Contact report: WWMCCS/MITRE, Murphy on 28Feb75

(WWMCCS) Contact report 25748 1

(DATE) 28 February 1975 1a

(BY) Lieberman 1b

(ATTENDEES) 1c

Frank Murphy of Mitre Corp 1c1

Robert Lieberman of SRI-ARC 1c2

Doug Engelbart of SRI-ARC 1c3

(ADDRESSES) Full name of organization, address, and phone number 1d

Frank Murphy 1d1

617-271-2311 1d1a

(MEDIUM) FACE-TO-FACE 1e

(WHERE) Menlo Park, CA 1f

(ACTION-ITEMS) 1g

Actions taken, to be taken, etc., dated 1g1

(DISTRIBUTION) ARC-LOG DCE JCN RLL 1h

(REFERENCES) 1i

(DOCUMENTS) Hard copy given and received 1j

(GIVEN) Date and documents given 1j1

(RECEIVED) Date and documents received 1j2

(REMARKS) 1k

Frank is a project leader from Mitre Corp on an Air Force contract coordinating and developing the Air Forces involvement with WWMCCS. 1k1

WWMCCS (World Wide Command and Control System) is really a confederation of existing systems plus some new ones. 1k2

Acronyms 1k3

Contact report: WWMCCS/MITRE, Murphy on 28Feb75

NCA - the president and his staff 1k3a

NMCS - National Military Command Service operates below NCA 1k3b

SAC/CONAD/PACOM/MAC - individual commands under the NMCS 1k3c

NMCS is composed of 1k3d

NMCC - National Military Command Center 1k3d1

ANMCC - the alternative NMCC 1k3d2

NEACP - the airbourne center 1k3d3

There are three levels which WWMCCS operates 1k4

(1) day to day - usually takes 36 hours for info to get through, most of it delayed for non-communication reasons. 1k4a

(2) crisis - difficult to define, info usually gets around via phone. 1k4b

(3) general war - relatively easy to define conditions, 1k4c

when operational, the products will be given to CONAD. 1k4d

AFSC - the Air Force Systems Command at Andrews AFB designated ESD at Hanscom AFB as the coordinator of the Air Force's WWMCCS activities. 1k5

The WWMCCS program office (WPO) is, thus, at FSD and their prime contractor. 1k6

The WWMCCS system architectural contract was given to IBM for some 10 to 11 million dollars. This contract was let from DTACCS (Director of Telecommunications and Command and Control Systems) whose director is now Tom Reed. 1k7

This architecture is for the entire WWMCCS program in the period 1985-95. 1k7a

Until some architecture comes from IBM and higher ups (Joint Chiefs of Staff) the AF WPO will be doing planning. 1k8

The J32 office of JCS are responsible for the "WHY" of WWMCCS and at a high level much of the "how". 1k9

Unfortunately, many people believe WWMCCS is just the ADP

procurement. This was handed by JCS to DCA to JTSA to give ADP support. 1k10

There were 35 computer systems bought. 1k10a

PWIN (Prototype WWMCCS Information Network) initially had 3 nodes (NMCC/JTSA/LANTCOM). 1k11

There will be 6 nodes, MAC/REDCOM/ANMCC. 1k11a

MAC (Military Air Command) has some 450 people in ADP at Scott AFB. 1k12

Most are programmers working on AF applications for WWMCCS. 1k12a

REDCOM (readiness Command) is operated by AF but is a joint services operation. 1k13

Chuck Sheenan (MITRE) has a similar project for the Navy at PACOM. Pete Tasker works for Chuck. 1k14

Lou Thomas is above both Murphy (head of AF project) and Sheenan (head of Navy project). 1k15

Contact report: WWMCCS/MITRE, Murphy on 28Feb75

(J25748) 13-MAY-75 03:51;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /ARC-LOG([INFO-ONLY]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) RLL([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-LOG; Clerk: RLL;

Contact report: Stefferud on 7 Mar75

(STEFFERUD) Contact report 25749 1

(DATE) 7 March 1975 1a

(BY) Lieberman 1b

(ATTENDEES) 1c

Einar Stefferud 1c1

Robert Lieberman of SRI-ARC 1c2

(ADDRESSES) Full name of organization, address, and phone number 1d

(MEDIUM) FACE-TO-FACE 1e

(WHERE) Menlo Park, CA 1f

(ACTION-ITEMS) 1g

(DISTRIBUTION) ARC-LOG DCE JCN RLL 1h

(REFERENCES) 1i

(DOCUMENTS) Hard copy given and received 1j

(GIVEN) Date and documents given 1j1

(RECEIVED) Date and documents received 1j2

(REMARKS) 1k

Stefferud and I conversed for several hours on a wide range of topics. 1k1

AMC - the organization of AMC 1k2

AMC-HG 1k2a

DMIS - Gilbert is head 1k2a1

-- 1k2a1a

-- 1k2a1b

-- Uhlig is head 1k2a1c

responsible for SENET, Scientific and Engineering Network 1k2a1c1

Contact report: Stefferud on 7 Mar75

Special Committees 1k2b

SECSC - Scientific/Engineering Computer Science Committee 1k2b1

These are political people throughout the AMC. 1k2b1a

SECC - Scientific/Engineering Computer Council. 1k2b2

This operating level committee gives information to SECSC. Under this council there is the RCF (Retail Computer Facility) group. There is hope to have this group involved with NLS. Uhlig is trying to get SECC people to buy slots. 1k2b2a

Problems 1k3

- spurious user problem. NLS can burn people or disillusion them. 1k3a

- need to couple NLS to outside world. 1k3b

- NLS too complex and needs constant working with [i.e., must work with it for extended periods to make it work for you]. 1k3c

- premature dependence. 1k3d

- there is a common feeling that we are selling x and delivering y. 1k3e

- sponsorship problem. Make sure we know each sponsor and support each whether officially designated or not. 1k3f

General 1k4

Ron Uhlig uses the terminal too much. 1k4a

Stefferud wondered if he could possibly help us in some way. I clearly stated that Engelbart and Norton were the people to talk to on this. 1k4b

Contact report: Stefferud on 7 Mar75

(J25749) 13-MAY-75 03:53;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /ARC-LOG([INFO-ONLY]) DCE([INFO-ONLY]) RLL([INFO-ONLY]) JCN([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-LOG; Clerk: RLL;

Contact report: DCA, Lyons on 13Mar75

(DCA) Contact report 25750 1

(DATE) 13 March 1975 1a

(BY) Lieberman 1b

(ATTENDEES) 1c

Dr. Robert Lyons of DCA 1c1

Colonel Gregg of DCA 1c2

Robert Lieberman of SRI-ARC 1c3

(ADDRESSES) Full name of organization, address, and phone number 1d

Defense Communications Agency 1d1

Reston, Virginia 1d2

(MEDIUM) FACE-TO-FACE 1e

(WHERE) DCA, Reston, Virginia 1f

(ACTION-ITEMS) 1g

Actions taken, to be taken, etc., dated 1g1

(DISTRIBUTION) ARC-LOG DCE JCN RLL 1h

(REFERENCES) 1i

(DOCUMENTS) Hard copy given and received 1j

(GIVEN) Date and documents given 1j1

(RECEIVED) Date and documents received 1j2

(REMARKS) 1k

The attendees had about an hour talk on a wide range of subjects. Dr. Lyons stated that DCA will be taking over the ARPANET. 1k1

ARPA has promised to support current net users and servers for three years. DCA will be getting a TIP later this year. 1k1a

A duplicative network control center will be installed at DCA. 1k1b

Contact report: DCA, Lyons on 13Mar75

It is intended that the network will be more closely managed. 1k1c

BBN as prime subcontractor is extremely likely. 1k1d

The Internet report is at the printers and is due back Monday, 17 March. 1k2

Lyons will send us a copy. Some delay was experienced because the spacing left for the diagrams was not enough or too much. 1k2a

DCA will put their IBM 360/155 on the ARPANET. 1k3

Their interest in NLS is not strong. They felt that they might be interested in NLS later this year when DCA is on ARPANET. 1k4

However, DCA is extensively using local TIPs. 1k4a

In response, Lyons made some other excuse. 1k4b

I felt that there was a general lack of enthusiasm for NLS and that this was indeed the basic reason for not pursuing NLS. 1k4c

I also had the impression that the cost of NLS was considered too high. 1k4c1

This feeling was present even though Lyons clearly stated his pleasure over the internetting study. 1k4d

contact report: DCA, Lyons on 13Mar75

(J25750) 13-MAY-75 17:16;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /ARC-LOG([INFO-ONLY]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) RLL([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-LOG; Clerk: RLL;

Contact report: NAVCOSSACT, McKenzie on 23Apr75

(NAVCOSSACT) Contact report 25751 1

(DATE) 23 Apr 75 1a

(BY) Lieberman 1b

(ATTENDEES) 1c

Doug McKenzie - NAVCOSSACT 1c1

Robert Lieberman - SRI-ARC 1c2

(ADDRESSES) Full name of organization, address, and phone number 1d

(MEDIUM) PHONE 1e

(WHERE) Menlo Park, CA and Washington, DC 1f

(ACTION-ITEMS) 1g

Actions taken, to be taken, etc., dated 1g1

(DISTRIBUTION) ARC-LOG DCE JCN RLL MEH 1h

(REFERENCES) 25731 25732 25746 25752 1i

(DOCUMENTS) Hard copy given and received 1j

(GIVEN) Date and documents given 1j1

(RECEIVED) Date and documents received 1j2

(REMARKS) 1k

Doug called to inform us of what is happening. 1k1

NAVCOSSACT will buy one Line Processor, two mice, and two keysets. The money will be coming via RADC. 1k2

It is all set and he expects the money will get to us in less than two months. 1k3

It was impossible to deal directly with us due to red tape. 1k4

I gave him the name of Martin Hardy as the person to contact from now on with regard to the delivery. 1k5

RLL 13-MAY-75 14:32 25751

Contact report: NAVCOSSACT, McKenzie on 23Apr75

(J25751) 13-MAY-75 14:32;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /ARC-LOG([INFO-ONLY]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) RLL([INFO-ONLY]) MEH([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-LOG; Clerk: RLL;

Contact report: NAVCOSSACT, McKenzie on 13Mar75

(NAVCOSSACT) Contact report 25752 1

(DATE) 13 March 1975 1a

(BY) Lieberman 1b

(ATTENDEES) 1c

Doug McKenzie - NAVCOSSACT 1c1

Robert Lieberman - SRI-ARC 1c2

(ADDRESSES) Full name of organization, address, and phone number 1d

(MEDIUM) PHONE 1e

(WHERE) Washington, D.C. 1f

(ACTION-ITEMS) 1g

Actions taken, to be taken, etc., dated 1g1

(DISTRIBUTION) ARC-LOG DCE JCN RLL 1h

(REFERENCES) 25731 25732 25746 25751 1i

(DOCUMENTS) Hard copy given and received 1j

(GIVEN) Date and documents given 1j1

(RECEIVED) Date and documents received 1j2

(REMARKS) 1k

McKenzie called SRI to find out about sending a person to ARC for training in NLS. 1k1

I called him to find out his reasons. Doug stated that the objectives at NAVCOSSACT were very close to those of ARC's. 1k2

They were unable to use OFFICE-1 because of security reasons. 1k3

I agreed that eventually they must use their own computers but felt some experimentation could be done using OFFICE-1. 1k3a

Doug thought a full PDP-10 might be needed for NLS at NAVCOSSACT if NLS proved useful. 1k4

Contact report: NAVCOSSACT, McKenzie on 13Mar75

He expressed desire to implement NLS or something like it on their computers. 1k5

This led him to think one or two people should be sent to SRI-ARC for extended training in NLS. 1k6

They would, of course, pay for this. 1k6a

I pointed out that it might be easier and far more effective to have people use the system as well as learn it. In fact it is a necessity. thus, how would they gain access to NLS without buying a slot. 1k7

I suggested that they might make some deal with NSRDC for part of their slots. 1k8

Doug will check with Brignoli on this. 1k8a

Basically, NAVCOSSACT cannot buy computer time from outside. There is plenty of money and programmers to implement something inhouse. 1k9

I told Doug in very strong terms that it would be very costly to redo NLS, in addition to being an unnecessary duplication. We could install NLS on their computers but felt that would be too premature and that NAVCOSSACT should gain a little experience with it first. 1k9a

McKenzie asked if we could cost the consulting, training, and installation of NLS on their machine. 1k10

He has in mind a one-of-a-kind computer that supports distributed computing. 1k10a

In any case NAVCOSSACT is interested in leasing a line processor, mouse, and keyset. 1k11

They would like to be kept posted on the arrangement we might make with NSA for installing NLS on an NSA machine. 1k12

McKenzie is currently making a plan on how to get an NLS-like system for 1000 people by 1980. This plan is due sometime in May or June. 1k13

John Raven is Al Sorkowitz's boss and Mc Kenzie works for Al. Doug is more or less in charge of the technical matters and Al in charge of the administrative things. 1k14

RLL 13-MAY-75 15:05 25752

Contact report: NAVCOSSACT, McKenzie on 13Mar75

(J25752) 13-MAY-75 15:05;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /ARC-LOG([INFO-ONLY]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) RLL([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-LOG; Clerk: RLL;

RLL 12-OCT-75 04:09 25753

CONTACT: Mitre Corp, visit of 12 May 75: COTCO, WWMCCS, etc.

A very old report never written. Should also relate this to Eulenstein and Agnew visits <26646,> and <26382,>

RLL 12-OCT-75 04:09 25753

CONTACT: Mitre Corp, visit of 12 May 75: COTCO, WWMCCS, etc.

(MITRE) Contact report 25753 1

(DATE) 12 May 75 1a

(BY) Lieberman 1b

(ATTENDEES) 1c

John Mitchell - MITRE 1c1

Lew Thomas - MITRE 1c2

Nancy Goodwin - MITRE 1c3

Robert Lieberman - SRI-ARC 1c4

Douglas Engelbart - SRI-ARC 1c5

Elizabeth Michael - SRI-ARC 1c6

John Postel - SRI-ARC 1c7

Jake Feinler - SRI-ARC 1c8

(ADDRESSES) Full name of organization, address, and phone number 1d

(MEDIUM) FACE-TO-FACE 1e

(WHERE) SRI, Menlo park, CA 1f

(ACTION-ITEMS) 1g

Actions taken, to be taken, etc,, dated 1g1

(DISTRIBUTION) ARC-LOG DCE JCN RLL 1h

(REFERENCES) (25748,) (25485,) (JOURNAL, JRNL29, J26279:gw) 1i

(DOCUMENTS) Hard copy given and received 1j

(GIVEN) Date and documents given 1j1

(RECEIVED) Date and documents received 1j2

(REMARKS) 1k

MITRE has many contracts at Bedford. They discussed the ones under Lew Thomas. 1k1

RLL 12-OCT-75 04:09 25753

CONTACT: Mitre Corp. visit of 12 May 75: COTCO, WWMCCS, etc.

In Hawaii 1k2

1. Voice conference network - preliminary design for a secure system 1k2a

2. Consolidate five WWMCCS computers (H6080 and H6180's) 1k2b

they have to design the consolidation 1k2b1

also have machines in Korea, Alaska, etc. 1k2b2

3. Command post update program 1k2c

essentially to tell them how to display information 1k2c1

4. Intelligence operation interface 1k2d

For COTCO 1k3

Originally it was to consolidate the COM centers 1k3a

However they have not gotten far so it has turned into installing a message handling system 1k3b

To support this, the five WWMCCS are being considered 1k3b1

Pete Tasker works for this project. 1k3c

Pete visited us some time ago and was suitably interested in using NLS. 1k3c1

At Bedford 1k4

1. AF command support (WMCCSS) - aimed at supporting National Command Authority 1k4a

2. PWIN (will go to 11 node net soon) 1k4b

3. For Air staff - to integrate terminals 1k4c

4. Operate computer center 1k4d

John's Mitchell's work 1k5

1. ARPA message handling 1k5a

test plans, procedures, training plan, evaluating alternatives. 1k5a1

CONTACT: Mitre Corp, visit of 12 May 75: COTCO, WWMCCS, etc.

2, secure office terminal 1k5b

secure front end, in essence 1k5b1

3, development/applicaton of computer networks (his main activity) 1k5c

who's doing what 1k5c1

how to join local networks 1k5c2

ARC personnel spoke about their work and a NLS demo was given. 1k6

The result was that MITRE would be very unlikely to buy a slot but they all had some personal interest and thus would keep in touch. 1k6a

RLL 12-OCT-75 04:09 25753

CONTACT: Mitre Corp. visit of 12 May 75: COTCO, WWMCCS, etc.

(J25753) 12-OCT-75 04:09;;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /ARC-LOG([INFO-ONLY]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) RLL([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-LOG; Clerk: RLL;

25753 Distribution
James C. Norton, Log Augmentation, Douglas C. Engelbart, James C. Norton, Robert N. Lieberman,

Contact report: SRI, Johnson re WATS service on 16Apr75

(WATS) Contact report 25754 1

(DATE) 16 Apr 75 1a

(BY) Lieberman 1b

(ATTENDEES) 1c

Jeanne Johnson - SRI 1c1

Robert Lieberman - SRI-ARC 1c2

(ADDRESSES) Full name of organization, address, and phone number 1d

Johnson 1d1

Phone = x3577 1d1a

(MEDIUM) PHONE 1e

(WHERE) SRI, Menlo Park, CA 1f

(ACTION-ITEMS) 1g

Actions taken, to be taken, etc., dated 1g1

(DISTRIBUTION) ARC-LOG DCE JCN RLL RA3Y 1h

(REFERENCES) 25755 1i

(DOCUMENTS) Hard copy given and received 1j

(GIVEN) Date and documents given 1j1

(RECEIVED) Date and documents received 1j2

(REMARKS) 1k

For Band 1 WATS service (Utah, Nevada, Idaho, Washington, Oregon) the rates are: 1k1

$230 per month for 10 hours, $17.25 per hour for overtime hours. 1k1a

This averages out to 38 cents per minute. 1k1a1

$1520 per month for 240 hours and $4.20 per hour for overtime hours. 1k1b

This averages out to 10.5 cents per minute. 1k1b1

This, apparently, is the same for both incoming and outgoing WATS. 1k2

However, the incoming sevice has two circuits. 1k2a

The direct dial rate from Menlo Park area are the following: 1k3

to Portland, 49 cents for the first minute and 34 cents for each additional minute. 1k3a

to Seattle, 50 cents for the first minute and 35 cents for each additional minute. 1k3b

All cost have 7 percent tax added to it. 1k4

One can change between sevices with week notice. The cost will simply be another installation charge, currently $50. 1k5

Private vendors can provide private lines. For example, Southern Pacific Communication uses land lines can Microwave. 1k6

The cost between Menlo Park and Arlington, Va is $1378 per month and a $360 installation charge. 1k7

This is about half the cost of a private, voice-grade circuit from ATT. 1k8

S.P. Communication has no service to the Northwest. 1k9

Westen Union Satellite can also provide service via Satellites for $1252 per month from Menlo Park to Arlington, Va. 1k10

Johnson will get the cost for wide band service from ATT between Cupertino and both Portland and Seattle. 1k11

As an aside, SRI has 14 WATS lines with an average of 900 calls per day. 1k12

RLL 13-MAY-75 15:53 25754

Contact report: SRI, Johnson re WATS service on 16Apr75

(J25754) 13-MAY-75 15:53;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /ARC-LOG([INFO-ONLY]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) RLL([INFO-ONLY]) RA3Y([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-LOG; Clerk: RLL;

RLL 13-MAY-75 17:08 25755

Contact report: SRI, Johnson re WATS service on 18Apr75

(WATS) Contact report 25755 1

(DATE) 18 April 75 1a

(BY) Lieberman 1b

(ATTENDEES) 1c

Jeanne Johnson - SRI 1c1

Robert Lieberman - SRI-ARC 1c2

(ADDRESSES) Full name of organization, address, and phone number 1d

(MEDIUM) PHONE 1e

(WHERE) SRI, Menlo Park, CA 1f

(ACTION-ITEMS) 1g

Actions taken, to be taken, etc., dated 1g1

(DISTRIBUTION) ARC-LOG DCE JCN RLL RA3Y 1h

(REFERENCES) 25754 1i

(DOCUMENTS) Hard copy given and received 1j

(GIVEN) Date and documents given 1j1

(RECEIVED) Date and documents received 1j2

(REMARKS) 1k

Jeanne called back to tell me the cost of the various direct lines between Cupertino and Portland/Seattle. The table below summarizes the costs for the lines under different conditioning. They all refer to a 3002 voice gradeline. 1k1

There is a switchable modem (209A) but must be reset by ATT each time. 1k2

Points	* Conditioning*	Cost/month *Installation		
				1k2a
San Jose - Seattle	C4 only	826.54	105.10	1k2b

Contact report: SRI, Johnson re WATS service on 18Apr75

San Jose - Seattle	C2	C4 less 7.50	105.10	1k2c
San Jose - Seattle	D1	791.84	445.10	1k2d
San Jose - Seattle	C4 and D1	854.94	550.20	1k2e
San Jose - Portland	C4 only	694.38	105.10	1k2f
San Jose - Portland	C2	C4 less 7.50	105.10	1k2g
San Jose - Portland	D1	663.88	445.10	1k2h
San Jose - Portland	C4 and D1	726.78	550.20	1k2i
San Jose - Wash., DC	C4 only	2337.76	105.10	1k2j
San Jose - Wash., DC	C2	C4 less 7.50	105.10	1k2k
San Jose - Wash., DC	D1	2303.06	445.10	1k2l
San Jose - Wash., DC	C4 and D1	2366.16	550.20	1k2m

The phone distances are between San Jose and 1k3

Seattle 716 miles, 1k3a

Portland 572 miles, 1k3b

Wash., DC 2014 miles. 1k3c

RLL 13-MAY-75 17:08 25755

Contact report: SRI, Johnson re WATS service on 18Apr75

(J25755) 13-MAY-75 17:08;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /ARC-LOG([INFO-ONLY]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) RLL([INFO-ONLY]) RA3Y([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-LOG; Clerk: RLL;

RLL 16-APR-75 14:41 25756

clinic for TNLS attendance

I might attend. How basic will you make it? Will it be just a series of tips? Hope so. Robert 1

RLL 16-APR-75 14:41 25756

clinic for TNLS attendance

(J25756) 16-APR-75 14:41;;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /SGR([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: RLL;

RLL 16-APR-75 15:25 25757

duplicative reports

the items <25716,> and <25720,> are exactly the same except for title. Jussst thought you ouldlike to know. 1

RLL 16-APR-75 15:25 25757

duplicative reports

(J25757) 16-APR-75 15:25;;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /POOH([INFO-ONLY]) DVN([INFO-ONLY]) KIRK([INFO-ONLY]) BEV([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: RLL;

Comment: a content analyzer program.

```
FILE comment % (L10,) (postel,comment,ca,) %                          1

   %inserts per cent signs at the beginning and end of each
   statement%                                                         1a

   DECLARE TEXT POINTER pt ;                                          1b

   (comment) PROCEDURE ;                                              1c

      FIND "pt;                                                       1c1

      ST pt _ '%, SF(pt) SE(pt), '%;                                  1c2

      RETURN (FALSE) ;                                                1c3

      END.                                                            1c4

   FINISH                                                             1d
```

DSM 17-APR-75 12:25 25758

Comment: a content analyzer program.

(J25758) 17-APR-75 12:25;;; Title: Author(s): David S. Maynard/DSM;
Distribution: /JBP([ACTION]) ; Sub-Collections: SRI-ARC; Clerk:
DSM;

DVN 18-APR-75 00:57 25759

Thanks for Journal Catalogues, Please Give Us More

Thanks for putting most of the journal catalogs online. Unfortuately one I need is missing. That is the 71-72 number index (<kjournal>1162). It happens for this report I need citations from that period and besides the Generate References command checks first to see if all it's sources are there and refuseds to go on if they are not. When I tried to interrogate it said the file was not archived. 1

DVN 18-APR-75 00:57 25759

Thanks for Journal Catalogues, Please Give Us More

(J25759) 18-APR-75 00:57;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /JCP([ACTION]) DMB([ACTION] dpcs notebook please) KIRK([INFO-ONLY]) POOH([INFO-ONLY]) JCN([INFO-ONLY]) ; Sub-Collections: DPCS SRI-ARC NIC; Clerk: DVN;

RLL 18-APR-75 20:58 25760

Bug: A four window bug

At BBNB using DNLS, I had four windowswhich I will call here, BOTTOM, RIGHT-TOP,LEFT-TOP-UPPER,LEFT-TOP-LOWER (to convey the physical set up). The Left-top-lower window's last line and the top line of the BOTTOM window overlap. What appears on the display depends on what waslast refreshed. Another problem isthat when I tried to have the LEFT-TOP-LOWEr window inserted wih the insert edge' command orginally on the right side instead of the left i consistently got a vertical split when I tried for the horizontal split. te Vertical split worked as expected. this is why I tried the left horizontal split on the Upper-Left quardant (got the picture? in ay case there are bugs to be exterminated). P.S. Split screens can be anoher way of saving refreshing time as well as cutting down on jumping back and forth between different parts of a file (or different files). 1

RLL 18-APR-75 20:58 25760

Bug: A four window bug

(J25760) 18-APR-75 20:58;;;; Title: Author(s): Robert N. Lieberman/RLL; Distribution: /FEED([ACTION]) JCN([INFO-ONLY]) JHB([INFO-ONLY]) SGR([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: RLL;

The Format Library

The Format Library will be available in hardcopy only. Copies will be ready in about a week and will be located in room J2098. 1

The Format Library

(J25764) 21-APR-75 12:55;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: NIC SRI-ARC;
Clerk: POOH;

POOH 21-APR-75 17:13 25765

Reprinting of the TNLS-8 Quick Reference Card

A reprinting of the TNLS-8 Quick Reference card (Cue Card) is underway. Copies will be available shortly and will be located in room J2098. 1

POOH 21-APR-75 17:13 25765

Reprinting of the TNLS-8 Quick Reference Card

(J25765) 21-APR-75 17:13;;;; Title: Author(s): Ann Weinberg/POOH;
Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: NIC SRI-ARC;
Clerk: POOH;

New design for tabs in NLS

TABS IN NLS

To quote from the NLS Help descriptions "use of tabs has not been known to give true satisfaction". The NSW contract has given us some money to implement a few dings and toots with tabs. In particular, an automatic right justification feature is desired along with statement dependant tab stops. This design deals with the right justification issue towards entering tabular text that ends up looking in the file like it did when it was entered. It is hoped that this implementation when combined with statement-dependant tab stop settings will provide the typist with the capability of usefully entering tabular material online. 1

AUTOMATIC RIGHT JUSTIFICATION

Typing tables of columns where the information is automatically right justified to a tab stop is desirable for many textual applications such as listing sums of money. Typically the off-line typist must tab, backspace the number of characters to be typed, and then insert the characters or else go through other time consuming and error prone mental calculations. In NLS one long range solution is to do such special formatting in the new graphics mode which will provide many other features besides. 2

In the mean time, a "Space (for tabs)" command can be implemented in the useroptions tool. Useroptions is picked because 1) that is where tab stops are set; 2) your desired tab mode will be remembered across sessions. This command would not only control the right justification feature, but it is hoped that with little extra implementation effort, we can provide the typist with the ability of entering the proper number of spaces in place of the tab character when entering standard left justified tabular material. This would ensure that what you type is what you get independent of 1) the medium you use or 2) where yours or your audiences tab stops are set. 3

It is worth noting here that at least one online implementation of tabs (at XEROX PARC) never inserts a tab character into text, only the proper number of spaces. 3a

The method of control proposed here will allow the typist to enter both left justified and MANUALLY right justified tabs in the same line of text but not both left and AUTOMATICALLY right justified tabs. For that, we look to the special graphics mode. 4

The following would be the help descriptions for a "Space (for tabs?) Yes/No/Right (justified) OK" command. 5

Space (for tabs?) Yes/No OK

After specifying the useroptions command "Space (for tabs?) Yes", the proper number of spaces to reach the next tab stop instead of a tab character will be entered into your file when you type the tab

key. The next character typed after the tab will appear in the column containing the tab stop. It will thus be "left justified" to the tab stop. Say "No" to "Space (for tabs?)" if you wish to have the actual tab character entered in your file. 6

BC, BW and right justification

BC and BW will backspace characters and words as if all the spaces and other characters had been entered without using tabs. Therefore, BC after typing a tab will cause your cursor or typing head to move back over one of the spaces entered by the tab. In this way, you can manually "right justify" tabular material such as sums of numbers by backspacing the number of characters to be typed before typing them. The "Space (for tabs?) Right (justified)" command will make this happen automatically, but does not allow left justification at the same time. 6a

Space (for tabs?) Right (justified) OK

After using the userOptions command "Space (for tabs?) Right" the proper number of spaces to reach the next tab stop will be entered into your file when you type the tab key. Every character typed after the tab will backspace the cursor or typing head one space. The character is remembered, but not typed at this point. When another tab or a carriage return is typed, the characters you input since the last tab will be typed and you will be at the next tab stop or at the beginning of the next line. In this way, your tabular material will be right justified to the tab stop. 7

BC, BW and column overflow

When you type enough characters to fill all the positions in front of the tab stop except one, your bell will ring. If you continue to type more characters, all of the characters you input since the last tab will be typed preceeded by a space and they will, of course, not be right justified. If you type BC or BW after some characters after a tab while you are in the automatic back space mode, the character or word you just typed will be deleted and your cursor or print head will move forward one space or one word. Otherwise BC and BW will backspace as if all the spaces and other characters had been entered without using tabs. 7a

KIRK 22-APR-75 02:03 25766

New design for tabs in NLS

(J25766) 22-APR-75 02:03;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /EKM([ACTION]) ARC-DEV([INFO-ONLY]) ;
Sub-Collections: NIC ARC-DEV; Clerk: KIRK;

KIRK 22-APR-75 02:20 25767

Bugs for applications

I handed a printout of this list of bugs to sgr.

Bugs for applications

Update Compact changes the name delimiters of your origin statement to your USEROPTION default thereby giving this default to any subsequent level 1 insertions.. 1

jump to name first finds the wrong one if it is the name of the origin statement. 2

GYEL OP directive doesnt work when at end of line. GYBL doesn't work when at the beginning of a page. 3

dismes procedure does not work as advertised, causes text to randomly be typed in tty window instead of where it belongs, and core dumps to appear in tty window. One fix ok with CHI is below but more likely, this stuff should be deleted completely since it appears to be disabled for line processors. 4

```
   CASE type OF                                                    4a

      =1, =2: %put up and leave%                                   4a1

         dismsg(astrng);                                           4a1a

      >=1000: %put up for a few seconds%                           4a2

         BEGIN                                                     4a2a

         settimer(IF type >= 1000 THEN type ELSE 3000, sdismes, 0,
         0);                                                       4a2b

         dismsg(astrng);                                           4a2c

         END;                                                      4a2d

      ENDCASE;                                                     4a3
```

The "delete Edge" command almost consistently says "Cannont delete margin edge" the first time it is used. Why does this command care where you bug if you only have one edge????? 5

When quitting and detaching from one DNLS terminal and then attaching at another terminal and continuing, the DNLS screen appears at the first terminal and not the one you have moved to. 6

Substitute Link doesn't work if you try to bug the old link, you get the message "cannot substitute for a null text field". 7

No valid windows found in findda when simulating tty window in lower half of screen and bugging in upper half on LSI machines. infinite loop. 8

Bugs for applications

Commands in startup branches that call lda procedure do not work probably because the da has not yet been set up when the startup branch is processed. This should be an easy and important fix. 9

Data Medias do not use all eighteen lines available on the screen unles you delete and insert an edge. The bottom line is unnused unless this is done. 10

user-programs bugs 11

The letter user program does not work if you do not specify a journal number. 11a

Send Message Command sends no message 11b

fix modify insert [address] to work with split screens. 11c

dean reports Generate Table not working correctly. 11d

Copy sequential two doesn't find carriage returns (only EOLs?) 11e

justified option in copy sequential doesn't work. 11f

It is not possible to search for Content with double quotes in it using the "Jump to Content" command. 12

The useroptions subsystem show command does not show your startup branch, your default subsystems and programs, or your entry subsystem. 13

The .21 address expression will not find any links if they are preceeded by an illegal link such as a lone left angle bracket. 14

Delete File with altmode gets the wrong (latest) version of file. 15

Insert And delete edge both cause unnecessary and time consuming recreations. 16

It's interesting that the TAB does not find the next occurance if the statement it's in has been modified. We could document this and call it a feature. 17

Viewspec capital D hides strings beginning a statement that are NOT statementnames if they happen to begin with a number. This bug causes an unfortunate confusion on the part of the user (EKM) that names can begin with numbers. 18

KIRK 22-APR-75 02:20 25767

Bugs for applications

(J25767) 22-APR-75 02:20;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /FEED([ACTION]) ; Sub-Collections: NIC; Clerk: KIRK;

KIRK BEV DVN POOH 22-APR-75 03:26 25768

Final Report to SRI editing, people interviewed, questions asked, some answered

Informal documentation weekly report

KIRK BEV DVN POOH 22-APR-75 03:26 25768

Final Report to SRI editing, people interviewed, questions asked, some answered

POOH 1

editing and more editing of the final report 1a

sent Format Library to printing 1b

began preparing new batch of business cards to go to COM 1c

spoke to a few perspective candidates 1d

attended Susan's class on TNLS 1e

DvN 2

The final report for the contract ending last June went to SRI editing with the following known problems: 2a

Paging: Because the report was printed from separate files, the paging is not consecutive. 2a1

Refences: Some are in the form of journal links useable to the Generate References comand of the Publish Subsystem, some are still in various formats left over from previous publication of the paper, some are simply incomplete. A first try at using Generate Reference at BBB&N showed not all the catalogs online, I have asked for the remaining catalogs. 2a2

Glossary: The contract calls for a glossary. I intend to filter one off from the NLS-8 Glossary when Beverly and Pam have finished their revisions. 2a3

The eidtor (Shirley Hentzell) will no doubt find many more. She estimates a week till it's return, then I estimate another week to respond to her changes before a draft can go officially to Rome. The return of quick, relatively reliable access to the printer and modestly imporved system response helpped this effort. 2a4

It appears that revisions in the overall NSW schedule will call for revsions in the NSW documentation schedule. I did some reading this week of various NSW documents in prepareation ffor that. 2b

Interviewed applicatns for the junior writing job. 2c

BEV 3

Worked on LZ Glossary. Completed revisions except for mass substitutions. 3a

KIRK BEV DVN POOH 22-APR-75 03:26 25768

Final Report to SRI editing, people interviewed, questions asked, some answered

Did some reading in general ARC materials, and on NSW. 3b

Interviewed three applicants for open documentation position. 3c

Continued to ask question after question of everyone within speaking or grabbing distance. 3d

KIRK 4

Discussed and wrote a short proposal for naming LSEL, DSEL, and SSEL. I'm not happy with it. It is up to Dirk. 4a

I started on the help descriptions and design for new nls tab features. 4b

Discussed and added ARC-DEV comments about Readmail design in preparation for ARC-APP review. 4c

Interviewed applicants. Sndertrf Wurdyiond (Answered questions). 4d

KIRK BEV DVN POOH 22-APR-75 03:26 25768

Final Report to SRI editing, people interviewed, questions asked, some answered

(J25768) 22-APR-75 03:26;;; Title: Author(s): Kirk E. Kelley, Beverly Boli, Dirk H. Van Nouhuys, Ann Weinberg/KIRK BEV DVN POOH; Distribution: /DIRT([INFO-ONLY]) DMB([INFO-ONLY] dirt stuff) ; Sub-Collections: NIC DIRT; Clerk: KIRK;

DVN 22-APR-75 12:17 25769

More on Output Processor Page Layout

I sent you some copies of the page layout diagram yesterday. They will probably be there by the time you read this. You might be interested in the context in which it appears in the final report. I am doing some file shuffling as we approach finishing (!?) but it is currrently at BB&N in <arcdocumentation,subsystems,3a> 1

DVN 22-APR-75 12:17 25769

More on Output Processor Page Layout

(J25769) 22-APR-75 12:17;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /DMB([ACTION] dpcs notebook please) JMB([INFO-ONLY]) ; Sub-Collections: DPCS NIC; Clerk: DVN;

DVN 22-APR-75 12:20 25770

Markers on the MoVe Again

For years markers were shuffled at random by the Update Compact command. Last fall Charles fixed that and for a while we had paradise. But early this year something else began shuffling markers. I have hesitated to send this item all these months although the problem troubled me because I was unable to be more specific, but the time has come. I don't know what does it, but sometimes I load a file and the markers are in different palces. Some people argue that markers are being mysteriously deleted as well, but as far as I understand that only occurs when they wander to some new statement which the unfortuante fileowner then unknowingly deletes. 1

DVN 22-APR-75 12:20 25770

Markers on the Move Again

(J25770) 22-APR-75 12:20;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /FEED([ACTION]) CHI([INFO-ONLY]) KIRK([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: DVN;

DVN 23-APR-75 00:36 25776

Authorship in 'Knowledge Workshop Development'

Some of you may remeber the contract that supported us until last June and its final report which has been painfull overdue for months. We are now in the last agonies of getting a draft to RADC for approval. It is arranged like a collection of papers and indiviual chapters have authors (arcdocumentation,headabstractintro,6d2>. Authorship has been assigned in a rather haphazard fashion, sometimes I have assigned it, sometimes I have copied from various sources. I present below an outline of the parts that have authors with thier names attached as things stand. If you think I have wrongly named anyone, left anyone out, or put anyone in the wrong order, please tell me so. Keep in mind this is for the 27 months ending last June. 1

ASPECTS OF COMMUNITY AUGMENTATION 2

The Augmented Knowledge Workshop By Douglas C Engelbart, Richard W Watson, and James C Norton 2a

Issues in the Design of the NLS User Interface
By Richard W Watson 2b

Coordinated Information Services for a Discipline or Mission Oriented Community
By Douglas C Enelbart 2c

ARC Organizational Development
By Dirk H van Nouhuys 2d

WORKSHOP TECHNOLOGY 3

User Interface 3a

A Command Meta Language for NLS
By Charles H Irby, Charles B Dornbush, and Donald C Wallace 3a1

Query/HELP Software and Data Bases
By Harvey G Lehtman, Kirk Kelley, Dirk H vannouhuys, and Jeanne M Beck 3a2

An Offline Text Editing Facility 3a3

NLS File System 3b

By Charles H Irby and Harvey G Lehtman 3b1

Display And Portrayal Techniques 3c

Lineprocessor: A Device For Amplification Of Display Terminals
By Donald I. Andrews 3c1

Authorship in 'Knowledge Workshop Development'

DVN 23-APR-75 00:36 25776

Authorship in 'Knowledge Workshop Development'

(J25776) 23-APR-75 00:36;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /SRI-ARC([ACTION]) DIRT([INFO-ONLY]) DPCS([INFO-ONLY]) DLS([INFO-ONLY]) ; Sub-Collections: NIC SRI-ARC DIRT DPCS; Clerk: DVN; Origin: < VANNOUHUYS, AUTHORS,NLS;2, >, 23-APR-75 00:29 DVN ;;;;####;

JBP 23-APR-75 16:28 25777

CML example: CANDE

```
FILE candefile % (XCML,)  (maynard,cande,cml,)%                          1

% DECLARATIONS %                                                         2

   DECLARE PARSEFUNCTION                                                 2a

      seqrange, %reads a set of range cande element returns a data
      structure of type integer and length 2%                            2a1

         % COMMON RULES %                                                2a1a

            compilernames =                                              2a1a1

               ( "ALGOL" / "XALGOL" / "DCALGOL" / "DMALGOL" /
               "FORTRAN" / "XFORTRAN" / "COBOL" / "BASIC" / "PL/I" /
               "ESPOL" / "BINDER")                                       2a1a1a

% COMMON RULES %                                                         3

   compilernames =                                                       3a

      ( "ALGOL" / "XALGOL" / "DCALGOL" / "DMALGOL" / "FORTRAN" /
      "XFORTRAN" / "COBOL" / "BASIC" / "PL/I" / "ESPOL" / "BINDER")      3a1

%CANDE SUBSYSTEM%                                                        4

   SUBSYSTEM cande KEYWORD "CANDESYS"                                    4a

   % WORKFILE COMMANDS%                                                  4b

   COMMAND  %get%                                                        4c

      zget =                                                             4c1

         seqok _ TRUE;                                                   4c1a

         asok _ TRUE;                                                    4c1b

         "GET"  LSEL(#"OLDFILELINK")                                     4c1c

            perform get1 UNTIL lookconfirm()                             4c1c1

            xget(ofn,nfn,seqdatastruc);                                  4c1c2

            get1 = (seqok seqrangelist seqok _ FALSE /                   4c1c3

               asok "AS" LSEL(#"NEWFILELINK) asok _ FALSE )              4c1c3a

            seqrangelist = #<,> sqrds _ seqrange()                       4c1c4
```

CML example: CANDE

```
        seqrange =( LSEL(#"NUMBER") / "-" (LSEL(#"NUMBER") /
        "END"))                                                    4c1c5
  COMMAND  %make%                                                  4d
    zmake =                                                        4d1
      "MAKE" param _ LSEL(#"NEWFILELINK")                          4d1a
      ( param2 _ compilername / lookconfirm() )                    4d1b
      CONFIRM                                                      4d1c
      xmake(param, param2);                                        4d1d
  COMMAND  %recover%                                               4e
    zrecover =                                                     4e1
      "RECOVER"  param _ LSEL(#"RECOVERYINDEX")                    4e1a
      xrecover (param);                                            4e1b
  COMMAND  %remove%                                                4f
    zremove =                                                      4f1
      dollarflag _ FALSE                                           4f1a
      "REMOVE" #<,>  remrule                                       4f1b
      CONFIRM                                                      4f1c
      xremove(filetype,filename,dollarflag);                       4f1d
      remrule = (filetype _ "SOURCE" filename _ FALSE /            4f1e
        filetype _ "SOURCE" filename _ LSEL(#"OLDFILELINK") /      4f1e1
        filetype _ "OBJECT" filename _ FALSE  /                    4f1e2
        filetype _ "OBJECT" '$ dollarflag _ TRUE filename _
        LSEL(#"OLDFILELINK")  /                                    4f1e3
        filetype _ "OBJECT" filename _ LSEL(#"OLDFILELINK") )      4f1e4
  COMMAND  %save%                                                  4g
    zsave =                                                        4g1
```

CML example: CANDE

```
        dollarflag _ FALSE                                                  4g1a
        "SAVE" #<,>  savrule                                                4g1b
        CONFIRM                                                             4g1c
        xsave(filetype,filename,dollarflag);                                4g1d
        savrule = (filetype _ "SOURCE" filename _ FALSE /                   4g1e
           filetype _ "SOURCE" filename _ LSEL(#"OLDFILELINK") /            4g1e1
           filetype _ "OBJECT" filename _ FALSE  /                          4g1e2
           filetype _ "OBJECT" 's dollarflag _ TRUE filename _
           LSEL(#"OLDFILELINK")  /                                          4g1e3
           filetype _ "OBJECT" filename _ LSEL(#"OLDFILELINK") )            4g1e4
    COMMAND  %title%                                                        4h
       ztitle =                                                             4h1
          "TITLE"                                                           4h1a
             ( filetype _ "SOURCE" filename _ LSEL(#"OLDFILELINK") /        4h1a1
             filename _ LSEL(#"OLDFILELINK") /                              4h1a2
             filetype _ "OBJECT" ( 's dollarflag _ TRUE / DUMMY
             dollarflag _ FALSE) filename _ LSEL(#"OLDFILELINK") /          4h1a3
             DUMMY filetype _ FALSE filename _ FALSE)                       4h1a4
             <"to"> newfile _ LSEL(#"NEWFILELINK")                          4h1a5
             xtitle(filetype,filename,dollarflag,newfile);                  4h1a6
    COMMAND  %type%                                                         4i
       ztype =                                                              4i1
          "TYPE"                                                            4i1a
             ( filename _ LSEL(#"OLDFILELINK") /                            4i1a1
             DUMMY filename _ FALSE)                                        4i1a2
             type _ compilertype                                            4i1a3
```

CML example: CANDE

```
        xtype(filename,type);                                          4i1a4
  %EDITING COMMANDS%                                                   4j
    COMMAND %delete%                                                   4j1
      zdelete =                                                        4j1a
        "DELETE"                                                       4j1a1
          allflg _ FALSE                                               4j1a1a
          (range _ seqrange / "ALL" allflg _ TRUE)                     4j1a1b
          CONFIRM                                                      4j1a1c
          xdelete(range,allflg);                                       4j1a1d
```

JBP 23-APR-75 16:28 25777

CML example: CANDE

(J25777) 23-APR-75 16:28;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /DSM([INFO-ONLY]) JBP([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: JBP; Origin: < MAYNARD, CANDE.NLS;3, >, 23-APR-75 16:14 DSM ;;;;####;

KIRK 23-APR-75 22:06 25778

Confusion about SRI-TSP

Jake, could you please explain to me again why every ARCers organization has been changed in the ident file to SRI-TSP and SRI-ARC is no longer an organization? I thought I understood it when you explained it to me yesterday, but when I tried to explain it to someone else, I was at a loss. I can find no one else who understands the change. I am especially curious as according to JDH and Jeff, the change to my record seems to be the reason I haven't received any journal mail since Tuesday April 15. 1

KIRK 23-APR-75 22:06 25778

Confusion about SRI-TSP

(J25778) 23-APR-75 22:06;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /JAKE([ACTION]) JP([INFO-ONLY]) JCP([INFO-ONLY]
) JDH([INFO-ONLY]) DCE([INFO-ONLY]) JCN([INFO-ONLY]) RLL([
INFO-ONLY]) JLE([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: KIRK;

JBP 24-APR-75 00:47 25779

Tabs

i agree with Kirk on his proposal for tabs, i think that it is very useful for the user to use tab to input columar information but that the file contain the right number of blanks, i have had unfortunate experiences with tabs in the file in other contexts than nls recently that would not have occured if a policy such as the one kirk suggests were followed. (i long ago stopped using tabs in nls). --jon. 1

Tabs

(J25779) 24-APR-75 00:47;;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: NIC SRI-ARC; Clerk: JBP;

JBP 24-APR-75 00:52 25780

Full Ascii in NLS

i agree with Kirk (25655,) that it is desirable to have the full ascii character set available in NLS. Kirk pointed out a difficulty with curly brackets (braces). The other day i had trouble with vertical bar. Lets get this all cleaned up as part of the "dings and toots" campaign. --jon. 1

JBP 24-APR-75 00:52 25780

Full Ascii in NLS

(J25780) 24-APR-75 00:52;;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: NIC SRI-ARC; Clerk: JBP;

JBP 24-APR-75 02:36 25781

Tool Installation Scenario

Please give me your reactions and suggestions, --jon,

Tool Installation Scenario

This is a scenario on how to convert an interactive program into a fully integrated NSW tool. 1

Study the existing program and determine which parts do command interpretation (parsing) and which parts do execution functions. 1a

Draw a boundary between these two portions of the program and examine how they interface to one another. [The hypothesis is that the command parser makes subroutine or procedure calls on the execution part.] 1b

If necessary do some recoding to clean up the interface between the command parser and the execution part. 1c

Write in CML (command meta language) a grammar describing the command language and producing calls on the procedures of the execution part. 1d

Prepare the execution part as a package (or set of packages) for the procedure call protocol environment (also called the distributed programming system). 1e

Make the grammar available to the Front End's CLI (command language interpreter). This requires "installing" the tool by making it known to the Works Manager. This may be an administrative task as well as a technical one. 1f

When a user interacting with the Front End indicates that the use of a tool is desired, the Front End calls the Works Manager. The Works Manager verifies that this user's use of this tool is allowed. The Works Manager arranges for a tool process (the execution part) to be started up at an appropriate tool bearing host. The Works Manager returns to the Front End the grammar for this tool (and some other parameters). 1g

Now when a user starts this tool the CLI interprets the user's input in accordance with the grammar and makes the PCP calls on the execution package as directed by the grammar. 1h

JBP 24-APR-75 02:36 25781

Tool Installation scenario

(J25781) 24-APR-75 02:36;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /NPG([INFO-ONLY]) ; Sub-Collections: NIC NPG; Clerk: JBP; Origin: < POSTEL, TOOL-INSTALATION.NLS;2, >, 24-APR-75 02:27 JBP ;;;;####;

KIRK 24-APR-75 03:01 25782

proposed search algorithm for a multi-file help data base

This is a copy of the branch at <xprograms, helpd, 1B2>. The search algorithm it describes has been implemented, after several man months of careful design, in the Whole Universe catalog where it works quite well. If I were to make it part of the NLS help code, I would want to spend some time to divide its three large procedures into several smaller ones, however.

KIRK 24-APR-75 03:01 25782
Proposed search algorithm for a multi-file help data base

SEARCH ALGORITHM

After a term (one or more words) has been specified, it is matched to description names in a prescribed order. First we describe the algorithm for the first word in a multi-word term. This is also the algorithm for a single word term. When the first word is found, we go on to the algorithm for succeeding words or, in the case of a single-word term, display the description for that word. 1

FIRST (searching for the first word in a term)

If the user is currently using the Help command, his current branch is searched for an occurance of the description name matching the first word typed. If the first word is not found or if the user was not previously using the Help command, the name hash table for that description file is searched. 1a

% It may be possible in the future to add the use of an optional search-type specified in the origin of the description file. If no search-type is specified, the name hash-table is searched. 1a1

Index files

If the first word is still not found, the message "searching this tool's index" is typed to the user indicating that we are searching the next description file if any. This file is specified in the origin of the current file in the exact form of "index in <link to file>" (without quotes). 1a2

The top file

If the name is still not found having exhausted all of the index file index files, if any, the message "searching NSW" is typed indicating that the top level NSW description file is being searched. If this yields nothing, the name of the word is echoed followed by a questionmark indicating that it was not found. 1a3

DUPLICATE (searching for a description with the same name at a higher level)

If the user re-specifies the same word twice in a row, it is assumed that s/he was not satisfied with the description at their current location and wants a higer-level description. Therefore, the next higher search from the last search is attempted. For example, if the current description was found by searching a file, when the user re-specifies the same word in the very next round, the index files are searched. Descriptions at higher levels are more general and usually point down to descriptions with the same name at lower levels. The user can usually go directly to a specific level description by specifying the tool name in front of the term s/he wishes to see. For instance, if the user typed "nsw

copy" s/he would get a general interface to the term "copy" in the NSW description file which is at the highest level. 1b

SUCCEEDING (searching for succeeding words in a term)

After the first name has been found, searches for any succeeding names specified in a multiple word term are limited to the branch describing the preceeding word. If the next name is not found, and there is a legal help link in the statement addressed by the first word (see links) then the branch addressed by that link is searched. If the next name is not found there, a view of the description defining the preceeding name is displayed and the succeeding word is typed followed by a questionmark indicating that it was not found. If that description has sub-structure, the message "You can pick one and try again." is also typed. 1c

STOPPING A SEARCH

The user can type CTRL-O at any point to stop a search and receive the message "search stopped on" followed by the word currently being searched indicating the search was stopped before the name was found. 1d

Proposed search algorithm for a multi-file help data base

(J25782) 24-APR-75 03:01;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /HGL([INFO-ONLY]) EKM([INFO-ONLY]) DVN([
INFO-ONLY]) POOH([INFO-ONLY]) BEV([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: KIRK;

EKM 24-APR-75 11:19 25783

Gone Forever

The development staff has received no Journal mail at BBNB for over a week. This mail is not sitting around waiting to be delivered, It is GONE FOREVER. 1

I find Important mail to which people have been awaiting answers has been lost. 2

With the exception of Jeff Peters, Operations has been 100 % unresponsive to my pleas to fix this. 3

Is this yet another example of what happens in a structure that erects barriers and destroys communications? 4

If the Journal is not fixed today the whole world should be told that it is inoperative. Dropping our pearls of prose into the void is non-productive and frustrating . 5

Gone Forever

(J25783) 24-APR-75 11:19;;; Title: Author(s): Elizabeth K. Michael/EKM; Distribution: /SRI-ARC([ACTION]) EKM([INFO-ONLY]) ; Sub-Collections: NIC SRI-ARC; Clerk: EKM; Origin: < MICHAEL, GONE,NLS;1, >, 24-APR-75 10:58 EKM ;;;;####;

KIRK 24-APR-75 11:39 25784

New design for tabs in NLS

This is a previous journal item resubmitted in order to enter it in the DPCS subcollection

KIRK 24-APR-75 11:39 25784

New design for tabs in NLS

TABS IN NLS

To quote from the NLS Help descriptions "use of tabs has not been known to give true satisfaction". The NSW contract has given us some money to implement a few dings and toots with tabs. In particular, an automatic right justification feature is desired along with statement dependant tab stops. This design deals with the right justification issue towards entering tabular text that ends up looking in the file like it did when it was entered. It is hoped that this implementation when combined with statement-dependant tab stop settings will provide the typist with the capability of usefully entering tabular material online. 1

AUTOMATIC RIGHT JUSTIFICATION

Typing tables of columns where the information is automatically right justified to a tab stop is desirable for many textual applications such as listing sums of money. Typically the off-line typist must tab, backspace the number of characters to be typed, and then insert the characters or else go through other time consuming and error prone mental calculations. In NLS one long range solution is to do such special formatting in the new graphics mode which will provide many other features besides. 2

In the mean time, a "Space (for tabs)" command can be implemented in the useroptions tool. Useroptions is picked because 1) that is where tab stops are set; 2) your desired tab mode will be remembered across sessions. This command would not only control the right justification feature, but it is hoped that with little extra implementation effort, we can provide the typist with the ability of entering the proper number of spaces in place of the tab character when entering standard left justified tabular material. This would ensure that what you type is what you get independent of 1) the medium you use or 2) where yours or your audiences tab stops are set. 3

It is worth noting here that at least one online implementation of tabs (at XEROX PARC) never inserts a tab character into text, only the proper number of spaces. 3a

The method of control proposed here will allow the typist to enter both left justified and MANUALLY right justified tabs in the same line of text but not both left and AUTOMATICALLY right justified tabs. For that, we look to the special graphics mode. 4

The following would be the help descriptions for a "Space (for tabs?) Yes/No/Right (justified) OK" command. 5

Space (for tabs?) Yes/No OK

After specifying the useroptions command "Space (for tabs?) Yes", the proper number of spaces to reach the next tab stop instead of a tab character will be entered into your file when you type the tab

key. The next character typed after the tab will appear in the column containing the tab stop. It will thus be "left justified" to the tab stop. Say "No" to "Space (for tabs?)" if you wish to have the actual tab character entered in your file. 6

BC, BW and right justification

BC and BW will backspace characters and words as if all the spaces and other characters had been entered without using tabs. Therefore, BC after typing a tab will cause your cursor or typing head to move back over one of the spaces entered by the tab. In this way, you can manually "right justify" tabular material such as sums of numbers by backspacing the number of characters to be typed before typing them. The "Space (for tabs?) Right (justified)" command will make this happen automatically, but does not allow left justification at the same time. 6a

Space (for tabs?) Right (justified) OK

After using the useroptions command "Space (for tabs?) Right" the proper number of spaces to reach the next tab stop will be entered into your file when you type the tab key. Every character typed after the tab will backspace the cursor or typing head one space. The character is remembered, but not typed at this point. When another tab or a carriage return is typed, the characters you input since the last tab will be typed and you will be at the next tab stop or at the beginning of the next line. In this way, your tabular material will be right justified to the tab stop. 7

BC, BW and column overflow

When you type enough characters to fill all the positions in front of the tab stop except one, your bell will ring. If you continue to type more characters, all of the characters you input since the last tab will be typed preceeded by a space and they will, of course, not be right justified. If you type BC or BW after some characters after a tab while you are in the automatic back space mode, the character or word you just typed will be deleted and your cursor or print head will move forward one space or one word. Otherwise BC and BW will backspace as if all the spaces and other characters had been entered without using tabs. 7a

New design for tabs in NLS

(J25784) 24-APR-75 11:39;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /DMB([ACTION] dpcs notebook please) DPCS([INFO-ONLY]
) ; Clerk: DVN; Origin: < LJOURNAL, 25766,NLS;1, >, 22-APR-75
12:55 XXX ;;;; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /EKM([ACTION]) ARC-DEV([INFO-ONLY]) ;
Sub-Collections: DPCS NIC; Clerk: KIRK;

NDM 24-APR-75 12:01 25785

roposal for Change in Output Commands Syntax

Journal item resubmitted to put it in the dpcs subcollection

roposal for Change in Output Commands Syntax

Motivation for Discussion 1

With the move to ELF, we are forced to be aware of the different requirements for lineprinters attached to TENEX systems vs. lineprinters running elsewhere. (The sequential files must be coded differently.) We use both types of devices (Office-1 printer and ELF printer), and our network users have any even greater diversity of printing configurations and requirements. 1a

The present command syntax has long been felt confusing by those who work closely with it. For example, "Output Remote" means format a file via the output processor, code the sequential image for non-TENEX printers, and then send the result over the network to a wild TIP port. In other words, the choice of using a TIP port implicitly involves the decision to use the Output Processor (vs. Quickprint, etc.) and that there is a lineprinter attached to that port (vs. terminal or COM device). 1b

The current software lacks generality in a few key places... It must be changed to allow Quickprints and COM-tests to be coded for non-TENEX as well as TENEX printers. These changes either have or must be done in order to use the ELF printer. The discussion of these changes did point out the lack of generality in the current syntax and the difficulty of sorting out what we do currently have. 1c

To access these new features, we should either add commands such as "Output Elf Quickprint" (adding to the confusion), or reconsider the output command syntax. 1d

Specification of Desired Output 2

To print a file, the user must specify three independent pieces of information: 2a

1) the format of the hard copy desired (quickprint, journal quickprint, comtest, of fully formatted output processor), 2a1

2) the type of device the resulting sequential file should be coded for (terminal, lineprinter, TENEX lineprinter, COM device), and 2a2

3) the destination of the resulting sequential file (the device itself, a disk file, a wild TIP port). 2a3

[Note: this last field may be defaulted to the device according to certain assumptions. For example, future development may allow user-specific defaults, e.g. all RADC

people using a printer attached to a TIP port as their default printer.] 2a3a

I propose the command syntax should be changed to reflect these three decisions. Such a change would replace the following commands: 2b

Output Printer 2b1

Output Printer File 2b2

Output Printer Append 2b3

Output Printer Copies 2b4

Output Remote 2b5

Output Terminal 2b6

Output Terminal File 2b7

Output CCM 2b8

Output CCM File 2b9

Output CCM Test 2b10

Output CCM Test File 2b11

Output CCM Test Append 2b12

Output Quickprint 2b13

Output Quickprint File 2b14

Output Quickprint File 2b15

Output Quickprint Copies 2b16

Output Journal (Quickprint) 2b17

Output Journal (Quickprint) File 2b18

Output Journal (Quickprint) Append 2b19

Output Journal (Quickprint) Copies 2b20

It could avoid the addition of commands with the following intent: 2c

roposal for Change in Output Commands Syntax

Output Elf Printer 2c1

Output Elf Printer File 2c2

Output Elf Printer Append 2c3

Output Elf Printer Copies 2c4

Output Elf Quickprint 2c5

Output Elf Quickprint File 2c6

Output Elf Quickprint File 2c7

Output Elf Quickprint Copies 2c8

Output Elf Journal (Quickprint) 2c9

Output Elf Journal (Quickprint) File 2c10

Output Elf Journal (Quickprint) Append 2c11

Output Elf Journal (Quickprint) Copies 2c12

Output Elf COM Test 2c13

Output Elf COM Test File 2c14

Output Elf COM Test Append 2c15

Changing the command syntax to seperate these fields should have the following advantages: 2d

- allows required additions in logical way (avoiding new confusing command syntax) 2d1

  [Note: Adding commands specific to ARC's need does nothing for our network users, yet ARC's needs may be typical of the desires of other applications. A general format should be found. This may be a chance for us to learn from the experience of working via the ARPANET.] 2d1a

- facilitates learning, and simplifies explanations in documentation 2d2

  [Susan Roetter agrees with my feeling here.] 2d2a

- allows additional generality with CURRENT software (e.g.

syntax is only reason why we can't now do Output Quickprint to TIP port) 2d3

[The execution routine offered below allows some things not currently available, but prohibits other things not currently supportable,] 2d3a

- points out places where generality is lacking in current software (e.g, Output COM Test to Terminal) 2d4

- allows logical place for additional features (e.g, new COM vendors, user-specific default printers,,,) 2d5

[With George Litho a potential COM vendor (pending some small amount of work on our end) this need may soon be relevant,] 2d5a

Proposal for Command Syntax 3

I propose the following CML: 3a

```
DECLARE VARIABLE device, type ;                                  3a1
DECLARE COMMAND WORD                                             3a2
   "ARC" = 209 ,                                                 3a2a
   "COPIES" = 210 ,                                              3a2b
   "FORMATTED" = 211 ;                                           3a2c
COMMAND  zoutput =  "OUTPUT"                                     3a3
   xoutsapf(FALSE)                                               3a3a
   ff _ TRUE      sim _ FALSE      pb _ FALSE                    3a3b
   param _ FALSE    port _ FALSE                                  3a3c
   dest _ FALSE                                                  3a3d
   device _ #"PRINTER"                                           3a3e
   <"type">                                                      3a3f
      ( "QUICKPRINT"                                             3a3f1
         type _ #"QUICKPRINT"                                    3a3f1a
```

```
      <"For device">  device _                                    3a3f1b
         ( "PRINTER" / "TENEX" <"Printer">)                       3a3f1b1
      (fdest xoutsnhf(FALSE) / "NO" <"Headers"> fdest
      xoutsnhf(TRUE))                                             3a3f1c
    / "JOURNAL" <"Quickprint">                                    3a3f2
      type _ #"JOURNAL"                                           3a3f2a
      <"For device">  device _                                    3a3f2b
         ( "PRINTER" / "TENEX" <"Printer"> )                      3a3f2b1
      fdest                                                       3a3f2c
    / "TEST" <"COM">                                              3a3f3
      type _ #"TEST"                                              3a3f3a
      <"For device">  device _                                    3a3f3b
         ( "PRINTER" / "TENEX" <"Printer"> )                      3a3f3b1
      fdest                                                       3a3f3c
    / "FORMATTED"                                                 3a3f4
      type _ #"FORMATTED"                                         3a3f4a
      <"For device">  device _                                    3a3f4b
         ( ( "TERMINAL"                                           3a3f4b1
            CLEAR <"Send Form Feeds?">                            3a3f4b1a
               ( answ()        ff _ TRUE  sim _ FALSE             3a3f4b1a1
               / <"Simulate?"> ff _ FALSE sim _ answer() )
                                                                  3a3f4b1a2
            <"Wait at page break?">                               3a3f4b1b
               pb _ answer()                                      3a3f4b1b1
            )                                                     3a3f4b1c
         / "PRINTER" / "TENEX"!L2! <"Printer"> / "COM" )          3a3f4b2
```

```
        fdest                                                    3a3f4c
      )                                                          3a3f5
    CONFIRM                                                      3a3g
    xout3opf (ff,sim,pb)                                         3a3h
    xout3 (type,device,dest,param,port) ;                        3a3i
```

The following execution routines should accompany the above CML, replacing the procedures "xout1" and "xout2": 3b

```
  (xout3opf) % setup flags record (to be passed to OP) %         3b1
    PROCEDURE                                                    3b1a
      %FORMALS%                                                  3b1a1
        (result,        %result record%                          3b1a1a
        parsemode,      %parsing, backup, cleanup%               3b1a1b
        formfeed,       %TRUE: send FF, FALSE: see simff%        3b1a1c
        simff,          %TRUE: simulate FF%                      3b1a1d
        waitpb);        %TRUE: wait at page breaks%              3b1a1e
      REF result, formfeed, simff, waitpb;                       3b1a2
    %----------------------%                                     3b1b
    CASE parsemode OF                                            3b1c
      = parsing:                                                 3b1c1
        BEGIN                                                    3b1c1a
        opflags _ 0;                                             3b1c1b
        CASE formfeed OF                                         3b1c1c
          = 1:                                                   3b1c1c1
            BEGIN                                                3b1c1c1a
            opflags.opform _ TRUE;                               3b1c1c1b
```

```
                opflags.opsimff _ FALSE;                                3b1c1c1c
                END;                                                    3b1c1c1d
             = 2, = 0:                                                  3b1c1c2
                BEGIN                                                   3b1c1c2a
                opflags.opform _ FALSE;                                 3b1c1c2b
                CASE simff OF                                           3b1c1c2c
                   = 1:  opflags.opsimff _ TRUE;                        3b1c1c2c1
                   = 2, = 0:     opflags.opsimff _ FALSE;               3b1c1c2c2
                   ENDCASE err(s"invalid response");                    3b1c1c2c3
                END;                                                    3b1c1c2d
             ENDCASE err(s"invalid response");                          3b1c1c3
          CASE waitpb OF                                                3b1c1d
             = 1:        opflags.opwtpb _ TRUE;                         3b1c1d1
             = 2, = 0:   opflags.opwtpb _ FALSE;                        3b1c1d2
             ENDCASE err(s"invalid response");                          3b1c1d3
          result _ opflags ;                                            3b1c1e
          END;                                                          3b1c1f
       ENDCASE;                                                         3b1c2
    RETURN(&result);                                                    3b1d
    END,                                                                3b1e
(xout3) %Output Command%                                                3b2
    PROCEDURE                                                           3b2a
       %FORMALS%                                                        3b2a1
          (result,       %result record%                                3b2a1a
```

```
        parsemode,      %parsing, backup, cleanup%          3b2a1b
        format,         %format type%                       3b2a1c
        device,         %device type%                       3b2a1d
        destination,            %destination type%          3b2a1e
        tip,            %tip name or filename%              3b2a1f
        tipport);       %tip port%                          3b2a1g
    LOCAL devtype, tp;                                      3b2a2
    LOCAL TEXT POINTER tp1, tp2 ;                           3b2a3
    LOCAL STRING tipstr[10], trmstr[10], outfile[30];       3b2a4
    REF result, device, destination, format, tip, tipport,
    tp;                                                     3b2a5
%----------------------%                                    3b2b
CASE parsemode OF                                           3b2c
  = parsing:                                                3b2c1
    BEGIN                                                   3b2c1a
    % output code format for device type %                  3b2c1b
      devtype _ CASE device OF                              3b2c1b1
        = 106 % terminal %: optydv;                         3b2c1b1a
        = 104 % printer %: oprmdv;                          3b2c1b1b
        = 117 % tenex printer %: opprdv;                    3b2c1b1c
        = 105 % com %: opcmdv;                              3b2c1b1d
        ENDCASE err(s"Unknown device type");                3b2c1b1e
    % destination file %                                    3b2c1c
      %put file name into a string%                         3b2c1c1
        *outfile* _ NULL;                                   3b2c1c1a
```

```
    filnam ([lda()],dacsp,stfile, soutfile);                    3b2c1c1b
  % check and edit it %                                         3b2c1c2
    IF NOT (FIND SF(*outfile*) [",] SSP "tp1 [",] <
    CH "tp2) THEN                                               3b2c1c2a
      err (s"System error -- bad file name");                   3b2c1c2a1
    *outfile* _ ", *initsr*, "), tp1 tp2, ",;                   3b2c1c2b
    IF destination = 210 %COPIES%                               3b2c1c2c
      THEN                                                      3b2c1c2c1
        BEGIN                                                   3b2c1c2c1a
        destination _ FALSE ;                                   3b2c1c2c1b
        *outfile* _ *outfile*, *tip* ;                          3b2c1c2c1c
        END                                                     3b2c1c2c1d
      ELSE CASE device OF                                       3b2c1c2c2
        = 104 % printer %:                                      3b2c1c2c2a
          *outfile* _ *outfile*, "PRINT" ;                      3b2c1c2c2a1
        = 117 % tenex printer %:                                3b2c1c2c2b
          *outfile* _ *outfile*, "LPT" ;                        3b2c1c2c2b1
        = 105 % com %:                                          3b2c1c2c2c
          *outfile* _ *outfile*, "COM" ;                        3b2c1c2c2c1
        ENDCASE ;                                               3b2c1c2c2d
  CASE destination OF                                           3b2c1c3
    = FALSE %- default -%:                                      3b2c1c3a
      CASE device OF                                            3b2c1c3a1
        = 106 % terminal %:                                     3b2c1c3a1a
          BEGIN                                                 3b2c1c3a1a1
```

```
                IF nlmode = fulldisplay THEN err
                (notyet) ;                                  3b2c1c3a1a2

                *outfile* _ "TTY:" ;                        3b2c1c3a1a3

                END;                                        3b2c1c3a1a4

              = 104 % printer %:                            3b2c1c3a1b

                %this is where you'd want to look up
                default in user profile%                    3b2c1c3a1b1

                REPEAT CASE 2 (209) ;                       3b2c1c3a1b2

              = 117 % tenex printer %:                      3b2c1c3a1c

                *outfile* _ "<PRINTER>", *outfile*;
                                                            3b2c1c3a1c1
              = 105 % com %:                                3b2c1c3a1d

                *outfile* _ "<COM>", *outfile*;             3b2c1c3a1d1

              ENDCASE err(notyet);                          3b2c1c3a1e

            = 15  %- file -%:                               3b2c1c3b

              BEGIN                                         3b2c1c3b1

              CASE lnbfls( &tip, 0, soutfile) OF            3b2c1c3b2

                = lhostn: NULL;                             3b2c1c3b2a

                ENDCASE                                     3b2c1c3b2b

                err(s"Remote File Manipulations Not
                Implemented Yet");                          3b2c1c3b2b1

              IF NOT FIND SF(*outfile*) [",] THEN           3b2c1c3b3

                CASE device OF                              3b2c1c3b3a

                  = 106 % terminal %:                       3b2c1c3b3a1

                    *outfile* _ *outfile*, ",TXT" ;
                                                            3b2c1c3b3a1a
                  = 104 % printer %:                        3b2c1c3b3a2

                    *outfile* _ *outfile*, ",PRINT" ;
                                                            3b2c1c3b3a2a
```

```
                = 117 % tenex printer %:                    3b2c1c3b3a3
                   *outfile* _ *outfile*, ",LPT" ;
                                                            3b2c1c3b3a3a
                = 105 % com %:                              3b2c1c3b3a4
                   *outfile* _ *outfile*, ",COM" ;
                                                            3b2c1c3b3a4a
                ENDCASE ;                                   3b2c1c3b3a5
             END;                                           3b2c1c3b4
          = 107 %- remote TIP -%: %printer/terminal%        3b2c1c3c
             BEGIN                                          3b2c1c3c1
             &tp _ &tip + d2sel;                            3b2c1c3c2
             *tipstr* _ tip tp;                             3b2c1c3c3
             &tp _ &tipport + d2sel;                        3b2c1c3c4
             *trmstr* _ tipport tp;                         3b2c1c3c5
             *outfile* _ "NET:0,",                          3b2c1c3c6
                STRING(VALUE(stipstr), 8), '-,
                 STRING((VALUE(strmstr)* 65536 + 2), 8);
                                                            3b2c1c3c6a
             END;                                           3b2c1c3c7
          = 209 % arc printer %:                            3b2c1c3d
             BEGIN                                          3b2c1c3d1
             *outfile* _ "<ARCPRINTER>", *outfile*;         3b2c1c3d2
             END;                                           3b2c1c3d3
          ENDCASE err($"Unknown destination type");         3b2c1c3e
       % format of file %                                   3b2c1d
          CASE format OF                                    3b2c1d1
             = 102 % quickprint %:                          3b2c1d1a
              coutqui(soutfile, lda());                     3b2c1d1a1
```

```
                = 103 % journal quickprint %:                          3b2c1d1b
                   coutjouqui(soutfile, lda());                        3b2c1d1b1
                = 211 % formatted %:                                   3b2c1d1c
                   coutproc(soutfile, lda(), devtype, opflags);
                                                                       3b2c1d1c1
                = 204 % comtest %:                                     3b2c1d1d
                   coutproc(soutfile, lda(), opxpdv, opflags);
                                                                       3b2c1d1d1
                ENDCASE err(s"Unknown print format");                  3b2c1d1e
            END;                                                       3b2c1e
        ENDCASE;                                                       3b2c2
    RETURN(&result);                                                   3b2d
    END.
                                                                       3b2e
```

Effort Involved in Changeover 4

The CML and execution routine have already been written (above) and tested to some degree. They can be used as such for the initial implementation. Harvey must do a half day's work to add capabilities to Quickprint and COM test. This work must be done no matter what the syntax looks like (to make the ELF printer operational). RWW and EKM have authorized the work if Applications approves intends to accept some syntax to access those capabilities. 4a

A brief changeover document (on how to use the new commands) might take a half day. The Output Processor Users' Guide can be changed quickly; this syntax would make the description there much simpler and clearer. User services must then inform our users. Other documentation (command summary, etc.) may be affected. 4b

Interested parties may try the syntax (although execution is not guaranteed) by trying the Output command in the user-attachable subsystem (meyer, format,subsys,). 4c

roposal for Change in Output Commands Syntax

(J25785) 24-APR-75 12:01;;; Title: Author(s): N. Dean Meyer/NDM; Distribution: /DMB([ACTION] dpcs notebook please) &DPCS([INFO-ONLY]) NDM([INFO-ONLY]) ; Clerk: DVN; Origin: < LJOURNAL, 32326,NLS;1, >, 18-APR-75 21:44 XXX ;;;; Title: Author(s): N. Dean Meyer/NDM; Distribution: /JCN([ACTION]) RLL([ACTION]) JHB([ACTION]) SRI-ARC([INFO-ONLY]) ; Sub-Collections: DPCS NIC; Clerk: NDM; Origin: < MEYER, OPCOMMANDS.NLS;5, >, 18-APR-75 13:59 NDM ;;;;####;

RWW 24-APR-75 14:10 25786

Telnet-PCP

You're right. Getting the Telnet-PCP connected for old tools is top priority after command interpreter. You and Postel should get together to chat about that.

should be ready to demo something by July. Will assume Joe Ehardt move Frontend to 11 between now and middle of next month and July can start on some of the display stuff. 1

Telnet-PCP

(J25786) 24-APR-75 14:10;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /CHI([ACTION]) RWW([INFO-ONLY]) DMB([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: RWW;

RWW 24-APR-75 14:16 25787

NSW Files

Jon, still concerned about the question of getting files into and out of NSW.

Will appreciate you and Milstein talking today so can be sure tomorrow (when I return) of how it will be done. Will we be using Jim's FTP fork stuff?

Dick

1

NSW Files

(J25787) 24-APR-75 14:16;;;; Title: Author(s): Richard W. Watson/RWW; Distribution: /JBP([ACTION]) RWW([INFO-ONLY]) DMB([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: RWW;

DMB 24-APR-75 17:33 25788

memo

Hello Susan! I have tried to link to you several times with no luck (smile). I have run into so many problems on the SRI-ARC file that I am working on. I sure wish you were here to help me. Yesterday it took four people to solve a drastic problem I encountered. But it was successful!

I am finally getting Journal mail and believe me it had piled up. Should I delete the DIRT,DCPS from my dir once I have done output quickprint? Because some of the citations appear in my journal mail again the next day. I know you don't really have the time to answer some of these little questions. However, if you have time send me a message regarding this. Hurry back! I am sure some of these problems will be in existence upon your return.

1

memo

(J25788) 24-APR-75 17:33;;;; Title: Author(s): Delorse M. Brooks/DMB; Distribution: /SGR([ACTION]) DMB([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: DMB;