by author, by date, by Journal number, or by keywords. Within NLS it is possible to place references to past documents in a current document, which when delivered can be used for online full text retrieval. 7a

It is our experience that the existing Dialog Support System is a sufficiently powerful tool to manage almost all communication within an NLS community. However we realize that a person within such a community may carry on a large portion of his work-related dialog with persons who are not currently within any NLS community. Currently the managment of this kind of dialog places an additional burden on the NLS user. 7b

It would be of benefit to an NLS user to have improved capabilities to manage all his correspondence, within and without the NLS user community, in a consistent manner that allows full use of the facilities provided by the NLS Journal and NLS editor. This chapter attempts to identify simple extensions to the Journal system which would make it a tool sufficient for the support of all of a users online dialog. 7c

Before attempting to identify the necessary Journal system extensions a very brief description of the current system is appropriate. The submission of Journal documents is accomplished through an NLS subsystem called Sendmail. The user specifies the distribution list via unique identifiers called idents. An ident is a character string which identifies either an individual or group of individuals. There is a master NLS identification file which contains all of the information necessary to get the document to the designated individual or group via the online Journal, hardcopy, or over the ARPANET. 7d

One of the parameters contained in an individual's identification record is the kind of Journal delivery this person wants. There are two basic flavors of online delivery. The first, called online Journal Delivery, is typically used by people within the NLS world. This delivery mode delivers Journal mail to a specified location in the file created by the system for each user which is the first file a user sees upon entry to NLS. These Journal items are automatically ordered, most recent first. The

second kind of online delivery is called "Network Delivery" and is implemented on top of the Tenex SNDMSG facility. To deliver a Journal document via network delivery the Journal system creates a specially formatted file, and names it [unsent-mail]... . The Journal system then wakes up the standard SNDMSG mailer program which then notices the [unsent-mail] file and actually performs the delivery. 7e

It is this interface between the Journal system and the SNDMSG system which we plan to enhance. A similar interface will be made with the mail facility offered NSW users by the Works Manager. We believe the following extensions are both necessary and sufficient to create a single consistent mode of dealing with correspondence that provides full access to the capabilities of the NLS Journal. 7f

SENDING MAIL 7f1

Allow distribution to people who are not in the Identification File. 7f1a

Thus the user could specify a SNDMSG type distribution list to the Sendmail system. The Journal system would then assume that these individuals exist, without verifying this fact, and that they want their online mail delivered via "Network Delivery". 7f1a1

Allow immediate delivery of items so designated. 7f1b

Presently the Journal delivers items every half hour on the half hour if the load average is below a cut off point. There are classes of messages that the user would like to have delivered immediately as in SNDMSG. An interface can be easily added to the Journal to utilize the SNDMSG delivery mechanism for items designated for immediate delivery. 7f1b1

Give the recipient and/or author control of the decision as to whether the entire document, or a citation to the document is delivered. 7f1c

Currently this decision is made by the Journal system based on the length of message. This sometimes results in citations being sent to people to whom use of File Transfer Protocol is inconvenient for retrieval of the full text of the document. 7f1c1

Provide a "canned message" which contains instructions for

the recipient of a citation to use to retrieve the cited document. 7f1d

RECEIVING MAIL 7f2

Provide tools to manage an incoming flow of SNDMSG type messages from network users. 7f2a

We will provide mechanisms for having a users incoming messages automatically translated into NLS form and inserted in a designated location in the user's file. 7f2a1

We will also provide commands which will enable a user to easily enter a message he has recieved via SNDMSG into the Journal system. This will provide for adding comments to the message and forwarding it to other people via the Journal. 7f2a2

Chapter 7 -- NLS for the Inexperienced User 8

We will make available specialized, limited, interactive modules oriented toward carrying out specific tasks occurring frequently in an office environment, together with an appropriate training package. 8a

Tasks which have already been identified include online mail sending, reading, and sorting procedures as well as a U.S. Mail (offline) letter writing template. A number of tools already exist to facilitate carrying out these tasks. These tools must be examined for effectiveness and integrated into coherent modules which have NSW Frontend grammars that are easy to understand and use. 8a1

We will also introduce a simple offline input and editing system which will be a refinement of our current Deferred Execution (DEX) System. 8b

The offline input and editing facility should be as much like the use of a standard typewriter as possible. Simple editing functions on both files being created and on existing files should be developed. 8b1

Material entered into offline storage media will be read into the computer and processed at off-peak periods, thereby conserving valuable computer resources. The NLS interface to sequential files should permit the use of a variety of such devices: digital cartridges, cassettes, magnetic cards (MCST), and even OCR. 8b1a

The training package will concentrate on a limited subset of NLS dialog creation and documentation production tools. Training in the use of the NLS online Help facility will make possible further self education in more sophisticated NLS functions. Primers in task oriented areas will be provided: for example, letter creation, report production, offline editing. 8c

Chapter 8 -- Creating an Initial Set of NSW Tools 9

One of the tasks of the NLS programming group will be the installation of a substantial portion of the NLS workshop as a set of tools fully incorporated into the NSW environment. The following subtasks are necessary: 9a

1. Cleanly separate the processes which will be handled by the NSW Frontend from the Backend procedure packages. 9a1

2. Write the grammars for the NLS tools initially to be included in NSW. 9a2

3. Create a file conversion package. (See Chapter 5 -- Sequential File Interface to NLS.) 9a3

4. Rewrite the code to satisfy the requirements of the Procedure Call Protocol. 9a4

This conversion of NLS into a set of NSW tools should serve as a prototype for other groups who wish to make tool installations. 9b

While it is not currently clear what the optimal division of the current NLS into a set of NSW tools will be, a possible division could yield an Editor, a Calculator, a User Profile system, a Programs system, a Sendmail system, a Document Formatting system, and a Help system. 9c

Finer subdivisions to include special types of editor (e.g., for COBOL programming or secretarial tasks) may prove to be desirable. On the other hand, it may prove most efficient to make a single tool out of several of those named above. These decisions will depend on such parameters as the amount of core available in the Frontend and the time it takes to map in grammars when tools are switched. We will examine the tradeoffs involved. 9c1

Two special tools will be provided as NSW standards for the first year. The current NLS Help and User Profile systems will be transformed into NSW wide facilities. Initially the User Profile tool will permit the setting of user characteristics for NLS, the Frontend, and the Works Manager. The Help tool will be available to those who wish to write data bases corresponding to its standard. 9d

EKM 21-NOV-74 15:51 24570

NSW / NLS Plans

15-NOV-74

The NLS Programming Group
Augmentation Research Center

Stanford Research Institute
Menlo Park, California 94025

NSW / NLS Plans

(J24570) 21-NOV-74 15:51;;;; Title: Author(s): Elizabeth K. Michael/EKM; Distribution: /WEC([ACTION]) LAC([ACTION]) SRI-ARC([ACTION]) VJT([ACTION]) PCW([ACTION]) DLS([INFO-ONLY]) MAW([INFO-ONLY]) SDC2([INFO-ONLY]) RMB([INFO-ONLY]) REM([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: EKM; Origin: < MICHAEL, INDEX,NLS;34, >, 21-NOV-74 10:09 EKM ;;;; ####;

JBP 22-NOV-74 08:36 24571

output processor ideas

< POSTEL, FOO,NLS;1, >, 21-NOV-74 18:44 JBP ;;;; 1

JBP 19-NOV-74 12:45 24547
new output processor directives
Message: i would like to have three new output processor directives:
1) Grab this branch ,GB;
2) Grab all blanches below level m ,GBBLVL=m;
3) Grab all statement above level m the next n lines ,GSALVL=m,n;
--jon. 1a

FEED 19-NOV-74 18:04 31368
Design Recommendation: new Output processor directives
Message: Jon, Thanks for your input (24547,),,we will add the recommendation to our list of Design recs to be considered for implementation as soon as funds are available -- latest would be Jan 75.
(Dean, What would it take in hrs of programming time to implement these? Please respond to Feedback). Feed/jim 1b

JBP 22-NOV-74 08:36 24571

output processor ideas

(J24571) 22-NOV-74 08:36;;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /EKM([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JBP;

DVN 22-NOV-74 10:03 24572

Proposal for a Documentation Weekly Activities Report

Fairly often these days people expresse to me a sort of general intertest and confusion about the state of ARC docmentation. A file (documentation,doculist,) which will list the viable documents with some comment on their status is nearly complete, but that does not seem to be enough. As many of you know, I often advocate people reporting to one another what they are doing in the hopes of unexpected utitlity. I propose a brief, informal Documentation Weekly Activity Report in which people working on documentation (currently Kirk, Ann, Jeanne Beck, and I, but possibly including others from time to time, tell in 50 words or less what they have been doing that week. I propose that it take the form of a file <documentaton, weekly,> in which all the doucmenters would write descriptions of their work since the last report each Friday morning and which would be journalized and distributed to DIRT every Friday afternoon. Please comment. 1

DVN 22-NOV-74 10:03 24572

Proposal for a Documentation Weekly Activities Report

(J24572) 22-NOV-74 10:03;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /DIRT([ACTION]) JOAN([ACTION] please put in dirty old notebook) ; Sub-Collections: SRI-ARC DIRT; Clerk: DVN;

RLB2 22-NOV-74 11:34 24573

Report On a Presentation to the ASME (Amer. Soc. of Mechanical Eng)

The ASME conducts a meeting every years in the fall. Topics in a broad range of topics from energy to piping design will be discussed. 1

During the November 1974 meeting in New York city, I have been invited to be a panel member for a discussion on research in the field of Computer Aided Design. Professor John Allen of the University of Texas is the session chairman. Prof. Allen has indicated that the object of the session is to isolate the essential areas for future CAD research. 2

In addition to Dr. Allen (who may well be in Viena) the panel includes: 3

Dr. Melvin R. Corley
Department of Mechanical Engineering
Georgia Institute of Technology
Atlanta, Georgia 30332 3a

Dr. Walter S. Reed
Computer Applications Group
Department of Mechanical Engineering
University of Texas at Austin
Austin, Texas 78712 3b

Dr. James C. Wambold
Department of Mechanical Engineering
Pennsylvania State University
University Park, Pennsylvania 16802 3c

CAD has endless possibilities for research; however, the essential problem is computer services delivery. For industry, access to the techniques of Computer Aided Design (modeling, analysis, graphics, synthethis, etc) represents a very considerable investment. Moreover, the investment is usually aimed at a specific design task (printed circuit mask layout, for example). Utilization of adjacent techniques is impeded by programming facilities limitations, cost, and specific hardware entanglements. Inter-facility program sharing is very difficult. 4

In short, The CAD community represents a group of users in search of a truly satisfactory, computer resource marketplace. 5

The 90 minute panel will be constructed from four 15 minute sections by the panelists and questions. The object of my presentation will be to describe the concepts of the augmented knowledge workshop and the utility as they apply to the community of CAD workers. 6

The presentation must be concise and clearly focused on the ability

of the utility to evolve into the service required by the CAD community. 7

INTRODUCTION 7a

The object of the introduction will be to: 7a1

1) Wake up and obtain the attention of the audience. (The session is at 8:45 and I have the opening slot.) 7a1a

2) Describe the computer service delivery problem for CAD. 7a1b

3) Describe Utility community in general terms. 7a1c

OPERATION OF THE CURRENT FACILITY FOR SOFTWARE DEVELOPMENT, DOCUMENTATION, and DIALOG 7b

The object of this session is to indroduce NLS and create the impression that, not only does the system exist, but that it is workable. (film and slides) 7b1

FUTURE DEVELOPMENTS 7c

This section will be addressed to the NSW development and to the installation of graphics within NLS. 7c1

CONCLUSION 7d

Simple restatement of premise. 7d1

The session was held on Nov. 18, 1974. Dr. Corley reviewed some of the results of his work on effect of information display on designer speed. Dr. Reed explored some of the aspects of design methodology, and Dr. Wambold commented on design education. 8

The discussion that followed covered such matters as the use of minicomputers and hand calculators, batch vs. on-line, the designers environment, and several aspects of Computer Aided Manufacturing. In general, the participants appreciated the conduct and content of the session. 9

RLB2 22-NOV-74 11:34 24573

Report On a Presentation to the ASME (Amer. Soc. of Mechanical Eng)

(J24573) 22-NOV-74 11:34;;;; Title: Author(s): Robert Louis Belleville/RLB2; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: RLB2; Origin: < BELLEVILLE, ASME-WINTER-1974.NLS;1, >, 22-NOV-74 11:30 RLB2 ;;;;####;

DVN 22-NOV-74 11:56 24574

Microprocessor Technology Goes to DDSI with Complete Transcript

This morning I put the file of Martin Hardy's paper Microprocessor Technology,,,,(journal,20185,) on tape at ISI to be picked up by DDSI, It is on tape number 0002, 1

I append the telent transcription of the session for record purposes, 2

3

TELNET typescript file started at FRI 22 NOV 74 1108;09 4

5

#isi is complete,# 6

Message slots are now being allocated,Type LOG or GLOG; type OFFQUOTA f 7

**or more information, 8

ISI-KA-TENEX 1,32,9, ISI-TENEX EXEC 1,51,4 8a

@GLOG SRI-ARC 1 9

JOB 22 ON TTY11 22-NOV-74 11:08 9a

TENEX WILL GO DOWN THU 11-28-74 2345 TIL FRI 11-29-74 0500 9b

SRI-ARC OVER ALLOCATION BY 36 PAGES, 9c

@DIR 10

11

<SRI-ARC> 11a

ED09,TMP;1 12

ED12-122552166116,TMP;1 13

ACCOUNTING,SEPT-1-30;1 14

,OCT-1-31;1 14a

COMMUNITIES,TXT;1 15

HARDYFREP,COM;1 16

MESSAGE,TXT;1 17

OFFICE-1.TXT;1 18

WORKSHOP.TXT;1 19

]=RSPRF=[,KELLEY@SRI-ARC;1 20

,GEOFF@SRI-AI;1 20a

]ARCHIVE-DIRECTORY[,;1 21

22

@LINK (TO) OPERATOR 23

24

LINK FROM SRI-ARC, JOB 22, TTY 11 25

@;;HI, ARE YOU THERE? 26

@;YES, GA 27

!;I'D LIKE TO PUT A FILE ONTO ONE OF OUT TAPES, DO YOU KNOW THE PRO
CEDU 28

**RE? 29

@;I'M NI\IOT SUREE, BUT II WILL FIND OUT. CCOULD YYOU LINK A BACK IN 30

!;ABOUT 10 MIN. WC 31

!;SURE, I CAN ALSO TELL YOU SOME OF THE THINGS YOU NEED TO KNOW 32

@;JUST A SC SEC, OK 33

!;SRI-ARC HAS SOME TAPES SET ASIDE THERE FOR US, ALL YOU NEED TO DO
IS M 34

**OUNT THEM ON A TAPE DRIVE AND I WILL PUT THE FILES ON, WHNE I'M
THROUG 35

**H YOU NEED TO TAKE THE OFF AD SET TEM ASSIDE FOR A MESSAGNER WHO
WILL 36

**COME 37

@;OK I KNOW ALL OF THAT BUT YOU STILL HAVEN'T SAID DECT TAPES OR M 38

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40

!;DE MMAG, TAPE, OR SCRATCH TAPE??????? 41

!;MAG TAPE 42

@;OK, JUST A MO MINUTE. 43

!;ALL OF THE TAPES WE A HAVE HERE SAY DDSI. 44

!;THOSE ARE THE RIGHT ONES 45

@;THEN YOU WILL HAVE TO TELL ME THE NUMBER YOU WISH TO USE. 46

!;PICK ONE, THEY ARE ALL TH SAM, AND THEN TELL METHE NUMBER YO CHOSE 47

@;NONE OF THE TAPES WE HAVE CAME WITH WRITE RINGS IN THEM. 48

!;PLWASE PUT IN A WRITE RING 49

@;OK, THE NUMBER WILL BE 0002.... 50

!;GREAT 51

@;HOLD ON JUST A SEC AND I WILL LET YOU KNOW WE WHEN ITS MOUNTED. 52

!AV D 53

MTA0, MTA1, DTA0, DTA1, DTA2, DTA3, PTR, PTP 53a

!OKXXX 54

!;OK, YOUR TAPES IS MOUNTED ON MTA0,, WC 55

!;GRDEAT, I'LL LINK BACK WHEN I'M DONE 56

@BREAK (LINKS) 57

@MOUNT MTA0: 58

@ASSIGN (DEVICE) MTA0: (AS) 59

@MTACPY,SAV;1 60

61

MAGTAPE UNIT NO.=0 62

Microprocessor Technology Goes to DDSI with Complete Transcript

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USE 556 BPI?(Y OR N)                                                    63
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USE 556 BPI?(Y OR N) N                                                  65
DESIRED DENSITY(200 OR 800):800                                         66
NORMAL ODD PARITY?(Y OR N):Y                                            67
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?HARDYFREP.COM;1                                                        70
32256 (DECIMAL) SIX-BIT BYTES.                                          71
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DONE?(Y OR N)N                                                          74
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32256 (DECIMAL) SIX-BIT BYTES.                                          76
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DONE?(Y OR N)Y                                                          82
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@LINK (TO) OPERATOR                                                     85
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@LINK (TO)                                                              87
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@LINK (TO) OPERATOR                                               88
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LINK FROM SRI-ARC, JOB 22, TTY 11                                 90
@;GA                                                              91
!;I'M DONE, CAN YOU DISMOUTH THE TAPE?                            92
@;YES I WILL...                                                   93
!;THANKS..BYE                                                     94
@;BREAK (LINKS)                                                   95
@DEL HARDYFREP.COM;1                                              96
@LOGO                                                             97
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DVN 22-NOV-74 11:56 24574

Microprocessor Technology Goes to DDSI with Complete Transcript

(J24574) 22-NOV-74 11:56;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /JOAN([ACTION] please add to DPCS notebook) MEH([INFO-ONLY]) DLS([INFO-ONLY]) NDM([INFO-ONLY]) SRL([INFO-ONLY]) ; Sub-Collections: DPCS SRI-ARC COM; Clerk: DVN; Origin: < VANNOUHUYS, COMTRANS.NLS;2, >, 22-NOV-74 11:46 DVN
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