DATA HANDLING SUPPORT FOR AIRSTAFF

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

93390000/55500000 1a1

fy-74 funds: 1b

75K 1b1

follow-on funds: 1c

100K 1c1

name of engineer & symbol: 1d

Duane Stone ISIM 1d1

effort title: 1e

Data Handling Support for Air Staff 1e1

effort discription: 1f

This effort will support pilot tests of portions of the AHI technology within Air Staff. 1f1

requirement: 1g

This effort is required to demonstrate the possibility of and benefits associated with introducing advanced on-line technology into environments outside the R&D community. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

AHI technology has been under development by ARPA for ten years. It is currently being evaluated by RADC within the ISI branch. The ultimate application of this technology may be within the intelligence community, the SPO's, or at any staff office. DCS/P&O has shown an interest in this technology for several years to assist their action officers in preparing position papers and briefs for the Chief of Staff. 1h1

technical approach: 1i

DATA HANDLING SUPPORT FOR AIRSTAFF

The introduction of this tecnology into Air Staff will proceed after an analysis in FY-73 of the environment, tasks and proceedures within DCS/P&O. Terminals and a connection to the ARPANET will be procured for DCS/P&O to allow them to access the software at SRI or at a commercial source (if such exixts at that time). 1i1

type of contract: 1j

N/S 1j1

date work statement available: 1k

1OCT73 1k1

contract number: 1l

N/A 1l1

D&F required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

N/A 1o1

remarks: 1p

manyears= .2 1p1

Project 9339 has never been funded before. The most likely source of funds is project 5550. 1p2

DLS 17-OCT-72 9:00 12245

DATA HANDLING SUPPORT FOR AIRSTAFF

(J12245) 17-OCT-72 9:00; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L./JLM; Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/USERSUPP.NLS;1, 4-OCT-72 6:40 DLS ;

AHI TRAINING

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

55500000 1a1

fy-74 funds: 1b

none 1b1

follow-on funds: 1c

none 1c1

name of engineer & symbol: 1d

Thomas Lawrence/ISIM 1d1

effort title: 1e

AHI TRAINING 1e1

effort discription: 1f

The effort will consist of training about 20 IS personall all of whom are outside the section ISIM. These individuals will be trained in the use of NTNLS or DEX using Execuport terminals or similar terminals. NTNLS will allow the user to input, edit, store and retrieve files at Stanford Research Institutes On Line System. DEX will permit the user to create files off line for later on line processing. 1f1

requirement: 1g

This effort is required before the AHI technology can be evaluated at the branch level. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

The overall objective of this effort is to involve all the activities of the branch (ISI) within NLS proceedures. This means that either every individual must be trained in NLS commands and have an available terminal when needed or that there must be a limited number of people able to meet the daily needs of the

remaining persons inregards to NLS. These select persons would have to be numerous enough to meet the branch needs for NLS. The branch includes at least 37 people (secrearies, engrs, admnistratrs & managers). 1h1

technical approach: 1i

The formal training will be performed by SRI personell. The 20 individuals to be trained will attend sessions in groups of 5 for about 2 days per session. In addition an informal (but monitored) learning period will follow the formal training period. This could vary from several manweeks to several manmonths depending upon the motivation of the individual and the availibility of terminals and NLS service. 1i1

type of contract: 1j

I/H 1j1

date work statement available: 1k

N/A 1k1

contract number: 1l

N/A 1l1

D&F required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

N/A 1o1

remarks: 1p

.5 manyears for ISIM people will be required to assist in instruction 1p1

1.0 manyears may be required from ISIS to effectively learn NLS 1p2

AHI TERMINALS

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

55810000 1a1

fy-74 funds: 1b

15K 1b1

follow-on funds: 1c

none 1c1

name of engineer & symbol: 1d

Lawrence ISIM 1d1

effort title: 1e

AHI Terminals 1e1

effort discription: 1f

This effort will continue to monitor the commercial developments in the terminal field as they apply to AHI technology. Of particular interest will be graphics output devices and inexpensive CRTs. 1f1

requirement: 1g

This effort is required to keep abreast of engineering tradeoffs which can be made in implementing AHI technology in Air Force environments. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

The NLS system at SRI can currently be accessed off-line via cassette, on-line via any standard ASCII teleprinter or CRT and on-line via an IMLAC graphics terminal. Graphics terminals are desireable in many functions, however current terminals are too expensive (15-20K). 1h1

technical approach: 1i

monitor developments in the commercial terminal field 1i1

monitor developments in the terminal R&D area 1i2

procure, install and evaluate the most promising graphics output device. 1i3

type of contract: 1j

N/S 1j1

date work statement available: 1k

OCT 73 1k1

contract number: 1l

N/A 1l1

D&F required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

N/A 1o1

remarks: 1p

manyears = .4 this includes in-house maintence of terminals 1p1

(an additional $3,000 should be set aside for contractual maintenence of terminals and perpherials) 1p2

DLS 17-OCT-72 9:03 12247

AHI TERMINALS

(J12247) 17-OCT-72 9:03; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L., Lawrence, Thomas F./JLM TFL;
Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/TERM.NLS;1, 4-OCT-72 6:36 DLS ;

ISI MANAGEMENT SYSTEM

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

55810000 1a1

fy-74 funds: 1b

none 1b1

follow-on funds: 1c

none 1c1

name of engineer & symbol: 1d

cavano isim 1d1

effort title: 1e

ISI Management System 1e1

effort discription: 1f

The objective of this effort will be to create a data management system accessable through AHI. 1f1

requirement: 1g

This effort would meet the requiremnets for testing a DMS on a real on-line system. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

An FY-73 effort will analyze the information requiremets of the branch, design a database that meets these needs under IDS, collect the data necessary, and finally, issue SOPs that will maintain the database. 1h1

technical approach: 1i

The approach to this effort will depend upon the knolwedge gained about ISI information needs during 73, the state of NLS by 74, the computer facility in use at RADC, and the state of ARPANET file

transfer protocol by 74. The best approach would be to formulate queries using NLS, ship these to IDS via the ARPANET and return the answers to NLS for further manipulation and printing. The second possible approach is to replicate the functional capability of IDS under NLS. The third approach is to access both systems from the same terminal. The fourth possible approach is to communicate and exchange data between both systems via an off-line device like the Termicette recorders. 1i1

type of contract: 1j

IH 1j1

date work statement available: 1k

JULY 15,1973 1k1

contract number: 1l

N/A 1l1

D&F required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

N/A 1o1

remarks: 1p

The estimated man-years for this effort is .6 man-years. 1p1

Programming support will be needed to augment that which will be provided in-house. 1p2

Depending on the success of interfacing GCOS with NLS, there may have to be alot of data manipulation. If there is enough of this, a Utica College student could help in inputting data into the system. 1p3

ISI MANAGEMENT SYSTEM

(J12248) 17-OCT-72 9:06; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L., Cavano, Joel P./JLM JPC;
Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/ISI.NLS;2, 17-OCT-72 9:05 DLS ;

ARPANET

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

55810000 1a1

fy-74 funds: 1b

none 1b1

follow-on funds: 1c

none 1c1

name of engineer & symbol: 1d

Thomas Lawrence/ISIM 1d1

effort title: 1e

ARPA NETWORK TASK 1e1

effort discription: 1f

The effort in FY 74 should consist of liaison function consumining time but few dollars at least as far as I can see now. Most Network interface equipmen will have been purchasd in FY 72 and 73. 1f1

requirement: 1g

This effort is required to keep abrest of the technical developments in the ARPANET, particularly the graphics protocol, the file transfer protocol and the data management protocol. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

RADC joined the ARPANET in late FY-73 and has since had numerous inquires about the possibilities of similar networks in other DOD organizations. In addition the question of secure transmission over the ARPANET has to be faced. These type of support activities require that someone at RADC remain technically current and competent concering ARPANET and general network technology. 1h1

technical approach: 1i

retain the role of technical liason at RADC fo the ARPANET 1i1

attend and actively participate in Network Working Group meetings 1i2

type of contract: 1j

date work statement available: 1k

contract number: 1l

DSF required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

n/a 1o1

remarks: 1p

In-house time should be about .4 man years. 1p1

Approximately 16K is required for communication costs and 7K for maintenence---A 30A FOR THIS AMOUNT SHOULD BE SUBMITTED BY ISF 1p2

DLS 17-OCT-72 9:10 12249

ARPANET

(J12249) 17-OCT-72 9:10; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L., Lawrence, Thomas F./JLM TFL;
Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/NET.NLS;1, 4-OCT-72 6:32 DLS ;

NLS SERVICE

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

55500000 1a1

fy-74 funds: 1b

200K 1b1

follow-on funds: 1c

300K 1c1

name of engineer & symbol: 1d

Duane Stone ISIM 1d1

effort title: 1e

NLS Service 1e1

effort discription: 1f

This effort will provide the branch (ISI) with the neccessary Quantity and quality of NLS service to support the evaluation of AHI technology. 1f1

requirement: 1g

This effort is required before evaluation of the AHI technology can proceed at the branch level. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

The use of NLS during FY-72 was freely granted by SRI. During FY-73 it was paid for indirectly by joining the ARPANET and partially by a service contract with SRI. 1h1

technical approach: 1i

The approach will be to solicit NLS service from available sources. At this time it is expected to be either SRI or a commercial source which has been identified by SRI and ARPA. Of

particular interest will be the reliability an consistancy of the service. It has been shown during initial use of NLS that the motivation to use the system and the speed with which one can learn to use the system is directly affected by the availablility of the system. 1i1

type of contract: 1j

N/S 1j1

date work statement available: 1k

1JUL73 1k1

contract number: 1l

N/A 1l1

DSF required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

N/A 1o1

remarks: 1p

manyears= .1 1p1

NLS SERVICE

(J12250) 17-OCT-72 9:12; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L./JLM; Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/NLS.NLS;1, 4-OCT-72 6:34 DLS ;

AHI EVALUATION

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

55810000 1a1

fy-74 funds: 1b

20K 1b1

follow-on funds: 1c

none 1c1

name of engineer & symbol: 1d

Bair ISIM 1d1

effort title: 1e

AHI Evaluation 1e1

effort discription: 1f

This effort will evaluate the effect of AHI technology on the job performance of individuals, teams and the ISI organization. 1f1

requirement: 1g

This effort is required to attempt to quantify the changes in quality, quantity and timeliness of job performance associated with the introduction of advanced on-line augmentation technology into an Air Force office environment. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

During FY-73 the basic measures for evaluating job performance in an intellectual environment will be developed, administered on a section level and validated and refined. 1h1

technical approach: 1i

Three types of measures will be used: 1i1

psychometric measures of attitude changes. 1i1a

comparitive measures of job performance on specific tasks--quality, manhours, through put time, and quantity of text generated in response to specific requests. 1i1b

cost/benefit measures. 1i1c

type of contract: 1j

I/H 1j1

date work statement available: 1k

N/A 1k1

contract number: 1l

post doctoral contract F30602-72-C-0409 1l1

D&F required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

N/A 1n1

sole source company: 1o

N/A 1o1

remarks: 1p

manyears = 1.0 1p1

additional manyears required from U C contract--1.0 1p2

in addition an airman or equivalent is required 1p3

AHI EVALUATION

(J12251) 17-OCT-72 9:34; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L., Bair, James H./JLM JHB;
Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/EVAL.NLS;1, 4-OCT-72 6:21 DLS ;

AHI EVALUATION SUPPORT

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

55810000 1a1

fy-74 funds: 1b

45K 1b1

follow-on funds: 1c

none 1c1

name of engineer & symbol: 1d

Duane Stone ISIM 1d1

effort title: 1e

AHI Evauation Support 1e1

effort discription: 1f

This effort will obtain the neccessary programming support to implement MIS techniques in NLS. 1f1

requirement: 1g

Certain packages must be available under NLS before the system can be fully evaluated in Air Force environments. These include such things as; calculation, graphics, and plotting packages. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

SRI had many of these packages in their system on the XDS-940 system in 1971. With the conversion to the PDP-10 computer and the redirection of their work toward supporting the ARPANET, these packages were given low priority for conversion. Initial evaluation at RADC has revealed the necessity of these packages within Air Force organizations. 1h1

technical approach: 1i

AHI EVALUATION SUPPORT

Both RADC and SRI have limited manpower to devote to the reprogramming task. Either SRI's programming staff will be augmented or another contractor will be given access to the SRI facility and the L-10 manuals to allow him to perform programming tasks jointly specified by RADC and SRI. 1i1

type of contract: 1j

01R 1j1

date work statement available: 1k

N/A 1k1

contract number: 1l

73 effort not initatied yet 1l1

D&F required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

N/A 1o1

remarks: 1p

manyears = 0 1p1

DLS 17-OCT-72 9:35 12252

AHI EVALUATION SUPPORT

(J12252) 17-OCT-72 9:35; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L./JLM; Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/AHISUPP.NLS;1, 4-OCT-72 6:18 DLS ;

AHI ADVANCED MANAGEMENT TECHNIQUES

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

55810000 1a1

fy-74 funds: 1b

none 1b1

follow-on funds: 1c

none 1c1

name of engineer & symbol: 1d

Roger Panara ISIM 1d1

effort title: 1e

Integration of Advanced Management Techniques with AHI 1e1

effort discription: 1f

This effort will integrate advanced management techniques with the AHI system and the IS Div. 1f1

requirement: 1g

This effort is required to take full advantage of and evaluate the AHI technology within the IS Div. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff
TPG #114, "Automated Air Staff Planning and Administration System" 1g2

background: 1h

The straighforward replication of manual proceedures using an advanced technology like AHI does not allow an organization to realize its full potential. Changes should be made in the organization itself, the way in which it is managed and the communication channels. Techniques like DELPHI, on-line conferencing, relevence trees, histogram and continuous plotting, statistical and coorelation analysis have been shown by basic

AHI ADVANCED MANAGEMENT TECHNIQUES

researchers to improve the management of goal oriented organizations. 1h1

technical approach: 1i

During FY-73 an in-house effort will explore in more detail the potential impact of these techniques on an organization like IS. The most promising ones will be implemented on the AHI system in FY-74. They will be used, evaluated and refined in FY-75. 1i1

type of contract: 1j

IH 1j1

date work statement available: 1k

N/A 1k1

contract number: 1l

N/A 1l1

D&F required (place X after appropriate ans.) 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

N/A 1o1

remarks: 1p

manyears = 1.0 1p1

consultants under the post doctoral program may be required. 1p2

AHI ADVANCED MANAGEMENT TECHNIQUES

(J12253) 17-OCT-72 9:41; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L., Panara, Roger B./JLM RBP;
Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/ADVMAN.NLS;1, 4-OCT-72 6:10 DLS ;

NETWORK INFORMATION CENTER & AUGMENTATION SYSTEM DEVELOPMENT

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

09670000 1a1

fy-74 funds: 1b

$1,300K 1b1

follow-on funds: 1c

$1,300K 1c1

name of engineer & symbol: 1d

Duane Stone ISIM 1d1

effort title: 1e

Network Information Center & Augmentation System Development 1e1

effort discription: 1f

This effort is aimed at developing Augmentation systems which will improve the performance of individuals, groups, teams and organizations engaged in intellectual activity. A secondary goal is to provide the ARPANET with a documentation and information retrieval capability using the developed augmentation techniques. 1f1

requirement: 1g

This effort is directed by ARPA order 0967. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

This effort has been supported by ARPA for a number of years. It has now reached the stage where it is ready for export out of the basic research community. One of the ways of exposing it to practical everyday use is to allow a subset of the system which has reached a certain level of stability to be used by other people around the ARPANET. RADC has a program to make extensive use of the system to evaluate its potential for use within other Air Force environments. 1h1

technical approach: 1i

The system developed at SRI will be used to further develop the system through a "bootstrapping" process. The bootstrapping will be controlled and influenced by the results of the experimentation at RADC. 1i1

type of contract: 1j

01R 1j1

date work statement available: 1k

N/A 1k1

contract number: 1l

F30602-72-C-0313 1l1

DSF required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

Stanford Research Institute 1o1

remarks: 1p

manyears = .5 1p1

NETWORK INFORMATION CENTER & AUGMENTATION SYSTEM DEVELOPMENT

(J12254) 17-OCT-72 9:42; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L./JLM; Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/0967.NLS;1, 4-OCT-72 6:08 DLS ;

AHI INTERFACE TO RADC FACILITY

Proposed Effort for FY 74-75 Program Call 1

job order number: 1a

55810000 1a1

fy-74 funds: 1b

30K 1b1

follow-on funds: 1c

45K 1c1

name of engineer & symbol: 1d

Duane Stone ISIM 1d1

effort title: 1e

AHI Interface to RADC Facility 1e1

effort discription: 1f

This effort will obtain the neccessary programming support to allow transfer of files and data between the RADC computer facility and SRI/NLS software. 1f1

requirement: 1g

To evaluate the AHI technology at the organizational level, one needs access to a reasonably sophisticated data management capability. 1g1

ESD TN-24-71-15 Man-Computer Communication in Interactive Systems
Project 5550 Task 06, Staff Job Automation Techniques
Project 921A-9339, Data Handling Support for Air Staff 1g2

background: 1h

To complete the evaluation of AHI technology in an organizational environment, some reasonably sophisticated data management capability is needed to support the IS organization. The philosophy of the ARPANET and economics dictate that software/hardware facilities be used where they exist. Data management capabilities and expertize exist at RADC. Only elementary data management capability

exists under NLS at SRI. By FY-74 protocol should be available for shipping files over the ARPANET. 1h1

technical approach: 1i

Data Management capabilities will not be replicated at SRI, but interface packages will be constructed between NLS and RADC's Data Management software to allow easy transfer of files and data between SRI and RADC over the ARPANET. This will allow economic access to a data management system and also test the ability of the ARPANET to facilitate data transfer between two dissimiliar hard/software facilities. 1i1

type of contract: 1j

N/S 1j1

date work statement available: 1k

1JUL73 1k1

contract number: 1l

N/A 1l1

DSF required 1m

YES: 1m1

NO: X 1m2

unsolicited proposal: N/A 1n

sole source company: 1o

N/A 1o1

remarks: 1p

manyears = .1 1p1

DLS 17-OCT-72 9:46 12255

AHI INTERFACE TO RADC FACILITY

(J12255) 17-OCT-72 9:46; Title: Author(s): Stone, Duane L./DLS;
Distribution: McNamara, John L./JLM; Sub-Collections: RADC; Clerk: DLS;
Origin: <STONE>30A/AHIINT.NLS;1, 25-SEP-72 8:55 DLS ;

KEV 18-OCT-72 18:53 12257

<SYSTEM>SYSDOC.TXT;3 as of 10/18/72 18:47

this is the sysdoc message prior to its obsoletion at the above time

New NLS features in system brought up 28-SEP-72

Control characters in TNLS

The new NLS has major additions in control character assignment and echoing. In addition to the previously acceptable control characters, the following will be interpreted as the given NLS control characters:

CR for CA (echoed as EOL)

ALT/ESC for C. (echoed as @)

DEL/RUBOUT for CD (echoed as #)

To enter a literal EOL (or CR) in text, the character must be preceded by a control-v.

Journal submission change

A number is no longer required in Journal submission; number assignment will be deferred to a background process unless desired. To get a number at submission time or to use pre-assigned numbers, type "N" for number and follow the old number assignment instructions.

Under certain conditions, neither the use of preassigned numbers nor the assignment of numbers at submission time is possible.

(in the past, this situation caused the message "Journal

Temporarily Unavailable" to be typed) In this case, the message

"Deferred Numbers Only" will be sent at the "Submit" command.

Current Features

New Terminal Type

There will soon be a new terminal type for the EXEC terminal type

command. The new new terminal is NVT for Network Virtual

Terminal. Saying you are a NVT is equivalent to issueing a

terminal type of 37 followed by a halfduplex command.

Change to accounting information input at login time

When it is time for you to type in your account number or string,

the system will type out a valid default account number or string

for you. At this point in time, you can either type a CR, which

means that you wish to use this account, or you can edit this

account with ↑A, ↑R, ↑W, or by adding text, and then type a CR.

If you modifythe account to be some bad account, you will not be

logged in, and will be given the message ILLEGAL ACCOUNT.

In addition, ARC will be keeping a list of valid accounts

for each individual user and you will be restricted to using

only valid accounts at both LOGIN time and CHANGE ACCOUNT
time.

More detailed information is in preparation.

New System Features.

IDENTS:

The EXEC may ask for your IDENT at LOGIN time.

If it knows your IDENT it wont ask for it.

If it does ask, please type your NLS IDENT followed by a CR.

If you do not have an IDENT just type a CR.

The new EXEC command "SET (IDENT TO)" can be used after LOGIN.

Also, JOBSTAT will indicate the current setting of your IDENT.

NLS no longer asks for your IDENT if it can get it from TENEX,

Device Type:

NLS no longer asks for your device type; it gets it from TENEX,

Use the EXEC command "TERMINAL (TYPE is)" to set your device
type (all terminals except our local displays are initialized
to be ti-terminals).

We have changed the "TERMINAL (TYPE IS)" command to accept actual
device names, instead of numbers.

Type a ? to the command to find out actual parameters.

Running Subsystems:

The EXEC will search directories as follows for subsystem names:

(1) the directory <SUBSYS>,

(2) the directory to which you are connected,

(3) your LOGIN directory.

Also, you can now include a directory name as part of a subsystem

name (without using the RUN command) e.g., <victor>xxx.sav

Running NLS:

There are now three EXEC commands which can be used to start NLS

NLS -- as before but does not ask for IDENT or device,

TNLS -- starts nls with device type ti-terminal (useful primarily from displays),

DEX -- starts nls in deferred execution mode (old device "offline").

KEV 18-OCT-72 18:53 12257

<SYSTEM>SYSDOC.TXT;3 as of 10/18/72 18:47

(J12257) 18-OCT-72 18:53; Title: Author(s): Victor, Kenneth E. (Ken)/KEV; Sub-Collections: SRI-ARC; Clerk: KEV;
Origin: <VICTOR>SYSDOC-10/18/72.NLS;2, 18-OCT-72 18:46 KEV ;

DVN 18-OCT-72 16:27 12258

The Interrogate Command Requires ALTMODE

After you enter the name of a file in the Archive interrogate command, you must hit ALTMODE to get a correct response

Syntax: in ALTMODE TERROGATE <directoryname>filename ALTMODE 1

DVN 18-OCT-72 16:27 12258

The Interrogate Command Requires ALTMODE

(J12258) 18-OCT-72 16:27; Title: Author(s): Van Nouhuys, Dirk H./DVN; Distribution: Row, Barbara E., Petell, Marcelle D., Panara, Roger B., Stone, Duane L., Slottow, Joan E., Peters, Jeffrey C., Hathaway, A. Wayne, Jones, William P., Feinler, Elizabeth J., Kelley, Kirk E., Prather, Ralph, Byrd, Kay F., Pucine, Gino, Merry, Diana L., Limuti, Don, Gray, Thomas B., Rosich, Raynor K., Knowlton, Prentiss H., Grothe, David M., Zar, Leon R., Layman, Terry J., Graham, Marvin L., McIntyre, David E., Meir, Jaacov, Grossman, Gary R., Bouknight, W. Jack, Sher, Michael S., Madden, James M., Slotnik, Daniel L., Beaman, Kathy, Day, John D., Crocker, David H., Hardeman, Beauregard A., Roistacher, Richard C., Ferguson, Ferg R., Forman, Ernest H., Lane, Linda L., Engelbart, Douglas C., Westheimer, Ellen, North, Jeanne B., McConnell, John W., Deutsch, L. Peter, Mitchell, James G., Kay, Alan C., Auerbach, Marilyn F., Hardy, Martin E., Irby, Charles H., Jernigan, Mil E., North, Jeanne B., Norton, James C., Page, Cindy, Van Nouhuys, Dirk H., Watson, Richard W., Crocker, Steve D., Lawrence, Thomas F., Heafner, John F., Long, Robert E., White, James E. (Jim), Hathaway, A. Wayne, Murphy, Dan L., Foulk, Patrick W., Winter, Richard A., Zoeren, Harold R. Van, McKenzie, Alex A., Sundberg, Robert L., Madden, James M., Bhushan, Abhay K., Karp, Peggy M., Neigus, Nancy J./TU NJN; Sub-Collections: SRI-ARC TU; Clerk: BER;

DVN 18-OCT-72 8:12 12259

When Someone is Working in Display NLS, he Cannot See Some One Linking to Him in TENEX

The title is the medium. 1

DVN 18-OCT-72 8:12 12259

When Someone is Working in Display NLS, he Cannot See Some One Linking to Him in TENEX

(J12259) 18-OCT-72 8:12; Title: Author(s): Van Nouhuys, Dirk H./DVN; Distribution: Neigus, Nancy J./NJN ; Sub-Collections: SRI-ARC; Clerk: DVN;

JRP 18-OCT-72 9:00 12260

Message re. File Transfer

BIll, I will be at ICCC in Washington DC for the next week, but I will still be reading my Journal mail. Now for your question. Whenthe FILE LOADED message appears you are then ready to execute any of the file transfer in or out sequences as described in the document. e.g. to copy a file to an O/S data set run..<USER> <1> <*> (;US,1,* <sp>) Try it. By the way, to sign off the air execute <SYST> <DOWN>....Is middle of November ok for seminar? 1

JRP 18-OCT-72 9:00 12260

Message re. File Transfer

(J12260) 18-OCT-72 9:00; Title: Author(s): Pickens, John R./JRP;
Distribution: Jones, William P./WPJ; Sub-Collections: NIC; Clerk: JRP;

RWW 18-OCT-72 10:00 12261

Visitor Log - Oct 17, 72 Visitors from Patrick Air Force Base

Oct 17, 72 1

Michael Young Patrick Airforce Base Florida 2

S. B Calo RCA Laboratories 3

Gordon W. Clarke RCA Service Co. 4

W.C. Roper RCA Service Co. 5

These gentlemen are on a fact finding tour to find out about the network and may take on some of the day today management of the network; their charter is as yet undefined. 5a

They asked more probing questions than any other group who has come by. The RCA guys seem to be under contract to the Patrick Air Force Base group, who would do the managing, to recommend to PAFB what position they should take with ARPA as to the scope of their management charter or whether or not to take on the problem at all. 5b

I felt as I talked frankly with them about our plans, problems, accomplishments that they did not really understand what we were trying to do, that they were focused on the problem of how the hell can the network work if people can not easily get documentation of the various systems and have good resource notebook information; the journal general augmentation ideas seemed to go by them. They did not seem to fully sympathize with the problems of gettng the sites to cooperate by sending us their reports etc. 5c

RWW 18-OCT-72 10:00 12261
Visitor Log - Oct 17, 72 Visitors from Patrick Air Force Base

(J12261) 18-OCT-72 10:00; Title: Author(s): Watson, Richard W./RWW; Distribution: Engelbart, Douglas C., Norton, James C., Kudlick, Michael D., North, Jeanne B./DCE JCN MDK JBN ; Sub-Collections: SRI-ARC; Clerk: RWW;

Arc Report Form for DEC Hardware Problems

```
**********************************************          1
**                                              **      2
**   ARC REPORT OF DEC HARDWARE PROBLEMS        **      3
**                                              **      4
**********************************************          5
```

Date: ..... Time: 6

Name of person reporting problem: 7

Device with problems: 8

Problems:

9

DEC may take the system down (yes no) 10

If yes, from ..... until 10a

Restart procedure: (check one) 11

(a) Bring TENEX up on Monitor Tape 11a

(b) Run diagnostics (specify): 11b

(c) Other (specify):

11c

DEC fix: (to be filled out by DEC maint.)

12

Note to ARC personnel: Make sure that Jeff has either notified the daytime DEC staff or called the DEC office (15) 964-6200 X-281 thru 285.

13

Ferguson, Ferg R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

To:
Ferguson, Ferg R.
Stanford Research Institute
Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

12263

Author Copy

WRF 18-OCT-72 14:15 12262

Arc Report Form for DEC Hardware Problems

(J12262) 18-OCT-72 14:15; Title: Author(s): Ferguson, Ferg R./WRF ;
Distribution: Norton, James C., Hardy, Martin E., Riet, Ed K. Van De,
Wallace, Smokey C., Victor, Kenneth E. (Ken), Peters, Jeffrey C./JCN
MEH EKV DCW KEV JCP ; Sub-Collections: SRI-ARC; Clerk: WRF;
Origin: <FERGUSON>DEC-REP.NLS;2, 18-OCT-72 13:42 WRF ;

```
.HJOURNAL="DCW 19 OCT 72  4:41AM";
```

1.

IDENTIFICATION 1

Program Name: "CHKBRD" XCORE MEMORY TEST 1a

Date: 22-SEP-72 1b

Maintainer: W.R FERGUSON 1c

Author: D.C. WALLACE 1d

Residence:
dectape dectape# 10 (in computer room)
On-Line (diagnostics.chkrbd,) 1e

Abstract: 1f

This program tests the 32 K Ampex External Core (XCORE). It allows selection of data patterns, writes these into XCORE, then reads back the data, and prints out any discrepancies. It can be run under the TENEX Monitor, or in stand alone mode.

Stand alone:

Requires PDP-10 and X-CORE

Port 8 on X-CORE must be selected, Port 7 may be selected if the XCORE test box is to be used, and Ports 1 - 6 must be deselected.

TENEX mode (runs under the Monitor)

Requires entire TENEX hardware configuration

Port 8 on X-CORE must be selected, Port 7 may be selected if the XCORE test box is to be used, and Ports 1 - 6 must be deselected.

This requires that the LPT and displays will not work.

1. Mount DEC tape 10 on DEC tape unit 8, selected to "REMOTE".

2. Press the keys "STOP", "RESET", and "READ IN".

3. When the DEC tape stops, type CHKRBD.SAV(CR) on the console teletype.

1. Login, and at the EXEC "@" type:
@<DIAGNOSTICS>CHKRBD.SAV(CR)

Stand alone:

All sense switches should be set to 0.

TENEX mode:

Sense switches not monitored

4.2 Starting Address(s) 4b

1) START(ALT)G - reads the contents of FLAGS, and executes appropriate tests (see Operating Procedure, EXEC mode)

2) ALLTST(ALT)G - runs a test through lower core, then upper core, and finally cycles through all of XCORE. This runs the following data patterns (it does not read "FLAGS"):

a) ADDRES

b) CHKRBD

c) FLOAT1

d) FLOAT0

e) ONE0

f) ONES

5 OPERATING PROCEDURE 5

5.1 Operational Switch Settings: 5a

Stand alone:

Sense switch bit 0 - off: normal, on: stop cycle and go to DDT

TENEX mode

Though sense switches are not monitored in this mode, you can accomplish the equivalent by typing:
(control-C)
@DDT(CR)

5.2 EXEC Mode: 5b

1) From entry point START

This program allows selection of both data pattern and output options via the word "FLAGS". LH selects the data pattern and RH selects the desired output

Data Patterns:

1) CHKRBD
write checkerboard pattern (see 8.2 algorithms chkrbd.doc)

2) ADDRES
write the address of each xcore location as data c(xcore)=a(xcore)=p(xcore)

3) ONE0 - write the pattern 52,,525252

4) ONES - write all ones pattern

5) USER - alternate between pattern "WORD1" and "WORD2"

6) FLOAT1 - write a floating one pattern; (ie: move a one bit through an all zero word)

7) FLOAT0 - write a floating zero pattern; (ie: move a zero bit through an all ones word)

The program cycles on write read and check with "pattern" and its logical compliment (except patterns "user,float1 and float0")

This entry point also allows selection of the XCORE addresses to be checked, via the setting of words "SADDR" and "NWORDS".

The word SADDR gives the starting address in XCORE, and is defaulted to 0. (A different starting address must be entered in octal.)

The word NWORDS gives the number of cells to be checked, starting with SADDR. This is defalted to 100000(oct), or all of XCORE. (A different setting must be entered in octal.)

2) From entry point ALLTST

This entry point runs a set of standard data patterns through all of XCORE, with an output option of TYPE.

The data patterns used are:
ADDRES
CHKRBD

FLOAT1
FLOAT0
ONE0
ONES

Note: If the flag "RMW" (Read, Modify, Write) is set to one (1), the above tests will do a RMW and then read each XCORE cell tested. If "RMW" is zero (0), which is the default, all cells will be tested with a simple write and then a read.

5.3 User Mode: 5c

Not applicable now.

5.4 Type-out Modes: 5d

OUTPUT OPTIONS: (specified in RH of "FLAGS" if START, or defaulted to "TYPE" if ALLTST)

1) TYPE = type all errors on the tty in the form
ADDR READ WROTE BITS

2) BELLS = ring the tty bell on each error encountered

3) DING = ring the tty bell once per read-write cycle if error

6 ERRORS 6

6.1 Errors will be printed in the format of:
ADDR READ WROTE BITS 6a

Where ADDR is the XCORE address (octal),

READ is the octal word read from XCORE,

WROTE is the octal word that was written in that cell, and

BITS are those bits which differ between the READ and WROTE words, and is the result of an exclusive Or function

7 RESTRICTIONS/CAUTIONS 7

7.1 If you run this under the TENEX monitor, you must turn off XCORE Ports 1-6. If you leave these ports on, you will immediately get errors, which are probably not real. 7a

8 MISCELLANEOUS 8

8.1 Sample Operator Scenario(s): 8a

8.2 Algorithms 8b

checkerboard pattern generation

definitions

a(xcore)= xcore address (in the range 0-77777 octal)
c(xcore)= contents of any xcore cell
p(xcore)= pattern to be writtten (via algorithm)
1b(n)= bit "n" of an xcore word or address
bits are labeled 12 - 35 (msb - lsb)
24 bits right justified in a 36 bit PDP-10
word

the pattern is constructed as follows:

IF:
1B(24)=1 AND 1B(29)=0 OF A(XCORE) OR
1B(24)=0 AND 1B(29)=1 OF A(XCORE)
THEN C(XCORE) = 0

IF:
1B(24)=1 AND 1B(29)=1 OF A(XCORE) OR
1B(24)=0 AND 1B(29)=0 OF A(XCORE)
THEN C(XCORE)=77777777

8.3 Control Words and Tables glossary 8c

Control word summary

FLAGS - used by START, LH is data pattern, RH is output option

RMW - zero: do normal writes and reads (default)
one: do read, modify, write and then read

SADDR - used by START, starting XCORE address (octal)

NWORDS - used by START, number of XCORE cells to test (octal)

ADDR - current cell being written or read

ERROR - one if any errors on this pass
zero if no errors

DDTSYM - DDT symbol table pointer (loc 116/36)

WORD1 - user settable data pattern (for START/USER pattern)

WORD2 - user settable data pattern (for START/USER pattern)

Data pattern summary

1) CHKRBD - write checkerboard pattern

2) ADDRESS - write the address of each xcore location as data

3) ONE0 - write the pattern 52,,525252

4) ONES - write all ones pattern

5) USER - alternate between pattern "WORD1" and "WORD2"

6) FLOAT1 - write a floating one pattern; (ie: move a one bit through an all zero word)

7) FLOAT0 - write a floating zero pattern; (ie: move a zero bit through an all ones word)

The program cycles on write read and check with "pattern" and its logical compliment (except patterns "user,float1 and float0")

Output option summary

1) TYPE = type all errors on the tty in the form
ADDR READ WROTE BITS

2) BELLS = ring the tty bell on each error encountered

3) DING = ring the tty bell once per read-write cycle if error

9 ASSEMBLY,LOAD and SAVE PROCEDURE 9

9.1 Stand-Alone: 9a

create sequential file

```
ASSEMBLE
  @FAIL
  XX.CHKRBD
  *↑C

LOAD:
  @LOADER
  */40000
  */SXX
  */WEDDT.REL$

SAVE:
  @DDT
  ENTRY=nnn
  HALTF$X
  @ENT nnn
  @SAVE 4000 ZZZZ DTAN:CHKRBD.SAV
```

WRF 18-OCT-72 14:32 12263

XCORE MEMORY TEST

(J12263) 18-OCT-72 14:32; Title: Author(s): Ferguson, Ferg R./WRF ; Distribution: Lee, Susan B., Michael, Elizabeth K., Dornbush, Charles F., Matzorkis, Gus, ARC, Guest O., Feinler, Elizabeth J., Handbook, Augmentation Research, Kelley, Kirk E., Meyer, N. Dean, Byrd, Kay F., Prather, Ralph, White, James E. (Jim), Vallee, Jacques F., Kaye, Diane S., Rech, Paul, Kudlick, Michael D., Limuti, Don, Ferguson, Ferg R., Lane, Linda L., Auerbach, Marilyn F., Bass, Walt, Engelbart, Douglas C., Hardeman, Beauregard A., Hardy, Martin E., Hopper, J. D., Irby, Charles H., Jernigan, Mil E., Lehtman, Harvey G., North, Jeanne B., Norton, James C., Page, Cindy, Paxton, William H., Peters, Jeffrey C., Ratliff, Jake, Row, Barbara E., Riet, Ed K. Van De, Van Nouhuys, Dirk H., Victor, Kenneth E. (Ken), Wallace, Smokey C., Watson, Richard W., Andrews, Don I./SRI-ARC ; Sub-Collections: SRI-ARC; Clerk: WRF;
Origin: <DIAGNOSTICS>CHKRBD.DOC;15, 18-OCT-72 14:29 WRF ;

```
.HJOURNAL="DCW 19 OCT 72  4:43AM";
```

1.

IDENTIFICATION 1

Program Name: "DRMTST" BRYANT drum diagnostic 1a

Date: 14 JULY 72 1b

Maintainer: W.R. FERGUSON 1c

Author: P.H. LIPMAN 1d

Residence:
dectape#10 (in computer room)
on-line (diagnostics,drmtst,) 1e

Abstract: 1f

This program tests the function of the BRYANT drum. It provides a wide variety of functions and data patterns for both fault isolation and diagnosis. The main loop is written as a subroutine to provide a "driver" program facility. The entry point "ALLTST" is an example of such use. At present this test uses the drum in a different manner than TENEX does. It does an I/O instruction for each band whereas TENEX issuses one cono and puts the commands in the command list "on the fly".

BIT 32 - 1=dynamic mem buffers, 0=fixed buffers
BIT 33 - 1=reread on compare errors, 0=don't
BIT 34 - 1=background input buffer, 0=don't
BIT 35 - 1=used keyed data pattern, 0=use patbuf patterns

5.2 EXEC Mode: 5b

5.3 User Mode: 5c

NONE

5.4 Type-out Modes: 5d

5.5 Controlling Parameters: 5e

FLINIT - The main control parameter which is used to initialize the flag register with the control flags.

BIT XX (CHAIN) - ON if chained xfer (band at a time), OFF if single sector

BIT 31 (MAP) - ON if testing bryant mapping hardware (not used by TENEX), off if not.

BIT 32 (CHGMEM) - ON if dynamically changing memory buffers, off if using fixed memory buffers. Dynamic buffers range from BOTMEM to TOPMEM and the next buffer address is calculated from the previous one by adding MEMINC. If BOTMEM and TOPMEM are left at zero, They default to the first page after the program and the last word in memory respectively. If you are using a fixed buffer address, the address is in BUFADR. This location may be manually altered and the new address will be picked up by the program. Changing buffers dynamically is clearly useful for helping find memory or port oriented problems, but it does take quite a bit more time to make a pass on the drum. Use static buffers if the problem is really the drum itself.

BIT 33 (REREAD) - ON if rereading a sector when data compare errors are found. This control should probably be used all the time; it gives a good indication of whether a failure took place in the write or in the read.

BIT 34 (BAKGRD) - ON if backgrounding the input buffer with the data specified in BKGRWD, off if not. this is useful in diagnosing a memory addressing failure on the part of the drum controller. It will also make it obvious

if the controller fails to transfer the specified number of words.

BIT 35 (KEYDRM) - ON if using the special data pattern XWD DRMADR,WRDADR. This pattern is designed to help find drum addressing errors. to work effectively, this pattern must be written once only to a given spot on a given pass, so RPTPAT should be 1 and the CHGMEM flag should be OFF. On alternate passes the complement of the data pattern is used. If KEYDRM is OFF then the data pattern(s) used are specified in PATBUF (see below). The program cycles through the list of patterns, repeating each one RPTPAT times before going to the next. Each drum band is tested with the entire cycle of patterns before the next drum band is tested. Even with KEYDRM OFF, The first word of every drum sector contains its drum address. This will catch certain drum addressing failures, but it is not as effective as a keyed data pattern.

FIRST - start of drum addresses for a pass.

LAST - end of drum addresses for a pass.

NRETRY - Specifies the number of errors that will be allowed on a given sector before the failure is considered "hard". since "soft" errors are serious on this drum due to poor check field logic, nretry should probably be left at 1. then the compare logic will tell you what the bad data was.

SILENT - Set to 1 to silence all output

RTCTL - Contains the maximum number of data errors that will be printed by the compare routine. It is rarely useful to let it print all of the errors even if output is on the printer, But this may be invoked by setting PRTCTL to -1.

PARPRT - contains the maximum number of parity errors to report in the parity interrupt routine's core scan. the maximum number is 377777 (using signed half word arithmetic).

RPTPAT - contains the number of times to do a write, read,compare sequence with the same data pattern before changing to the next pattern.

PATBUF - (at the end of program) contains the data patterns to be

cycled through if using data patterns (KEYDRM flag= 0). The description which documents the GENPAT (generate datapattern) subroutine describes the format of the pattern buffer.

5.6 Tables: 5f

5.7 Routines: 5g

GENPAT - Generate pattern, operates on a pattern list, which has data word and control word entries. Six control entries are defined.
EOP= end of pattern,
EOL= end of list,
BITON= generate a word with a random bit on,
BITOFF= generate a word with random bit off.
RPT= repeat the data word in .+2, n times where n is in .+1.
RANDOM= generate a random 36 bit number. The pattern buffer consists of a list of patterns each ending with EOP, The last with EOL called with 1=IOWD of buffer to be filled

6 ERRORS 6

7 RESTRICTIONS/CAUTIONS 7

8 MISCELLANEOUS 8

8.1 sample operator scenario(s): 8a

8.2 Control Words and Tables glossary 8b

APRCHN	interrupt channel for processor
APRSAV	temp cells for parity interrupt routinE
APR	processor device code
BADADR	temp cell for compare routine
BADDAT	temp cell for compare error
BAKGRD	ON if backgrounding input buffer with BKGRWD
BKGRWD	data word used to background input buffers
BOTMEM	lowest core loc to be used for buffers, default to first page above program
BUFADR	the default buffer address if not using dynamic buffer addresses
CHAIN	ON if chained xfer (band at a time), OFF if single sector
CHGMEM	ON if dynamically changing buffer addresses
CHRCNT	temp cell used by ctyout to keep track of chars on a line. used to take care of long lines
CMDLST	drum command list

```
CMPADR    drum adr for compare routine printout
CPERCT    temp cell for compare routine
DRMADR    current drum adr being tested
DRMBND    no. of bands on drum
DRMCHN    interrupt channel for drum
DRMSEC    no. of sectors in a band
DRM       drum device code
EOL       end-of-list (used in pattern buffer PATBUF)
EOPADR
EOP       end-of-pattern (used in pattern buffer PATBUF)
ETIME     elapsed time (for typing time since beginning)
FIRST     first drum adr tested
FL              flags register
FLINIT    initial settings for flag word "FL"
FRSTER    on after first compare error
GOODAD    temp cell for compare routine
IBFIO2    iowd 2000,C(IBUF)
IBFIOW    IOWD 1000,C(IBUF)
IBUF      input buffers (computed in "MEMINI")
INIRND    use as initial random number if non-zero, if
           zero, use checksum of memory
INTERR    ON if controller busy in interrupt routine
JOBFF     contains first free memory loc after diagnostic
KEYDRM    ON if data pattern is XWD DRMADR,WRDADR
KEYS      current keys value, as set by operator
LAST      last drum adr tested
LPTOUT    0=all output to cty, 1=all output to lpt
LPT       line printer device code
MAP        ON if mapped xfer (2000 words) OFF if not
MAXCOR    set to highest memory address available by core
           scan in MEMINI
MAXPAS    no. of passes to take before returning to
           diagnostic monitor
MEMINC    buffer address increment if dynamically
           changing memory buffer addresses
NRDERR    no of read errors (for compare routine)
NRETRY    max tries before error is considered "HARD"
NWTERR    no of write errors
NXMFLG    turn of if wating for nxm, turned off when happens
OBFIOW    IOWD 1000,C(OBUF)
OBFXW1    XWD C(OBUF),C(OBUF)+1000
OBFXW2    XWD -DRMSEC,C(OBUF)
OBUF      output buffer address
ODDPAS    1 if PASSCT is an odd no., 0 if even
P         stack pointer
PARPRT    no of parity errors to print out on a parity
           error interrupt, max = 377777
PASSCT    count of no. of complete passes of test
```

PATADR	current adr of next pattern
PATCNT	no of times pattern has been repeated
PDL	stack storage
PDLSIZ	size of push down list (stack)
PI	priority interrupt device code
PRTCNT	used to count no. of errs printed
PRTCTL	-1=print all errors, n=print n errs for each buffer
RAN18	current random 18 bit number
RANDOM	use random data routine for data (entry in PATBUF)
READY	ON if drum ready, OFF if still busy
REREAD	ON to cause reread of sector if compare errors
RERRL	read error list
RPTPAT	no of times to repeat pattern
SILENT	1 if all output is to be suppressed
TIMER	ON if time to print time
TIMOUT	ON if timout has occurred
TOPMEM	last mem adr used for buffers, default to last existent cell in memory
TTY	console tty device code
TYPCLK	clock in aprint that keeps track of when to print out elapsed time
TYPTIC	interval between time type out (in tics)
WAIT	ON if waiting for timeout (enables timeout logic)
WERRL	Write error list
WRITE	ON if write, OFF if read
WTIME	put no. of tics to wait in here and set wait flag, timout flag will get set by clock routine when you have waited that long.

9 ASSEMBLY,LOAD and SAVE PROCEDURE 9

9.1 TENEX 9a

create sequential file:

```
ASSEMBLE:
  @FAIL
  *DRMTST_DRMTST
  *↑C

@LOADER
  /W
  EDDT
  /S
  DRMTST$

@SAVE:
```

```
@DDT
MOVE 116$x
MOVEM 36$x
```

SET THE ENTRY VECTOR TO 140 IF YOU WANT TO START UP IN DDT
OR THE THE DESIRED STARTING ADDRESS, AND THEN SAVE THE CORE IMAGE.

9.2 TOPS-10 9b

ASSEMBLE:
same as TENEX

LOAD:
same as TENEX

@SAVE:

```
@DDT
MOVE 116$x
MOVEM 36$x
```

NOTE: You will need to fake out the monitor to get it to save the symbol table. it only does this if user ddt has been loaded with the program, and of course you just loaded exec mode ddt. The trick is to execute

```
MOVEI 1,140
CALL 1,[SIXBIT /SETDDT/]
```

before issuing the save command. This kludge was necessary under the level 4 monitor, but may be unnecessary under later versions.

DCW 18-OCT-72 14:41 12264

BRYANT DRUM TEST

(J12264) 18-OCT-72 14:41; Title: Author(s): Wallace, Smokey C./DCW ; Distribution: Lee, Susan B., Michael, Elizabeth K., Dornbush, Charles F., Matzorkis, Gus, ARC, Guest O., Feinler, Elizabeth J., Handbook, Augmentation Research, Kelley, Kirk E., Meyer, N. Dean, Byrd, Kay F., Prather, Ralph, White, James E. (Jim), Vallee, Jacques F., Kaye, Diane S., Rech, Paul, Kudlick, Michael D., Limuti, Don, Ferguson, Ferg R., Lane, Linda L., Auerbach, Marilyn F., Bass, Walt, Engelbart, Douglas C., Hardeman, Beauregard A., Hardy, Martin E., Hopper, J. D., Irby, Charles H., Jernigan, Mil E., Lehtman, Harvey G., North, Jeanne B., Norton, James C., Page, Cindy, Paxton, William H., Peters, Jeffrey C., Ratliff, Jake, Row, Barbara E., Riet, Ed K. Van De, Van Nouhuys, Dirk H., Victor, Kenneth E. (Ken), Wallace, Smokey C., Watson, Richard W., Andrews, Don I./SRI-ARC ; Sub-Collections: SRI-ARC; Clerk: WRF;
Origin: <DIAGNOSTICS>DRMTST.DOC;13, 26-SEP-72 9:31 DCW ;

MEH 19-OCT-72 15:33 12326

ARC Hardware Coverage for ICCC

(M4J) In assessing the needs for ARC hardware support during the ICCC time. I find we have only the Network Interface to provide other than normal coverage for. 1

DRUM 1a

If the DRUM failed the system would be restarted as a DISK only system. Repair of the Drum would then be made at some later time. 1a1

NETWORK Interface 1b

Obviously in need of coverage. 1b1

Three hours should be assumed as minimun down time if failure occurs. 1b2

Standby at SRI is not required. 1b3

When a supected failure has occured the operation people should immediately call one of us before proceeding with futher diagnostics. Futher diagnostic and software troubleshooting would cover some of our travel time in from home, perhaps even all of it. Therefore, if this method is followed, I see no need for a hardware person to stand by at SRI during off hours. 1b3a

All other devices in the system, (maintained by ARC), 1c

They are not crucial to the support of ICCC, therefore no more than normal coverage is required. 1c1

-Week End coverage will be covered from home by myself and ED as follows: 1d

SAT 10/21 Martin
SUN 10/22 ED
1e

+++ FEEDBACK: 1f

(FM4J) Looks good. Keep yer fingers crossed. I got the note about the DEC PM. 1f1

MEH 19-OCT-72 15:33 12326

ARC Hardware Coverage for ICCC

(J12326) 19-OCT-72 15:33; Title: Author(s): Hardy, Martin E./MEH; Distribution: Norton, James C., Engelbart, Douglas C., White, James E. (Jim), Rech, Paul, Kudlick, Michael D., Auerbach, Marilyn F., Irby, Charles H., Bass, Walt, Van Nouhuys, Dirk H., Vallee, Jacques F., North, Jeanne B., Watson, Richard W./ICCCT; Sub-Collections: SRI-ARC ICCCT; Clerk: BER;

HGL 19-OCT-72 13:45 12327

Reply to DCE (12127,) Concerning Jump to Link

I just read 12127 concerning Jump Link. You pointed out two things wrong with it. One in fact was a bug which has since been remedied. (A command accept is awaited after the bug specification and before execution; a sngle instructon was misplaced.) That the link you described (:gebtzn) only displayed one line of each statement shown is explainable by the fact that viewspec t is "show first line only." 1

HGL 19-OCT-72 13:45 12327

Reply to DCE (12127,) Concerning Jump to Link

(J12327) 19-OCT-72 13:45; Title: Author(s): Lehtman, Harvey G./HGL; Distribution: Engelbart, Douglas C., Irby, Charles H., Kaye, Diane S., Auerbach, Marilyn F., Van Nouhuys, Dirk H., Norton, James C./dce chi dsk mfa dvn jcn ; Sub-Collections: SRI-ARC; Clerk: HGL;

MDK 19-OCT-72 9:08 12328

Loading and Logging in from the ARC IMLAC

My journal item # 12232 on loading and logging in to the IMLAC is no longer valid. DCW has developed a far simpler method. See him for details. Consider that # 12232 is obsolete. 1

MDK 19-OCT-72 9:08 12328

Loading and Logging in from the ARC IMLAC

(J12328) 19-OCT-72 9:08; Title: Author(s): Kudlick, Michael D./MDK ; Distribution: Lee, Susan B., Michael, Elizabeth K., Dornbush, Charles F., Matzorkis, Gus, ARC, Guest O., Feinler, Elizabeth J., Handbook, Augmentation Research, Kelley, Kirk E., Meyer, N. Dean, Byrd, Kay F., Prather, Ralph, White, James E. (Jim), Vallee, Jacques F., Kaye, Diane S., Rech, Paul, Kudlick, Michael D., Limuti, Don, Ferguson, Ferg R., Lane, Linda L., Auerbach, Marilyn F., Bass, Walt, Engelbart, Douglas C., Hardeman, Beauregard A., Hardy, Martin E., Hopper, J. D., Irby, Charles H., Jernigan, Mil E., Lehtman, Harvey G., North, Jeanne B., Norton, James C., Page, Cindy, Paxton, William H., Peters, Jeffrey C., Ratliff, Jake, Row, Barbara E., Riet, Ed K. Van De, Van Nouhuys, Dirk H., Victor, Kenneth E. (Ken), Wallace, Smokey C., Watson, Richard W., Andrews, Don I./sri-arc ; Sub-Collections: SRI-ARC; Clerk: MDK;

Annotating Journal Files with Footnotes

PURPOSE 1

This note addresses the problem of inserting annotations to existing journal (or other) files. The note describes some concepts I talked about in an ARC file design meeting some months ago, and is written as a follow on to a conversation I had with Ken Victor recently about the possibility of implementing an annotation scheme. 1a

As used in this note, an "annotation" is information that is added to an existing journal file. 1b

GOALS 2

What one wants to achieve in the design of an annotation scheme is: 2a

- a mechanism that will allow annotations to be made easily, that will allow annotations to annotations to be made easily, and that will allow a user to locate annotations easily. 2a1

- a mechanism that will automatically inform interested persons that an annotation has been made, and inform them how to find it. 2a2

What one wants to avoid in the process of annotation is: 2b

- constraining the annotator with any but a minimum of preconceived notions of form or data organization . 2b1

- having to insert any but a minimum amount of text in the middle of someone else's document. 2b2

PROPOSED MECHANISM 3

The mechanism proposed involves use of footnotes. 3a

A footnote is information that is appended to a file, that is, added to the file at a point beyond the last statement that already exists in the file. 3a1

Footnotes are pointed to by a special type of link, which is a number enclosed in square brackets, like [1]. These footnote links are placed in the file at the point where the annotation is logically (but not physically) to be inserted. 3a2

Annotating Journal Files with Footnotes

The mechanism of footnotes requires several user aids to be built into NLS. These aids fall into two main categories, Footnote Creation and Footnote Viewing. 3b

A) Footnote Creation 3b1

- automatic insertion of the footnote link and footnote itself, with footnote number assigned by the computer (a sequence number unique within the file), to be accomplished by a command such as "insert footnote". This command would do the following: 3b1a

1) insert the footnote link at the end of the statement that is bugged; 3b1a1

2) perform a jump to item, where the item jumped to is that item following which the actual footnote is to be inserted; 3b1a2

NOTE: If no previous footnote had been added to the file, then the system should create a branch named (NOTES) at the plex 1 level, and use it as the item to be jumped to. This would make it easy for other users to jump to name NOTES when looking for footnotes at a later time. 3b1a2a

3) put the system in "insert statement" mode, and create the text appropriate to the beginning of the footnote (namely, footnote number, author ident, date of creation, and a link back to the statement to which the footnote pertains); 3b1a3

4) leave the user in the middle of the insert statement mode so he can begin inserting his footnote, with all the editing features of NLS at his fingertips. 3b1a4

- automatic delivery of a journal item to the author of the file that was annotated, announcing that an annotation has been made, by whom it has been made, and where (in the form of a link) it has been made. 3b1b

The optional feature of titling a footnote for use with the journal system could be accomplished immediately following the completion of the footnote by the annotator. That is, after the annotator signified "command accept" to complete the insertion of the footnote text, the system could automatically

go into "Execute Journal" mode and request a title from him. 3b1b1

- automatic insertion of journal index entries (author index and Journal number index) to record the footnote. The entry in the number index should be a substatement under the original entry for that journal item. 3b1c

B) Footnote Viewing 3b2

- a "jump to footnote" command which, like a jump to link, performs a jump to item, where the item is the footnote statement that the user designates by bugging a footnote link in some text he is reading. 3b2a

The footnote link that is bugged would be either the square-bracketed link in the file that has the footnote, or a link in the user's initial file that announces the location of the footnote. 3b2a1

NOTES 4

1) Jacques Vallee has pointed out to me that there is a point where the size of a footnote becomes critical, in the sense that if it becomes too large the footnote really should be a separate journal item. This would require self-discipline in the use of the footnote mechanism, of course, but one might also consider having the system limit footnotes to a single statement. It seems to me that there are two alternatives, either (a) We could design this beforehand, or (b) we could wait for experience to develop before determining what the size-limiting mechanism should be. I favor the latter approach. 4a

2) Ken Victor has pointed out that it might be desireable to have a "jump THROUGH footnote" command, so that a footnote could merely be a link to another file. Jump THROUGH footnote would scan the footnote for the link and then do a jump to link automatically. This seems to me to be a desireable feature. 4b

3) An alternate to the use of square brackets for the footnote link would be to use ordinary parentheses. Then the footnote link would simply be in the form of a statement name, like (1). This would facilitate using the journal system to announce footnotes, as described above. However, as Paul Rech has pointed out (and I agree), this is less desireable than using square brackets, because of confusion by the system in

executing the jump to link command, and because the occurrence of square brackets is a clear reminder to the reader that there is indeed a footnote. Consequently, I think the square brackets should be used for footnote links. 4c

4) The ever-present problem of finding an available letter to use for a new command exists in the case of "jump to footnote". Fortunately, it doesn't exist in the case of "insert footnote". There are at least two ways that the dilemma of "jump to footnote" can be resolved: 4d

One way is to "retire" the "jump to file link" command, and use simply "jump to link" instead. This frees up the "f" . 4d1

I personnally don't like this approach, because the jump to link command doesn't jump to a link at all; rather, it jumps to a file, that is it jumps THROUGH the link. Consequently, I'd think we'd rather have the command be "jump to file". But of course there are a lot of old habits to overcome before changing that. 4d1a

Another way is to have the command be "where is footnote". The "where" may be a poor substitute for jump or show, but perhaps it implies the same to the user. I'd appreciate your comments on this, and any other aspect of this note. 4d2

MDK 19-OCT-72 9:33 12329

Annotating Journal Files with Footnotes

(J12329) 19-OCT-72 9:33; Title: Author(s): Kudlick, Michael D./MDK ; Distribution: Lee, Susan B., Michael, Elizabeth K., Dornbush, Charles F., Matzorkis, Gus, ARC, Guest O., Feinler, Elizabeth J., Handbook, Augmentation Research, Kelley, Kirk E., Meyer, N. Dean, Byrd, Kay F., Prather, Ralph, White, James E. (Jim), Vallee, Jacques F., Kaye, Diane S., Rech, Paul, Kudlick, Michael D., Limuti, Don, Ferguson, Ferg R., Lane, Linda L., Auerbach, Marilyn F., Bass, Walt, Engelbart, Douglas C., Hardeman, Beauregard A., Hardy, Martin E., Hopper, J. D., Irby, Charles H., Jernigan, Mil E., Lehtman, Harvey G., North, Jeanne B., Norton, James C., Page, Cindy, Paxton, William H., Peters, Jeffrey C., Ratliff, Jake, Row, Barbara E., Riet, Ed K. Van De, Van Nouhuys, Dirk H., Victor, Kenneth E. (Ken), Wallace, Smokey C., Watson, Richard W., Andrews, Don I./sri-arc ; Sub-Collections: SRI-ARC; Clerk: MDK;
Origin: <KUDLICK>FOOTNOTES.NLS;10, 19-OCT-72 9:24 MDK ;

RMM 19-OCT-72 13:33 12330

current TIP bugs or missing features, a compendium

i know of the following 11 TIP problems or desirable features.
(1)The RESET command does not work as of 10/19/72 at AMES
(2)The TIP should echo a BELL equivalent when discarding type-in.
(3)The LOGGER should be made reentrant to avoid queueing.
(4)There should be a way to force CLOSE's (or something) when a remote HOST fails to echo them. Else, the terminal hangs up. RESET?
(5)The T R CLSOED message should come after the typing of text still
in the buffer. Note daily happening on Multics, Maxim, ...
(6)Would be nice to be able to say "@l 69 12" to do an ICP to socket 12 of host 69.
(7)How about a TIP "HELP" service like a TIP "NEWS" service?
(8)The TYMSHARE connection should be made smooth if kept and I, for
oone, hope they are.
(9)The message T R CAN'T has something of the opposite meaning. When both connections are close and I say C, silence would be nice.
If one of them is closed, then the other one should cause CAN'T. Anyway, it would be nice to know why.
(10)The fact that the TIP buffers your type-in when not connected and then rams it out when you are connected is a bit of a loss. People who make mistakes while trying to setu p a connection often, then,
find themselves making mistakes during log in do to spurious chars
set for them by the TIP.
(11)The TIP should accept CR in addition to if not instead of LF to terminate it commands. LF is a real loser to CR-oriented people.
(12)oops. The TIP shoulld probably prompt with atsign when not connected
to anyone instead of requiring the superfluous leading @.

RMM 19-OCT-72 13:33 12330

current TIP bugs or missing features, a compendium

(J12330) 19-OCT-72 13:33; Title: Author(s): Metcalfe, Robert M. (Bob)/RMM; Distribution: Levin, Joel B., Cohen, Stanley, Feinler, Elizabeth J., Plummer, William W., Watson, Richard W., Metcalfe, Robert M. (Bob), Kahn, Robert E., Karp, Peggy M., Cerf, Dr. Vinton G., Thomas, Robert H., Vezza, Albert, Roberts, Diane C., Postel, Jonathan B., Crocker, Steve D., Dolan, Bruce A., Wessler, Barry D., Powell, Jerry J., McKenzie, Alex A., White, James E. (Jim), North, Jeanne B., Forgie, James W., Walden, David C., Levin, Joel B., Bressler, Robert D. (Bob), Padlipsky, Michael A., Plummer, William W., Kahn, Robert E., Watson, Richard W., Karp, Peggy M., Thomas, Robert H., White, James E. (Jim), Cerf, Dr. Vinton G., Metcalfe, Robert M. (Bob), Vezza, Albert, Roberts, Diane C., McKenzie, Alex A./ICCC DCW3 XIC3; Sub-Collections: NIC ICCC XIC3; Clerk: RMM;

R&D Contract Status Report Project 1894

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

Mr. Burns, RADC/PMA
Department of the Air Force
Headquarters Rome Air Development Center (AFSC)
Griffiss Air Force Base, New York 13440

Dear Mr. Burns:

This responds to block 10 of DD Form 1664 with respect to contract F30602-72-C-0333 (SRI #1894). 1

During the month of September, 75 professional man hours were expended on this contract as follows: 2

Supervisor	0
Senior Professional	66
Professional	9

2a

That brought the cumulative man hours expended at the end of September to 1354. 3

We estimate that the percentage of technical completion at the end of September was 50 per cent. 4

During September we began at the request of Rome Air Development Center gathering and reporting the use of our system by various users working in various ways and provided to Rome the first such report. We are still awaiting specifications for a report generator. We have been collaborating with Rome in developing software for operation of our display NLS over the ARPA Network from an Imlac display at Rome. 5

Training activities are continuing at a low level. 6

Sincerely,

Dirk vanNouhuys
Research Analyst
Augmentation Research Center

ber

DVN 20-OCT-72 10:05 12331

R&D Contract Status Report Project 1894

(J12331) 20-OCT-72 10:05; Title: Author(s): Van Nouhuys, Dirk H./DVN; Sub-Collections: SRI-ARC; Clerk: BER;
Origin: <ROW>R&DREPORT.NLS;1, 20-OCT-72 9:55 BER ;

.HJournal="DVN 26 OCT 72 2:38AM 12331";

Initial instructions for use of the shared screen feature in DNLS are given here. This feature may be used between ARC Tasker and IMLACs with or without long-vector hardware displays. In this first version of the shared screen feature, both people see the same screen image, except that each sees only his own cursor. Both people can (in advise mode) edit files that can be written on by the person receiving the advise. 1a1a

Both people need to determine the TERMINAL (not job) number of the other person. 1a1a1

The link/advise is established by one person using the Execute Connect command. 1a1a2

e[xecute] c[onnect to terminal] TTYNO. CA
[input and output] CA
o[utput] CA 1a1a2a

Answering the [input/output] message with CA indicates that advise is wanted, 1a1a2b

'o CA indicates only a link is wanted. 1a1a2c

"TTYNO" means the TERMINAL NUMBER of the other person. 1a1a2d

The person receiving the link (and thus sharing his screen) should give the Execute Receive Connection Command: 1a1a3

e[xecute] r[eceive connection from] XX CA
[display type] t[asker] CA
i[mlac]
i[mlac] w[ith-LVH]
i[mlac] n[o-LVH] 1a1a3a

The display type is that of the person originating the connection. If not specified otherwise (by the user typing the character "n" or "W" after "Imlac", the system will assume an Imlac with Long Vector Hardware (LVH). 1a1a3b

NOTE: for now, if one user is on an Imlac and the other is on a Tasker, the user at the Imlac should receive. 1a1a4

To break the connection either user (if advise) or the receiving user (if just linked) should type CONTROL s. The connecting user should type an additional ^s to get his old image back. The link/advise is then broken and both jobs are returned to normal. 1a1a5

CONTROL CHARACTERS IN TNLS 1a2

The new NLS has major additions in control character assignment and echoing. In addition to the previously acceptable control characters, the following will be interpreted as the given NLS control characters: 1a2a

CR for CA (echoed as EOL) 1a2a1

ALT/ESC for C. (echoed as @) 1a2a2

DEL/RUBOUT for CD (echoed as #) 1a2a3

To enter a literal EOL (or CR) in text, the character must be preceded by a control-v. 1a2b

DEFINING YOUR OWN TNLS CONTROL CHARACTER SET 1a3

NLS now provides the following facility for people who want other than standard control character assingments (Command Accept, etc) in TNLS: 1a3a

If you have a branch in your initial file (the one that gets loaded automatically when you enter NLS) with the name "NLSControlCharacters", with the next level substatements of the form: 1a3b

CC = X1,X2,...,Xn; ECHO = Xe; 1a3b1

NLS WILL OVERRIDE ITS DEFAULT DEFINITIONS FOR THE SPECIFIED CONTROL CHARACTERS WITH YOURS. 1a3c

Control characters (CC's) which may be redefined in this manner are: 1a3d

CA for Command Accept
CD for Command Delete
CDOT for Center DOT
BC for Backspace Character
BW for Backspace Word
LE for Literal Escape character. 1a3d1

Valid replacements for the Xi's above are: 1a3e

a character
an ↑ followed by a character in the range A to Z (control characters)
a number (in the range 1 to 127, for the code the character sends), which may be decimal, octal (ends with O), or hexidecimal (end in H). 1a3e1

In addition to the above, NLS now has an Execute STatus of Control characters command and an Execute SEt control Characters from Branch command (this takes an address of a branch of the form described above and should be useful for people who use a variety of different terminals since they can have a branch for each type of terminal). 1a3f

e[xecute] st[atus of] c[ontrol characters] CA 1a3f1

e[xecute] se[t control characters from branch] ADDR CA 1a3f2

EXAMPLE: 1a3g

(NLSControlCharacters) 1a3g1

CA = ,37O, 7FH; ECHO = ; 1a3g1a

, EOL (TENEX's version of Carriage Return), and RUBOUT (DEL) will all be interpreted as CA and will echo as . 1a3g1a1

BC = 174O; ECHO = 174O; 1a3g1b

the character which transmits code 174 Octal will be interpreted as BC, and will be echoed as itself. 1a3g1b1

LE = '; ECHO = 177O; 1a3g1c

' will be interpreted as the literal escape character and will be echoed as RUBOUT (DEL). 1a3g1c1

Note: ↑D will always be interpreted as CA, ↑X as CD, ↑A,↑H as BC, ↑W as BW, and ↑B as COOT.

1a3h

NEW OUTPUT PROCESSOR 1a4

See (Journal,12866,1) 1a4a

LOGIN WITHOUT LOGIN 1a5

It is no longer necessary to use the command word LOGIN when logging in to a terminal. Simply type your login name and proceed as usual with the normal (old) login procedure. The old login procedure itself is still valid.) 1a5a

The EXEC distinguishes between a subsystem name and a login name by the fact of whether or not a user is already logged in. 1a5b

CONTROL CHARACTER CHANGE IN DEX-1: 1a6

retesc is now % instead of @ 1a6a

lndel is now ↑ instead of] 1a6b

USER PROGRAMS BUFFER SIZE CHANGE AND COMMAND 1a7

There is a new command for changing the size of the user programs buffer: 1a7a

g[oto] p[rograms] b[uffer size] <number> CA [in TNLS -- CA] 1a7a1

where <number> is the number of pages (512 words each) to be allocated to the user programs buffer. 1a7a2

The user programs buffer shares memory with data pages for files which the user has open -- i.e., increasing the size of the user programs buffer decreases the amount of space available for file data (with a possible slowdown in response for that user). 1a7b

As a result of this consideration, the user programs buffer size has been reduced from the previous fixed size of 16 pages to a current initial size of 4 pages. 1a7b1

This means that some programs which formerly compiled OK may not compile anymore until the buffer size has been increased using the GPB command -- i.e., if you get strange "SYSTEM ERROR" messages when attempting to compile a user program, try increasing the buffer size and recompiling before panicing. 1a7b2

We're sorry for any inconvenience this change may cause, but think that the overall improvement in performance and capability will more than offset it. 1a7b3

UPPERCASE OK IN DNLS COMMANNDS 1a8

DNLS will now accept uppercase characters when parsing commands. 1a8a

FASTER RECREATE DISPLAY 1a9

The recreate display routines are reformatting lines much less often. The only externally noticeable difference which should have any effect on the DNLS user is the fact that it is now more difficult to sense when the previously issued command is done and the system is ready for new input. For example, if you issue a jump to successor and bug a statement which has no successor, (and don't change viewspecs), the only indication you would get is that the bug mark would disappear when recreate display is done (but you would not see any line movement). 1a9a

RUNNING SUBSYSTEMS: 1a10

The EXEC will search directories as follows for subsystem names: 1a10a

(1) the directory <SUBSYS>, 1a10a1

(2) the directory to which you are connected, 1a10a2

(3) your LOGIN directory. 1a10a3

Also, you can now include a directory name as part of a subsystem name (without using the RUN command) e.g., <victor>xxx.sav 1a10b

RUNNING NLS: 1a11

There are now three EXEC commands which can be used to start NLS 1a11a

NLS -- as before but does not ask for IDENT or device, 1a11a1

TNLS -- starts nls with device type ti-terminal (useful primarily from displays), 1a11a2

DEX -- starts nls in deferred execution mode (old device "offline"). 1a11a3

DEVICE TYPE: 1a12

NLS no longer asks for your device type; it gets it from TENEX. Use the EXEC command "TERMINAL (TYPE is)" to set your device type (all terminals except our local displays are initialized to be ti-terminals). 1a12a

We have changed the "TERMINAL (TYPE IS)" command to accept actual device names, instead of numbers. 1a12b

Type a ? to the command to find out actual parameters. 1a12c

IDENTS AND EXEC: 1a13

The EXEC may ask for your IDENT at LOGIN time. If it knows your IDENT it wont ask for it. If it does ask, please type your NLS IDENT followed by a CR. If you do not have an IDENT just type a CR. The new EXEC command "SET (IDENT TO)" can be used after LOGIN. Also, JOBSTAT will indicate the current setting of your IDENT. NLS no longer asks for your IDENT if it can get it from TENEX, 1a13a

CHANGE TO ACCOUNTING INFORMATION INPUT AT LOGIN TIME 1a14

When it is time for you to type in your account number or string, the system will type out a valid default account number or string for you. At this point in time, you can either type a CR, which means that you wish to use this account, or you can edit this account with ↑A, ↑R, ↑W, or by adding text, and then type a CR. 1a14a

If you modify the account to be some bad account, you will not be logged in, and will be given the message ILLEGAL ACCOUNT. In addition, ARC will be keeping a list of valid accounts for each individual user and you will be restricted to using only valid accounts at both LOGIN time and CHANGE ACCOUNT time. 1a14b

More detailed information is in preparation. 1a14c

NEW TERMINAL TYPE 1a15

There will soon be a new terminal type for the EXEC terminal type command. The new terminal is NVT for Network Virtual Terminal. Saying you are a NVT is equivalent to issueing a terminal type of 37 followed by a halfduplex command. 1a15a

EXECUTE BROWSE MODE 1a16

The Execute Browse Mode commmand in TNLS has been fixed to be terminated by a CA. 1a16a

CHANGE IN JOURNAL SUBMISSION NUMBER ASSIGNMENT 1a17

A number is no longer required in Journal submission; number assignment will be deferred to a background process unless desired. To get a number at submission time or to use pre-assigned numbers, type "n" for number and follow the old number assignment instructions. 1a17a

Under certain conditions, neither the use of preassigned numbers nor the assignment of numbers at submission time is possible. (in the past, this situation caused the message "Journal Temporarily Unavailable" to be typed) In this case, the message "Deferred Numbers Only" will be sent at the "Submit" command. 1a17b

EXECUTE OWNERSHIP CHANGE 1a18

The Execute Ownership command in TNLS and DNLS require that the user specify the directory name either by a literal type in or a bug (DNLS only). Tne current directory to which the user is connected is no longer assumed as the default directory. 1a18a

NEW JOURNAL "COMMAND FORM" COMMANDS (not available to network users) 1a19

A "command form" is a formatted statement containing journal submission specifications. 1a19a

It includes title, author, clerk, distribution, etc. specifications. 1a19a1

e[xecute] j[ournal] i[nsert commmand form at] BUG CA 1a19b

causes a command form (with blank title, distribution, sub-collection, ... fields) to be inserted. 1a19b1

Journal Submission Subcommand: 1a19c

pr[ocess command form at] BUG CA 1a19c1

When at the subcommand level in journal submission (where one normally specifies title, distritbution, etc.), the "process command form" command is equivalent to giving the various subcommands contained in the command form. 1a19c1a

Deleting the "Go" command from the form causes a return to the subcommand level following processing. 1a19c1a1

A number command (starting with "NUMBER:" (get the case right) and terminating with a CR) may be inserted in the form anywhere before the "Go" command. All of the usual options are available (including RFC numbers in TNLS). Absence of a number command means defer number assignment to the background program (as usual). 1a19c1a2

The following are sample number commands for the command form. they mean, in order: "assign a number now", "Use preassigned number 12777 assigned to jdh", "assign an RFC number now", "Use preassigned RFC number 432 assigned to jdh". (the RFC commands are only availabel in TNLS) 1a19c1a3

```
NUMBER:
NUMBER: 12777 jdh
NUMBER: R
NUMBER: R432 jdh
(there are "CR"s ath the end of each of the
four lines above)                          1a19c1a3a
```

EXECUTE CONTENT ANALYZER DEMISE 1a20

The command Execute Content-analyzer no longer exists. Instead there is now a Goto Program Content-analyzer command. 1a20a

```
g[oto] p[rograms] c[ontent analyzer pattern compile]
CA                                                 1a20a1
```

This command does everything that Execute Content Analyzer did including instituting the user content analyzer program. 1a20b

USER CONTENT ANALYZER PROGRAM CHANGE 1a21

The use of user Content Analyzer programs is changed. Now a statement "passes" if the content analyzer program returns TRUE and fails if it returns FALSE. SENDS and SPORTS are unaffected. The global variable FLAG is no longer examined. 1a21a

CONTENT ANALYZER PATTERNS IN LINKS 1a22

It is now possible to use the content analyzer viewspecs i and k in link specifications. When the file specified by the link is accessed, only the content of the the file (if i) that passed the current content analyzer pattern in effect, or only the first occurrence of the specified pattern (if k) and any remaining text in the file will appear when the file is accessed. 1a22a

USER PROGRAMS AND NLS SYMBOLS 1a23

User programs now have access to all NLS symbols (and each others if more than one is compiled at a time). This was done by providing communication between L10 and DDT's symbol table (which contains all NLS symbols plus those of previously compiled programs using the Goto Program L10/Contentanalyzer compile commands). 1a23a

NEW COMMAND - NULL FILE 1a24

A new command, Null File, has been added to TNLS and DNLS. It requires a file name, and will create an empty file of that name. Upon completion of the command the user is left with the CM / display start at the origin of this new file. 1a24a

n[ull file] FILENAME CA 1a24a1

If a file with the specified name already exists, then the message "File already exists; CA to proceed" is typed. Confirmation (a CA) causes NLS to create a new, empty version of the file. Any other character is interpreted as a new command. 1a24b

MORE NEW IDENTIFICATION SYSTEM COMMANDS 1a25

Several new commands have been added to the identification system: 1a25a

An individual may have two types of affiliation, primary and secondary. 1a25a1

A primary affiliation is exactly what the name suggests. An individual may have only one. When prompted for "Affiliation" while entering a new individual into the identification system, the primary affiliation is meant. In the Modify submode, the command "Af" (for Affiliation) IDENT CA causes the system to replace the current Primary Affiliation with the new ident. 1a25a1a

An individual may have any number of secodary affiliations. Such an affiliation is assigned in the Modify submode, using the "se" (for secondary affiliation) command. The system will print out all current secondary affiliations, then the hearald ">>>". This list of affiliations may be modified by typing 'a(dd), 'd(elete), or 'i(nitialize), followed by a list of idents, as with group membership lists, or the old Modify affiliate command. 1a25a1b

When a new individual is added to IDENTFILE, his ident is automatically added to the membership list of his primary affiliation. 1a25a2

SUBSTITUTE COMMAND CHANGE IN DNLS 1a26

Substitute in DNLS has been enlarged to understand about words, visibles, etc. 1a26a

All of the old commands are still available, and work as they always have. In addition, the commands, Substitute [text entity] in [structure entity] are now available. Text entity may be Character, Word, Visible, etc., and Structure entity may be Statement, Branch, Group, or Plex. 1a26b

s[ubstitute] s[tatement] BUG CA ...
b[ranch]
p[lex]
g[roup]
w[ord in]
v[isible in]
t[ext in]
c[haracter in]
l[ink in]
n[umber in] 1a26b1

If structural entity specified: 1a26b2

[text] BUG BUG CA [for text:] BUG BUG CA
[go?...etc.
LIT CA LIT CA 1a26b2a

If textual entity specified: 1a26b3

s[tatement] BUG CA
b[ranch]
p[lex]
g[roup] 1a26b3a

If textual entity specified was word, visible, link, number, character, or invisible, the remaining syntax is: 1a26b4

[text:] BUG CA [for text:] BUG CA [go?...etc.
LIT CA LIT CA 1a26b4a

If textual entity specified was "text" remaining syntax is the same as for a structural entity: 1a26b5

During the substitution, the delimiters of the candidates for substitution are observed. For example, if the user issues Substitute Word... "the" for "an" in the statement "Do you want an igloo instead of another kayak, dear?", the word "an" will be replaced by "the", but the word "another" will not be changed. 1a26c

Also, this change has not been added to TNLS (yet). 1a26d

NEW RECORD MODE 1a27

A set of commands (and modifications to the user input routines) has been added to implement a control environment. A display session may be recorded on a file, then played back. During the playback, NLS will read the input from the control file instead of from the work station. An attempt is made to replay the commands at the same speed that the user entered them. 1a27a

To record a session -- 1a27a1

g[oto] c[ontrol file record] CA
[record on file] FILENAME CA 1a27a1a

where FILNAME is the file onto which the subsequent session will be recorded. The system automatically sets the extension field of FILENAME to ".CTL". 1a27a1b

To terminate a session -- 1a27a2

g[oto] c[ontrol] q[uit] CA 1a27a2a

When this command is executed the record file is closed and recording is terminated. 1a27a2b

Record mode sessions are also terminated when the user issues the NLS Execute Quit command. 1a27a2c

To play back a session -- 1a27a3

g[oto] c[ontrol] p[layback] CA FILENAME CA 1a27a3a

When this command is executed, further user input is read from the FILNAME specified. 1a27a3b

When a control file is being read back the user is in the "DNLCTL" subsystem. 1a27a3c

NEW COMMAND - EXECUTE LOGOUT 1a28

The new Execute Logout command is equivalent to issuing the Execute Quit command in NLS and following it with a LOGOUT command in the EXEC. 1a28a

e[xecute] l[ogout] CA 1a28a1

TNLS STATEMENT NUMBERS TO THE RIGHT 1a29

TNLS will now print statement numbers on the right if the appropriate viewspecs are on. 1a29a

EXECUTE UNLOCK NEWS 1a30

If the user attempts an Execute Unlock command on a file that is not locked, the system will issue the message: "This file is not locked". 1a30a

If the file is locked by someone else, system will issue message "You do not have this file locked". 1a30b

If the user does not have write privileges for the directory in which the specified file resides, the system will issue the message: "No write access to <DIRECTORY>". 1a30c

SUBCOLLECTION DEFAULT IDENTS 1a31

The default subcollection of a group is the IDENT of that group. 1a31a

MISCELLANEOUS FIXES 1a32

Execute Insert Sequential now handles EOL's properly. 1a32a

Some Bugs fixed in the Journal (mostly in hard copy). 1a32b

The Baseline system should work again. 1a32c

The DEX EOL escape and translation now works properly. 1a32d

The file status command will no longer suggest doing an Output File if there are three or less pages in the file 1a32e

DEX EXPANSION 1a33

DEX now permits the user to make use of the expanded character sets of terminals other than the TTYs by permitting the use of shift characters to change case rather than / and . To make use of this feature, the user specifies a "Terminal type" after specifying the "Device: Off-line DEX-1". Valid terminals are 33- and 35-TTYs (which have single case and thus make use of the DEX capitalization characters) and Execuport, TI Terminal and 37-TTY (which have case shifts). The same symbols as are used in "Device" specification for the terminals to enter NLS are used to specify the Terminal type, (i.e., T for TI terminal, 33 for 33 TTY.) 1a33a

If an improper specificaton is entered, the user will be prompted again for input. If an acceptable device is specified, the user will then be asked for "Input file names as in the old DEX. If a device with uppercase characters is given, the slashes are not considered to be control characters and need not be preceded by the Literal Escape character (').) 1a33a1

DOUBLE QUOTES IN HEADERS 1a34

The Output Processor will now allow double-quotes (") in headers. The text of a header is still begun with a double quote, but the end is indicated by a double-quote followed IMMEDIATELY by a Directive Right Delimiter (DRD). A double-quote which does not have a DRD as the next character is assumed to be part of the text of the header. This applies to all header directives. 1a34a

REVISED OUTPUT PROCESSOR 1a35

The FR80 has been added as a device. 1a35a

A '= or '← is no longer necessary in any directive. However, the value has to be separated from the name of the directive by an invisible . 1a35b

EXECUTE ASSIMILATE AGAIN 1a36

The problems with TNLS Execute Assimilate have been fixed. 1a36a

OUTPUT/UPDATE LOCKED FILE 1a37

When an Output or Update File is done on a locked file, the user must have write privileges for the directory to which the original file belongs (even if the user is putting the new file in another directory). If the user doesn't have write privileges, the message "No write access to <DIRECTORY>" is issued. The Output/Update is not executed. 1a37a

SUBSTITUTE AND THE g/l VIEWSPECS 1a38

Substitute no longer pays any attention to the g or l viewspecs. Their function is superceded by the structural entity specified in the command. 1a38a

SIGNATURES 1a39

Displaying signatures now depends only on the signature display viewspec. Previously, viewspec y (blank lines between statements) had to be on for signatures to appear. Create display, TNLS print, Quickprint, but not the Output Processor all follow this same convention. 1a39a

JOURNAL ONLINE DELIVERY CHANGES 1a40

The Journal online delivery system will use pairs of square brackets (['s and]'s) to enclose RFC numbers (where appropriate). This eliminates any confusion with link syntax. 1a40a

Comments in the distribution field are now included as the last item in the delivery statement. Comments in the comment field are delivered as a sub-statement of the delivery statement. 1a40b

Author copies are delivered to a new branch called "author" and are tagged with the message "**** Note: Author Copy ****". 1a40c

UPDATE FILE COMMAND IN TNLS AND DNLS 1a41

A user may supply a name for the updated file, instead of just updating to the next higher (or to the same) version. (Note that supplying a name to the update command will not make this command just like Output File. Output File reorders the file and reclaims unused space in the file. Update does neither of these, but, in many cases, is significantly faster than Output.) 1a41a

The syntax of Update is now: 1a41b

```
U[pdate] n[ew] CA
         o[ld]
         FILENAME
```
1a41b1

"new" specifies the next higher version 1a41c

"old" specifies the current version 1a41d

FILENAME is the name of a new file; i.e. any character other than "o" or "n" is taken as the first character of a new file name. To specify a file name that begins with 'O or 'N type a space, then the file name. (Note that if one started with the 'n or 'o , the character wuld be interpreted to mean "old" or "new" versions. 1a41e

CHANGES TO IDENT SYSTEM 1a42

-- The process for entering a new affiliation has been made identical to entering a new group. This is, the user will be prompted by the system for a coordinator and a membership list. 1a42a

-- When all of the information for a new IDENT has been entered, the system previously asked "ok?" and an affirmative answer initiated an update of the IDENTFILE. Now, the system asks "Abort?" and a negative answer initiates the update. 1a42b

--. When specifying the record to be modified, the name corresponding to the IDENT, and, if the IDENT is an individual, his affiliation, is typed out, followed by "Proceed?". An affirmative response puts the user in the modify submode. A negative response puts one back at the top ('>) level of the IDENT system. 1a42c

-- In the group membership subcommand mode, the herald is now ">>>", and the command may be terminated by Quit, which has the same effect as terminating with a CA. 1a42d

-- When modifying the name of a group or affiliate, the prompt "New name" is given. Prompts for modifying individual names are as in the past. (The bug that made the prompts appear only after one character had been typed in has been fixed.) 1a42e

-- The Identification system now recognises the commands 'o for Online Delivery and 'h for Hard copy delivery in the modify mode. 1a42f

LIT SEARCHES 1a43

In TNLS, single character searches preceeded by a number (e.g. 3't to move to the third "t") now work. 1a43a

MARKERS 1a44

Markers may be included in links in both TNLS and DNLS. A marker name way be placed in the link where the statement name or number would be, prefaced by a #, to distinguish it from a name. 1a44a

PRINT CM LOCATION RESPONSE 1a45

The response to the print current location (.) command in TNLS is now formatted in the way a user would type in a TNLS address specification... e.g., 1 +2 instead of 1(2). 1a45a

PROMPT IN REPLACE AND SUBSTITUTE 1a46

Prompts in TNLS to ask for a literal in the Replace and Substitute commands have been changed to use the word "literal" instead of "text". The help responses use the word "LIT" instead of "TEXT" also. 1a46a

FROZEN STATEMENT BUG FIX 1a47

Previously, if the user did a Jump to Item pointing to a frozen statement from another file, a subsequent Jump to Return or Jump to File Return would cause unpredictable results. 1a47a

DNLS LITERAL FEEDBACK AREA 1a48

The literal feedback area in DNLS uses 72 columns now (instead of 63. (MSC) 1a48a

EDITING FILE RESTRICTION 1a49

Editing files which are not the highest versions will no longer be allowed 1a49a

The write pseudo interupt will do a gtjfn for the highest version numbered file. If it is not the same as the current file, the edit will fail and the user will be informed of the situation. 1a49a1

1a49a2

EXECUTE ASSIMILATE SYNTAX CHANGE 1a50

The syntax for Execute Assimilate has been changed to: 1a50a

e[xecute] a[ssimilate]
(b[ranch]/g[roup]/p[lex]/s[tatement]) BUG (BUG [BUG
%if its a group%] LEVADJ CA Viewspecs CA. 1a50a1

```
e[xecute] a[ssimilate] s[tatement] CA BUG...
                       b[ranch
                       p[lex]
                       g[roup]         BUG BUG
...LEVADJ  CA VIEWSPECS CA
```
1a50b

The first BUG specifies the statement after which to copy the stuff. The second [and, for groups, third] BUG specifies which particular structural entity to copy. LEVADJ specifies the level relative to the first statement at which to start inserting. VIEWSPECS select the actual content of the assimilated entity. 1a50c

A BUG is a bug selection (in DNLS only), a typed in statement number or statement name, or a TNLS address specification (including links). 1a50d

Note that to assimilate from one file to another in DNLS, it is necessary to have the appropriate statements displayed on the screen before the command is commenced. This may be done via split screen or frozen statements. 1a50e

OUTPUT QUICKPRINT AND OUTPUT DEVICE PRINTER CHANGES 1a51

The file name specification for Output Quickprint and Output Device Printer has been changed in both TNLS and DNLS. 1a51a

o[utput] d[evice] p[rinter NAME] CA [copies 1] CA LIT CA LIT CA 1a51a1

and, 1a51a2

o[utput] q[uickprint file NAME] CA [copies 1] CA LIT CA LIT CA 1a51a3

1) The file is put in PRINTER directory unless the user explicitly includes a directory name in the file name. 1a51b

2) The system automatically echoes a file name (which is the user's IDENT) when the user is to specify an output file name. (This will be put in directory PRINTER, as per 1) above.) If the user responds with a CA then this becomes the file name. Otherwise, the text specified by the user (by typing or bug selection) are taken as the file name. 1a51c

3) After the user has specified the file name, the prompt "Copies: 1" is given. A CA affirms that one copy is needed. Any other number terminated by a CA is taken to be the number of copies. (MSC) 1a51d

Text files that are not in <PRINTER> will not be automatically deleted by ths system. The printer routine only deletes <PRINTER> files (i.e., after they have been processed). 1a51e

COMMENTS IN TNLS 1a52

The " (comment) command in TNLS has been changed to the ; command -- in order to make TNLS compatible with TENEX (BLP). 1a52a

TABSTOPS IN DNLS 1a53

There is now a tabstop setting command in DNLS. 1a53a

The syntax is: 1a53a1

E(xecute) T(abstops set) $10 NUMBER; 1a53a1a

Where for the ith number the column of the ith tabstop is shown in the name register. If a CA is typed immediately, that tabstop remains unchanged, otherwise a number maybe typed in (not bug selected) followed by a CA. 1a53a1b

The command is terminated when all 10 tabstops have been specified or a CD is typed. Any tabstops changed up to the point of a CD remain changed (BLP). 1a53a1c

QUICKPRINT AND STATEMENT SIGNATURES 1a54

Output Quickprint will now recognize the Statement Signature viewspecs. 1a54a

QUICKPRINT SHOULD NOW BE QUICKER (BLP). 1a55

NAME DELIMITERS COMMANDS 1a56

The Name Delimiter commands ... are now E(xecute) N(ame Delimiter) .... The syntax remains the same except for the initial E. This is in order to make room for the new command New File (BLP). 1a56a

VIEWSPECS ANd SPLIT SCREEN 1a57

(PRMSPC, invspc) has been slightly changed so that it first changes the viewspecs displayed to those of the display area passed to it. Previously it made the existing viewspec area large while leaving the characters in it alone. If the screen were split, you were sometimes not looking at the viewspecs you were changing until after the first character was typed in -- I think (BLP). 1a57a

CONTINUE AND REENTER 1a58

All the problems with CONTINUE and REENTER should be no more. In addition a CONTINUE after an Execute Quit will have the same effect as a REENTER. 1a58a

TNLS LEVADJ FEEDBACK FIX 1a59

The system no longer echoes "32" when inserting a statement after the origin statement. 1a59a

TNLS JUMP TO CONTENT '; FIX 1a60

Specifying a semicolon preceded by a single apostrophe in a Jump to Content command (SP '; CA) will not automatically move the cursor to the origin statement but will function as intended. 1a60a

REPLACE NUMBER FIX 1a61

When using the Replace Number Command, replacement numbers of any length will be right-justified. 1a61a

RESET PARTIAL COPY IN DNLS FIX 1a62

Resetting a partial copy in DNLS with any statement but the origin at the top of the screen will no longer produce ugly results. 1a62a

DEFAULT DIRECTORY FIX 1a63

The Default Directory for links is now accurate and reflects the true file ownership (HGL). 1a63a

TNLS FORMATTING FIX 1a64

Double echoing of formatting characters in TNLS has been fixed (HGL). 1a64a

JOURNAL DELIVERY 1a65

Irregularities in Journal Delivery have been fixed. WSD 1a65a

DEX 1a66

As a convention for DEX, name the sequential file to be proceessed with the extension "DEX" as this will remove any confusion between the input files and the created print files (HGL). 1a66a

The DEX delete control characters should now work in the following manner: 1a66b

> -- Delete character. Deletes one character. For this purpose an EOL is;treated as a single character rather than as the two individual characters CR LF. 1a66b1

< -- Delete word. Deletes any number of printing characters (including zero) followed by any number of non-printing characters (including zero). Thus this takes the user through the preceding gap. Thus a single "<" may be used to delete through the preceding gap no matter how large. 1a66b2

] -- Delete line. Deletes text through the gap before the first preceding EOL (HGL). 1a66b3

NLS CURRENT FEATURES

(J12353) 20-OCT-72 16:48; Title: Author(s): Stanford Research Institute/@SRI-ARC; Distribution: Rupert, William P., Lee, Susan B., Michael, Elizabeth K., Dornbush, Charles F., Matzorkis, Gus, ARC, Guest O., Feinler, Elizabeth J., Handbook, Augmentation Research, Kelley, Kirk E., Meyer, N. Dean, Byrd, Kay F., Prather, Ralph, White, James E. (Jim), Vallee, Jacques F., Kaye, Diane S., Rech, Paul, Kudlick, Michael D., Limuti, Don, Ferguson, Ferg R., Lane, Linda L., Auerbach, Marilyn F., Bass, Walt, Engelbart, Douglas C., Hardeman, Beauregard A., Hardy, Martin E., Hopper, J. D., Irby, Charles H., Jernigan, Mil E., Lehtman, Harvey G., North, Jeanne B., Norton, James C., Page, Cindy, Paxton, William H., Peters, Jeffrey C., Ratliff, Jake, Row, Barbara E., Riet, Ed K. Van De, Van Nouhuys, Dirk H., Victor, Kenneth E. (Ken), Wallace, Smokey C., Watson, Richard W., Andrews, Don I./SRI-ARC; Sub-Collections: SRI-ARC; Clerk: MFA;
Origin: <AUERBACH>STATUS.NLS;2, 20-OCT-72 15:30 MFA ;

(Journal) Journal documents (most recent first)
&SRI-ARC 20-OCT-72 16:48 12353
NLS CURRENT FEATURES
Location: (LJOURNAL, 12353, 1:w)

RMM 21-OCT-72 16:24 12371
The Duality of TIP RESET
Message: To confirm our ICCC conversation. There is a certain duality in TIP RESET. First, one would like to reset the HOST-dependent TIP connection parameters, e.g., TOL CIL TEO EL ER. Second, one might (less importantly) want to reset the terminal-dependent parameters, e.g., EH DR DCE. Some thought should be givien the defaults. It might turn out that CIL is better as an option rather than as the default. Peace. See my earlier TIP BITCH memo.

MFA 20-OCT-72 17:08 12369
New DNLS SHARED SCREEN COMMANDSg
Location: (LJOURNAL, 12369, 1:w)

MFA 20-OCT-72 17:06 12368
Notice of new Handbook and NLS News
Message: The curret versions of the ARC Handbook (see -- journal,12355,) and the Folklore Branch of te the NLS Status File (see -- journal,12353,) are now available. Please let me know if you find any errors. Marilyn

MFA 20-OCT-72 17:03 12367
ARC LOCATOR
Location: (LJOURNAL, 12367, 1:w)

Comments: This file will be helpful as a general guide to services and features at ARC especially for demonstration pusposes.
LPD 20-OCT-72 8:12 12362
Hurray for the NLS people!
Message: The NLSControlCharacters feature is FAR OUT. Keep up the good work!

&FRAMAC 20-OCT-72 18:03 12361
FRAMAC 27 JULY 1972 TRANSCRIPTION
Location: (LJOURNAL, 12361, 1:w)

JBN 20-OCT-72 14:06 12359
ARC Catalog of Offline Documents
Message: There is a copy, in number order, of the complete catalog of offline documents in the ARC and NIC collections, in the cave area. The card index in the hall is still the only author access to these collections.

JCN 19-OCT-72 16:49 12226
ARC FIle Directory Cleanup Request: Space for THE ICCC
Location: (LJOURNAL, 12226, 1:w)

Comments: Request for action friday 10/20 by 1:00pm
RMM 19-OCT-72 13:33 12330
current TIP bugs or missing features, a compendium

Message: i know of the following 11 TIP problems or desirable features.
(1)The RESET command does not work as of 10/19/72 at AMES
(2)The TIP should echo a BELL equivalent when discarding type-in.
(3)The LOGGER should be made reentrant to avoid queueing.
(4)There should be a way to force CLOSE's (or something) when a remote HOST fails to echo them. Else, the terminal hangs up. RESET?
(5)The T R CLSOED message should come after the typing of text still in the buffer. Note daily happening on Multics, Maxim, ...
(6)Would be nice to be able to say "@1 69 12" to do an ICP to socket 12 of host 69.
(7)HOW about a TIP "HELP" service like a TIP "NEWS" service?
(8)The TYMSHARE connection should be made smooth if kept and I, for oone, hope they are.
(9)The message T R CAN'T has something of the opposite meaning. When both connections are close and I say C, silence would be nice. If one of them is closed, then the other one should cause CAN'T. Anyway, it would be nice to know why.
(10)The fact that the TIP buffers your type-in when not connected and then rams it out when you are connected is a bit of a loss. People who make mistakes while trying to setu p a connection often, then,
find themselves making mistakes during log in do to spurious chars set for them by the TIP.
(11)The TIP should accept CR in addition to if not instead of LF to terminate it commands. LF is a real loser to CR-oriented people.
(12)oops. The TIP shoulld probably prompt with atsign when not connected
to anyone instead of requiring the superfluous leading @.

MDK 19-OCT-72 9:33 12329
Annotating Journal Files with Footnotes
Location: (LJOURNAL, 12329, 1:W)

MDK 19-OCT-72 9:08 12328
Loading and Logging in from the ARC IMLAC
Message: My journal item # 12232 on loading and logging in to the IMLAC is no longer valid. DCW has developed a far simpler method. See him for details. Consider that # 12232 is obsolete.

&SRI-ARC 5-OCT-72 18:22 12082
Quarterly Management Report 1: RADC/ARPA Project 1864 -to 9 August 1972
Location: (LJOURNAL, 12082, 1:W)

DCW 5-OCT-72 18:18 12081
Archive Proposal
Message: A request for comments - ARCHIVING
the archive is taking on most of the undesirable characteristics of the journal. In otherwords it's becoming a trash bin for unaccessed files. I would propose that we change the archiving criteria to be:
archive only files explicitly designated by a user
delete from the file system all files not accessed in 30 days
relying solely on the nightly dump to retrieve inactive files
plus provide a save/restore entire user facility for vacations,

and long inactive periods.

RMM 4-OCT-72 23:53 12080
The Scenario Booklet Preprint is Out!
Message: Ten copies of a preprint of the ICCC Scenario Booklet have been mailed to each of the regional managers for distribution to people who will be at the ICCC as Scneario helpers. Get yours now. Do not hesitate to copy for yourself and friends who might be interested. Keep notes on your experiences with them, as suggested in the cover letter. Thank you. Love, Bob.

KEV 4-OCT-72 17:45 12067
erwrt - a new jsys to be implemented in 129.01
Location: (LJOURNAL, 12067, 1:w)

Comments: there will be a new subsystem, WRTERR, to make use of this jsys
PR 4-OCT-72 9:06 12058
Analysis Notes: Some Typical Measurements
Location: (LJOURNAL, 12058, 1:W)

DCE 3-OCT-72 18:55 12056
Transcription of FRAMAC meeting 13 July 1972
Location: (LJOURNAL, 12056, 1:w)

DCE 2-OCT-72 19:50 12037
FRAMAC MEETING HELD 23 JUNE 1972
Location: (LJOURNAL, 12037, 1:w)

JCN 29-SEP-72 11:08 12023
How to Access Old ARC Journal Documents
Location: (LJOURNAL, 12023, 1:w)

JCN 26-SEP-72 13:52 11932
USING THE JOURNAL
Location: (LJOURNAL, 11932, 1:w)

Comments: This is a transcription from the audio portion of the video tape of Jim Norton's demonstration. Edited by me at the request of Dick Watson. -- Kirk
MDK 27-SEP-72 11:19 11945
NOTES ON BIDDERS' MEETING NLS NETWORK SERVICE FACILITY
Location: (LJOURNAL, 11945, 1:w)

Comments: This supersedes (11935,1:w).
MEH 26-SEP-72 16:41 11938
Loading Procedures for the ARC Imlac
Location: (LJOURNAL, 11938, 1:w)

WRF 26-SEP-72 16:02 11937
New Jsys 411 - .CHPSW
Location: (LJOURNAL, 11937, 1:w)

WRF 26-SEP-72 15:54 11936
Improved SIN - Jsys 52
Location: (LJOURNAL, 11936, 1:w)

MDK 26-SEP-72 15:58 11935
SUMMARY OF BIDDERS' MEETING ON
Location: (LJOURNAL, 11935, 1:w)

comments: This document summarizes the Bidders' Meeting held Friday September 8 1972 at SRI, and defines certain policies with respect to the relationships of SRI-ARC, BBN, the bidders, and the utility company that is awarded the contract to manage a PDP-10 TENEX system for NIC and NLS users.

JCN 20-SEP-72 18:05 11892
Revised Notes on Use of the New ARC TENEX Account Numbers
Location: (LJOURNAL, 11892, 1:w)

JEW 20-SEP-72 16:13 11891
TELNET Documentation
Location: (LJOURNAL, 11891, 1:w)

comments: A copy of <system>telnet.help as of 20-SEP-72

JFV 19-SEP-72 15:18 11841
Q1: A Simple Retrieval Tool for TNLS Structured Files.
Location: (LJOURNAL, 11841, 1:w)

comments: This describes a prototype that is available for testing. It can be used for accessing personal files as well as the NIC Resources Notebook. It will be integrated in NLS within a couple of weeks. To use th prototype in the mean time, do the following:
get <rel-nls>xnls
ddt
tnls /alt mode/g
then proceed as shown in the example.

JCN 19-SEP-72 10:56 11824
Current ARC Project and Overhead Subnumbers
Location: (LJOURNAL, 11824, 1:w)

DVN 18-SEP-72 13:19 11821
TNLS flip charts
Message: We have reduced the twenty-three most general flip charts used in our TNLS course to 8 1/2" x 11" in color. They serve as clear prompts for the most commonly used TNLS commands and general features. For a set, get in touch with Cindy Page, Station Agent, SRI-ARC, (415) 329,0740.

KEV 18-SEP-72 9:08 11818
MAINTAINING <IDENTFILE>USER>ACCOUNTS
Location: (LJOURNAL, 11818, 1:w)

comments: THIS DOCUMENT DESCRIBES THE USE AND MAINTAINANCE OF <IDENTFILE>USER.ACCOUNTS WHICH IS USED AT LOGIN AND CHANGE ACCOUNT TIME

KEV 17-SEP-72 9:35 11817
new jsys uasqd
Location: (LJOURNAL, 11817, 1:w)

comments: this jsys will be implemented in tenex version 129.01

KEV 17-SEP-72 9:32 11815
new jsys gcoor
Location: (LJOURNAL, 11815, 1:w)

Comments: this jsys will be impemented in tenex version 129.01
KEV 17-SEP-72 9:31 11814
new jsys
Location: (LJOURNAL, 11814, 1:w)

Comments: this jsys will be implemented in version 129.01 of tenex
KEV 17-SEP-72 9:19 11813
automatic system accounting
Location: (LJOURNAL, 11813, 1:w)

Comments: this is the proposal that led to the soon to be implemented changes of handling accounting at LOGIN and CHANGE ACCOUNT time
KEV 17-SEP-72 9:17 11812
system loginmessage
Location: (LJOURNAL, 11812, 1:w)

Comments: this is a copy of the current <system>sysdoc.txt
NDM 15-SEP-72 17:36 11810

Message: I'm off to San Diego for a week. I'll be moving to Berkeley on the 26th of Sept. If there's anything I can do fr anyone, give me a call.
Thank you very much for today's picnic. It's been a fantasit summer, working with you people. See you soon.
Dean

NDM 15-SEP-72 17:31 11809
COM Users' Guide Notification
Location: (LJOURNAL, 11809, 1:w)

MFA 14-SEP-72 9:09 11785
COM Seminar, Thursday, Sept. 14 at 3:00
Message: There will be a seminar today (Sept. 14) at 3:00 in the Parsley room on COM and led by Walter for those of us destined to be "intimate" with COM.

DIA 14-SEP-72 8:59 11784
Why TENEX 1.29 has been so bad, including a message from DLM
Location: (LJOURNAL, 11784, 1:w)

JBN MDK JFV 13-SEP-72 13:34 11779
Comparative analysis of three state-of-the-art information systems
Location: (LJOURNAL, 11779, 1:w)

Comments: Transcript of an SDIS Planning session. Discusses the features of three installations that support interactive information systems.
DIA 7-SEP-72 14:28 11722
New Superwatch
Message: There is a new superwatch. See (ANDREWS,DOCSUPER,) for

up-to-date documentation. new features: accepts lower case, allows editing with ↑A, ↑W, new averaging commands for Paul Rech, and new exciting ways to look at drab data.

NDM 7-SEP-72 13:48 11721
Notice of new Output Processor Users' Guide
Message: The new Output Processor Users' Guide is ready!
For on-line viewing, see --1journal,11076,2:gy)
Hard copy is being printed, and will be available
next week. See Cindy, Barbara, or Dean.

HGL 6-SEP-72 21:14 11719
NEW NLS
Message: There is a new NLS. Jump to link should no longer loop, DEX repeats should function as promised, compilers other than those in subsys may be used for automatic compilations. There are a few other minor changes. As usual, let us know immediately if there are any problems. Backup is OLDNLS.sav;343.

NDM 31-AUG-72 16:31 11657
APE tries again
Message: ARC PHYSICAL ENVIRONMENT SIG
Please read (KJOURNAL, 11071, 1: w) if you
haven't already done so.
This first meeting will be held on Tuesday, September 5,
at 3:00PM in the parsley room instead of Aug 31.
Please bring lots of ideas, but don't feel that
that's an entrance requirement.
APE

&SRI-ARC 30-AUG-72 16:06 11651
NLS COMMAND SUMMARY (PRELIMINARY)
Location: (KJOURNAL, 11651, 1:w)

comments: This document is an attempt to pull together every available NLS command. It is meant for local ARC usage and may be in need of further debugging. Please report any errors to me as soon as is possible.
Hardcopy versions (photo reduced and comb-bound will be available from Cindy some time next week. -- Marilyn
MFA 30-AUG-72 14:08 11650
ICCC DOCUMENTATION SCHEDULE version 2
Location: (KJOURNAL, 11650, 1:w)

comments: This is a more complete version of (KJOURNAL, 11641,) It lists the responsible people and the dates for each project's partial deadlines. The first version was not authored by Kirk, that was a mistake.
KIRK 29-AUG-72 11:14 11641
ICCC DOCUMENTATION SCHEDULE
Location: (KJOURNAL, 11641, 1:w)

NDM 29-AUG-72 17:09 11071
ARC Physical Environment SIG
Location: (KJOURNAL, 11071, 1:w)

CHI 27-AUG-72 14:12 11579
ARC Guest IDENT (ARCG)
Message: I defined a new IDENT for ARC Guests (IDENT = ARCG). If one logs in as "GUEST" or "ICCC", his IDENT will automatically be set to ARCG. Note also, that the NLS greeting will be "Good Morning Guest".

DL 25-AUG-72 12:41 11572

Message: A CHALLENGE !!! I WILL BUY ANYONE A BEER WHO CAN OUTRUN ME IN A MILE RACE . HANDYCAPS
CHEERFULLY GIVEN. TUESDAY AUGUST 29 .
don limuti

DVN 25-AUG-72 17:47 11574DVN 25-AUG-72 17:47 11574Shopping for Training in PODAC:Arthur Hastings
Location: (KJOURNAL, 11574, 1:w)

MDK 25-AUG-72 14:01 11573
On NLS Command Language Syntax: I
Location: (KJOURNAL, 11573, 1:w)

DVN 23-AUG-72 14:49 11567
Ongoing NLS Training
Location: (KJOURNAL, 11567, 1:w)

DL 23-AUG-72 10:57 11563
Message: the phone lines for the dialin service have been serviced and no complaints are heard. alas!

MEH 23-AUG-72 10:53 11562
martin on hardware diagnostics
Location: (KJOURNAL, 11562, 1:w)

&SRI-ARC 23-AUG-72 16:30 11165
ARC JOURNAL INDEX BY TITLEWORD -- M thru Z -- to 21 July 72
Location: (KJOURNAL, 11165, 1:w)

&SRI-ARC 23-AUG-72 16:16 11164
ARC JOURNAL INDEX BY TITLEWORD -- A thru L -- to 21 July 72
Location: (KJOURNAL, 11164, 1:w)

JFV 22-AUG-72 9:39 11558
File Control instructions for simple NETINFO queries
Location: (KJOURNAL, 11558, 1:w)

Comments: A very simple-minded retrieval system that saves casual users the trouble to learn about NLS file structures is described. It is applied to the on-line query of ARPANET information with the ICCC conference as a target for demonstration. The service will be maintained after the Conference. Instructions for update and maintenance of the data-base are given.

DVN 22-AUG-72 8:58 11556
Call to Meet ontne 4-Day Week

Message: This message is to call a meeting to discus the experiement with a work week of 4 ten-hour days for memebers of PSO. (Hjournal,11220,) (hjournal,11330,) We will meet tomorrow, the 23rd, at 9 AM in the Parsley room. Anyone from ARC who is interested should feel free to come and speak.

KEV 22-AUG-72 1:20 11555

Message: Could all those who ate/or drank at last firday's party please contribute $2/person ($1/person for drinkers only) to cover the cost of the food and drinks. Thank you. kev

DVN 21-AUG-72 10:43 11548
Shopping for Facilitators
Location: (KJOURNAL, 11548, 1:w)

(author) Journal documents authored
JAKE 6-OCT-72 15:44 12091

Message: ONE TWO ONE TWO
*****Note: Author Copy*****

JAKE 21-AUG-72 17:04 11553
TNLS Beginners Guide Error.
Message: TNLS Beginners Guide Table-of-Contents. It came to my attention while trying to use the TNLS Beginners Guide (version 7 Aug 72) that the page numbers cited do not match up with the actual text. For instance, the section called "Command Summary and Help" occurs on page 63 and not on page 53 as cited in the table-of-contents. Perhaps there is still time to redo the page numbers N. (NOTE: I am sending this as a journal message so that I can get the practice of sending messages. You are probably already aware of what I am writing.)
*****Note: Author Copy*****