FPS 15-NOV-74 07:49 31369

send mail to store in the system

this is an error, overlook,

send mail to store in the system

FPS 15-NOV-74 07:49 31369

1

FPS 15-NOV-74 07:49 31369

send mail to store in the system

(J31369) 15-NOV-74 07:49;;;; Title: Author(s): Frank P. Sliwa/FPS;
Distribution: /DRL([ACTION]) DLS([INFO-ONLY]) ; Sub-Collections:
NIC; Clerk: FPS;

First Attempt to Use Sendmail Form

This statement will hold the link so I can try jumping to
it--(journal, jrnl23, j31359;gw) 1

TITLE: First Attempt to Use Sendmail Form
COMMENT:
AUTHOR(S):SRL
NUMBER:31370

DISTRIBUTE FOR ACTION TO: JPC
DISTRIBUTE FOR INFO-ONLY TO:
SUBCOLLECTION(S):
KEYWORD(S):
HANDLING INSTRUCTION:
RECORDING INSTRUCTION:
OFFLINE ITEM -- LOCATED AT:
RFC NUMBER:
OBSOLETES ITEM NUMBER(S):
ACCESS STATUS:
UPDATE TO ITEM NUMBER(S):
INSERT LINK TO FOLLOW:
FORWARD ITEM NUMBER:
MESSAGE: I havn't yet received anything from you via Sendmail - so
thought I would let you know by trying to use it myself, hope this
goes through!
BRANCH AT:
PLEX AT:
GROUP AT:
FILE:
SEND THE MAIL, 2

SRL 21-NOV-74 10:14 31370

First Attempt to Use Sendmail Form

(J31370
) 21-NOV-74 10:14;;;; Title: Author(s): Susan R. Lee/SRL;
Distribution: /JPC([ACTION]) ; Sub-Collections: SRI-ARC; Clerk:
SRL;

DLS 21-NOV-74 05:10 31371

Test message

Bob, just a test message to see if the journal and ident systems know about you yet. Let me know if you receive this. 1

DLS 21-NOV-74 05:10 31371

Test message

(J31371) 21-NOV-74 05:10;;;; Title: Author(s): Duane L. Stone/DLS;
Distribution: /RKW([ACTION]) ; Sub-Collections: RADC; Clerk: DLS;

Summary of RADC Course Nov. 11-15

The following is a description of the classes held at RADC November 11-15, listing who attended and the type of material covered in each class. 1

AKW Group 2

Met 8:15 to 10:00 Mon - Wed; Friday work with individuals as needed 2a

Attendees: 2b

Bobbie Carrier 2b1

Dean Bergstrom (missed Tuesday) 2b2

Ed Kennedy 2b3

Ed LaForge 2b4

Joe Cavano 2b5

Roger Panara 2b6

Tom Lawrence 2b7

Duane Stone (missed Tuesday) 2b8

Bill Rzepka 2b9

Ray Liuzzi 2b10

Material Covered: 2c

Monday 2c1

Used transition document (MJOURNAL,24357,); covered up to Repetition 2c1a

Tuesday 2c2

Continued with transition document - covered all but Sendmail 2c2a

Wednesday 2c3

Discussed Sendmail - all commands - used the Command Summary for this 2c3a

Friday 2c4

Covered Calculator and Useroptions in detail with Ed LaForge, Joe Cavano, and Bobbie Carrier 2c4a

First Beginning Group 3

Met 10:15 to 12:00 Mon - Fri 3a

Attendees: 3b

Agatha Deconde 3b1

Barbara DuRose 3b2

Carmella Di Prospero 3b3

John McNamara (missed Wed - Fri) 3b4

Mike Wingfield (missed Wed - Fri) 3b5

Nettie Riolo 3b6

Frank Sliwa (missed Tues - Fri) 3b7

Material Covered: 3c

Monday 3c1

Covered Create File, Insert Statement, Print File, Set Viewspecs, Substitute, Delete Statement, Move Statement, Copy Statement, Update File, Load File, \, <LF>, Print Statement, Print Rest, and Jump to Address 3c1a

Tuesday 3c2

Covered Insert Text with +e and "", and structuring files 3c2a

Wednesday 3c3

Covered Branch, Group, Transpose and Mixing Commands - i.e, Delete Text etc, 3c3a

Thursday 3c4

Covered CTL B, Replace, Sending with Sendmail, Print Journal, and Links 3c4a

Friday 3c5

Covered Append, Break, more viewspecs (xwabrstGHIJ), and

explained what could be done with Output Processor Directives 3c5a

New-User Group 4

Met 13:15 - 15:00 Mon - Fri 4a

Attendees: 4b

Robert Walker 4b1

Bill Stinson (missed Thurs & Fri) 4b2

Bob Krutz (Tues only) 4b3

Dick Nelson (missed Mon) 4b4

Don Van Alstine (missed Mon) 4b5

Frank Tomaini (Mon only) 4b6

Joe Femia 4b7

Larry Lombardo (Mon only) 4b8

Roger Weber 4b9

Richard Calicchia 4b10

Dan Loreco (missed Thurs and Fri) 4b11

Jack Hillbing 4b12

Material Covered: 4c

Monday 4c1

Covered Create File, Insert Statement, Print File, Set Viewspecs, Substitute, Delete Statement, Move Statement, Copy Statement, Update File, Load File, \, <LF>, Print Statement, Print Rest, Jump to Address, sndmsg, and readmail 4c1a

Tuesday 4c2

Covered Insert Text with +e and "", structuring files, and showed examples of Output Processor and COM 4c2a

Wednesday 4c3

Covered Branch, Sendmail, Reading Journal Mail, Statement Names, and Links (summarily) 4c3a

Thursday 4c4

Covered Locator, Jump to Name and Content, and reviewed reading mail 4c4a

Friday 4c5

Covered Message Program, Process Commands, and Output Remote 4c5a

Second Beginning Group 5

Met 15:15 - 17:00 Mon - Fri 5a

Attendees: 5b

Becky Levine 5b1

Donna Robilotta (missed Mon, Wed and Fri) 5b2

Duayna Bathrick (missed Tues and Fri) 5b3

Frank Lamonica 5b4

Marcelle Petell 5b5

Marilyn Rossi 5b6

Rocky Iuorno 5b7

Tom Bucciero (missed Tues - Fri) 5b8

Ciel Friedman (Mon only) 5b9

Material Covered: 5c

Monday 5c1

Covered Create File, Insert Statement, Print File, Set Viewspecs, Substitute, Delete Statement, Move Statement, Copy Statement, Update File, Load File, \, <LF>, Print Statement, Print Rest, and Jump to Address 5c1a

Tuesday 5c2

Covered Insert Text with +e and "", and structuring files 5c2a

Summary of RADC Course Nov, 11-15

(J31372) 21-NOV-74 09:42;;;; Title: Author(s): Susan R, Lee/SRL;
Distribution: /JCN([INFO-ONLY]) JHB([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: SRL; Origin: < LEE,
RADCTRIP,NLS;2, >, 20-NOV-74 12:06 SRL ;;;;####;

LAC 21-NOV-74 10:24 31373

request for AFDSDC Office-1 Directories for Basetop(xpp) and Stalog(LGL)

Jim
The form letter you requested follows, I have made some changes and additions, so I'm going to copy Connie again, Basically, what has happened is that the three previous accounts requested have been combined into one, and an additional account has been added for another group which will be learning the system starting in mid December. 1

Ps, are you sure this isnt just a sneeky way of trying to convince me that journal mail is better than sndmsg? 1a

(BASETOP) account-this is the revised original request, 2

Directory name:	BASETOP
Ident:	<not yet asigned>
Account:	80
Password:	DSDCXPP
Disk pages:	600
Allocation group:	ARPA
Default protection:	770000
Person's name:	Capt, Fredrick P, Ariail (alsoMae Y, Stone and June M, Ziebell)

2a

Ident Info: 2b

Address: 2b1

Program Management Branch
Office of Pland
Air Force Data Systems Design Center, Bld 810
Gunter Air Force Station, Alabama 36114 2b1a

Phone: 2b2

(205)279-4709 2b2a

(STALOG) account-this is the additional account required 3

Directory name:	STALOG
Ident:	<not yet assigned>
Account:	80
Password:	DSDCLGM
Disk pages:	600
Allocation group:	ARPA
Default protection:	770000
Person's name:	<comming as soon as they tell me>

3a

LAC 21-NOV-74 10:24 31373

request for AFDSDC Office-1 Directories for Basetop(xpp) and Stalog(LGL)

Ident Info: 3b

Address: 3b1

STALOG Development Branch
Directorate of Logistics Systems
Air Force Data Systems Design Center
Gunter Air Force Station, Alabama 36114 3b1a

Phone: 3b2

(205)279-4929 3b2a

Thanks,
/Larry Crain 4

LAC 21-NOV-74 10:24 31373

request for AFDSDC Office-1 Directories for Basetop(xpp) and Stalog(LGL)

(J31373) 21-NOV-74 10:24;;;; Title: Author(s): Lawrence A. Crain/LAC; Distribution: /CKM([ACTION]) ; Sub-Collections: NIC; Clerk: LAC; Origin: < CRAIN, DIRECTORY-REQUEST,NLS;2, >, 21-NOV-74 10:18 LAC ;;;;####;

Notes on the Application of the ARC Utility at SRI - November 5, 1974 1

Background 2

For more than a decade the Augmentation Research Center (ARC) at SRI has been developing computer-based tools and techniques designed to "augment individuals and groups in the performance of knowledge work." Under government sponsorship, this activity has grown into what is now called the "Augmented Knowledge Workshop." The principal component of the workshop is an online computer system (NLS). A utility version of NLS was made commercially available in January, 1974 as a multi-user, time-shared service administered by ARC. It runs on a Digital Equipment Corporation PDP-10 (called Office-1) accessible over the ARPANET or through direct communication lines. This facility is managed by Tymshare, Inc. and is located in Cupertino, California. A subscriber to the Utility contracts with ARC for service access in units called slots. A slot is guaranteed single-user access to the system sixteen hours a day, six days a week. In addition a subscriber is provided with technical assistance by ARC personnel through training, documentation and consultation. 2a

As a result of negotiations earlier in the year, ORO and IS&E have agreed to support subscription to Utility service for general SRI usage and evaluation. ORO has contracted for one slot at Office-1 through January 15, 1975. IS&E has committed funds for the purchase and lease of capital equipment to support the activity and to cover labor costs to support the SRI Utility Architect in his role. 2b

SRI Utility Architect 3

The role of the SRI Architect is basically to act as an active interface between SRI and the ARC Utility. He should provide exposure of Utility capabilities to an increasing segment of SRI and assist in evaluating its potential application as a productive tool in SRI activities. In those areas of applications deemed appropriate by SRI management and the Architect, he should assist in implementation design activities and coordinate user training. The Architect is intended to be a focal point for questions arising in the user community about the use of the Utility and to insure adequate service responsiveness to usage requirements. In this portion of his role he must work closely with the ARC and Office-1 personnel -- informing them of problems and monitoring the pursuit of their solution. The scope of the SRI Architect's responsibilities require that he be active on this task minimally half-time, potentially to a higher degree if the use of the Utility proves to have merit at SRI and usage demand increases. 3a

Notes On The Application Of The Arc Utility At SRI

The role of the SRI Utility Architect is destined to be evolutionary in nature. Initially, a great deal of the Architect's time will be devoted to reaching a sophisticated level of proficiency as a Utility user. As his capabilities increase, his learning time should decrease, but concurrently he will be spending more time in activities delineated above. Just as the relative worth and potential of the application of ARC Utility services at SRI will be continually monitored and evaluated, so will the role of the SRI Architect be reviewed and evolve. 3b

Potential Application of the Utility at SRI 4

The Utility provides a wide range of capabilities for its user community. An extensive repertoire of computer aids exists for document development. Text may be captured either offline or online and then edited using sophisticated text-handling techniques. Facilities exist for generating hard-copy in a variety of forms, including high-quality photocomposition output. Management of document development and production may be augmented by NLS, as may management endeavors in general. The communications support offered by NLS is extensive. Processes exist to support collaborative dialogue, teleconferencing and information exchange. Messages may be created, distributed and maintained in historical perspective through the use of NLS tools. Through the structuring of information on the system, the user may take advantage of techniques to store and retrieve data useful in his activities. These comments are meant to be only a cursory overview -- for further discussion of general NLS capabilities see the attached publication produced by ARC. 4a

In an organization the size of SRI there are numerous activities where the use of an interactive tool such as NLS might be beneficial. Several classes of activities stand out as prime candidates for application of the Utility. In activities where communications and information exchange are crucial, the Utility can be an important tool. The marketing effort at SRI is one example where geographically distributed actions and the number of people or contacts involved present special problems. This area could be explored by augmenting one or two marketing activities at the Institute with NLS. Team projects where data collection or document production are collaborative efforts would benefit through the use of NLS techniques. The general question of improving project management and coordination should be addressed by application of NLS to determine its merit in this sphere of Institute activity. Currently the internal SRI document production processes are being reviewed and evaluated. NLS is a potential component of any Institute-wide computer-aided text handling system and should be evaluated for its effectiveness in providing solutions to the unique problems of document production. 4b

Notes On The Application Of The Arc Utility At SRI

The basic goal of any application of the Utility at SRI should be to improve the effectiveness of SRI to respond to its clients' demands. Hence, initially the application of NLS should occur in those areas where effects will be most visible and which provide a realistic framework for evaluation of the Utility. The evaluation of four attributes during utilization of NLS at the Institute should determine its relative merit for future application; 4c

1) The potential to enhance the working environment -- Project activities should be improved through better communication and more effective project monitoring and coordination, 4c1

2) Cost-effectiveness -- The Utility must demonstrate cost-advantage over current methods of competitive alternatives, 4c2

3) Acceptance -- The use of NLS should be complimentary to current methods and have a positive effect on the individuals who have to accomplish specific tasks with the tool, 4c3

4) Impact on SRI's final product -- The Utility should increase Institute capabilities to satisfy client demands, 4c4

Current Activities 5

A room in Building 30 (J1068) has been established as a Utility workstation. It will eventually contain equipment for demonstration, training and general applications' use of the Utility by SRI personnel. This equipment will include both a display (CRT) terminal and a typewriter terminal, a storage device (cassette recorder or floppy disk) and a high-quality hard-copy output device. A high-speed line (4800 BAUD) from SRI to Office-1 has been installed and is currently being used with equipment on loan from ARC. 5a

During the past month I received training in NLS from ARC personnel sufficient for me to begin active participation with potential users at SRI. I began training a clerical assistant in NLS last week and will be formalizing a general training procedure for Institute use this week with the aid of ARC personnel. 5b

Several potential users of the Utility have made contact with me during the past month. I visited the SRI-Washington offices recently and discussed the potential use of NLS by the Washington Program Development Group (PDG) with several staff members. These discussions led to the initiation of activities to define the augmentation of the PDG with NLS. I will be working with Hal Bertrand from the SRI-Washington office on this issue. Similar use of NLS as a marketing management tool was discussed at a

meeting I had with Joe Rubenson and Steve Miller. Steve is interested in using the Utility to improve his marketing efforts for IS&E. I'm preparing a demonstration for Steve and expect to work with him in developing an NLS methodology for his application. Potentially both of these applications will share developed techniques because of the commonality of their needs. 5c

Training is scheduled to begin this week for three members of a project team headed by Barbara Ripple of the Systems Evaluation Department. They will be exploring the use of NLS as a major component in a crisis management system. Discussions will be held soon pertaining to the potential use of the Utility by Urban and Social Systems in some of their large team project activities. Dick Meier has expressed an interest in exploring the possible use of NLS by Editing and Composition for monitoring their workload and that of Report Services. 5d

These are the major areas I'm attempting to investigate at the moment. Many other SRI activities have been mentioned as potential candidates for using the Utility. It is important to mention that although there are pressures to accelerate the use of SRI's Utility slot (primarily the cost of the service), it is extremely important to concentrate on a few primary applications initially. To reiterate an earlier point, a visible and realistic application framework is necessary to provide a sound evaluation of the Utility's merit. Through such careful study at this time, the future use of NLS at the Institute may be accurately postulated. 5e

Notes On The Application Of The Arc Utility At SRI

(J31374) 21-NOV-74 11:38;;;; Title: Author(s): Michael A. Placko/MAP2; Distribution: /DCE([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: MAP2; Origin: < PLACKO, SRIUTILITYNOTE,NLS;1, >, 20-NOV-74 16:45 KLM ;;;;####;

further info on DSDC NLS accounts

here are the names for the stalog directory, The first one will probably be the primary user. 1

Tsgt, Flanoid F, Lejeune (that is spelled right) 1a

Msgt, Silas D, Adams 1b

Sgt, Linda F, Shellhammer 1c

Marry J, Brantley 1d

Iva D Hawes 1e

Since they will all be working together on one rather large document, I think it would be best to set up one large directory, rather than a bunch of smaller ones. 2

Thanks, 3

Larry Crain 3a

further info on DSDC NLS accounts

(J31375) 21-NOV-74 13:40;;;; Title: Author(s): Lawrence A. Crain/LAC; Distribution: /FEED([ACTION]) JHB([INFO-ONLY]) JCN([INFO-ONLY]) CKM([INFO-ONLY]) WEC([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: LAC; Origin: < CRAIN, LGNAMES.NLS;2, >, 21-NOV-74 13:36 LAC ;;;;####;

EJK 21-NOV-74 14:18 31376

NLS Cue Cards

I hope this gets to you, Using the sendmail form with the Number: in it seems to lose the message or something.

EJK 21-NOV-74 14:18 31376

NLS Cue Cards

I assume that the NLS Cue Cards I received from ARPA were sent by you. Thank you very much. I'm sorry I missed you before you left RADC, but I got tied up in something until after 5:00 and you had already left when I looked for you. I think you did a great job while you were here. You managed to hold together a larger group than anyone has before, and you gave them a good rudimentary knowledge of NLS as well as a good look at its potential. Now it is up to ME/US to carry on and build on this foundation. I feel that a lot of people will now begin to use it for communications and to compose notes and reports and gradually a data base will build up that people will find useful. Then we will have a 'working' AKW at RADC or whatever we will be... 1

NLS Cue Cards

(J31376) 21-NOV-74 14:18;;;; Title: Author(s): Edmund J. Kennedy/EJK; Distribution: /SRL([ACTION]) JHB([INFO-ONLY]) JCN([INFO-ONLY]) DLS([INFO-ONLY]) ; Sub-Collections: RADC; Clerk: EJK;

NDM 21-NOV-74 16:12 31377

Output Processor Suggestions

Refering to suggestions in (24547,) and to 'answer' in (31368,).

NDM 21-NOV-74 16:12 31377

Output Processor Suggestions

Jon's requests have been heard (for a number of years actually). It takes converting the Output Processor from a statement formatter to a page formater. This is a major rewrite. We hope a DPCS community will someday develop and find funding for such a conversion. I can think of a LOT of neat suggestions once that conversion takes place. 1

Output Processor Suggestions

(J31377) 21-NOV-74 16:12;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /JBP([INFO-ONLY]) JHB([INFO-ONLY]) FEED([
INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: NDM;

Unifying Output Commands

Rob's suggestions (GJOURNAL, 24546, 1:w) do not make sense to me, I don't understand what the new commands he is proposing would do. I DO agree that a integration of the sequential output commands is in order. The variables are: 1

- Format 1a
  - unformatted (Output Sequential) 1a1
  - quickprint 1a2
  - formatted (output processor) 1a3
- Type of device 1b
  - sequential (teletype) 1b1
  - printer 1b2
  - COM 1b3
- Output goes to 1c
  - device 1c1
  - file 1c2
  - TIP port 1c3

They can be combined in any way. I feel they should be put into a single command with three options in each of the three fields. 2

I would hesitate to mix the input commands (with all the potential algorithms) in with this. I would however support a SEQUENTIAL subsystem that included both. 3

Unifying Output Commands

(J31378) 21-NOV-74 16:30;;;; Title: Author(s): N. Dean Meyer/NDM; Distribution: /RLL([INFO-ONLY]) FEED([INFO-ONLY]) FDBK([INFO-ONLY]) JCN([INFO-ONLY]) RWW([INFO-ONLY]) EKM([INFO-ONLY]) CHI([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: NDM;

FGB 23-NOV-74 11:13 31380

ident=request

Jim, please generate idents for the following to be valid under the NALCON directory. Thanks. Frank. 1

2

Directory name:	NALCON
Ident:	III
Account:	same as architect
Password:	PPP
Disk pages:	300
Allocation group:	GGG
Default protection:	770000
Person's name:	James Peterson Shores

2a

Ident Info: 2b

Address: 2b1

Code PA=41 Sonar Analysis Division, Naval Underwater systems Center, New London , Conn, 06320 2b1a

Phone: 2b2

203=442=0771 x2126 or AV 636=2126 2b2a

3

Directory name:	NALCON
Ident:	III
Account:	same as architect
Password:	PPP
Disk pages:	300
Allocation group:	GGG
Default protection:	770000
Person's name:	Manley W. Turner

3a

Ident Info: 3b

Address: 3b1

Code KEE Weapons Control Division
Naval Surface Weapons Center
Dahlgren, Va. 22448 3b1a

Phone: 3b2

703=663=8336 or AV 249=8336 3b2a

ident-request

4

Directory name:	NALCON
Ident:	III
Account:	same as architect
Password:	PPP
Disk pages:	300
Allocation group:	GGG
Default protection:	770000
Person's name:	Louis M. Robertson

4a

Ident Info: 4b

Address: 4b1

Code 232 Simulation Division
Naval Coastal Systems Lab
Panama City, Fla 32401 4b1a

Phone: 4b2

AV 436-4172 4b2a

5

Directory name:	NALCON
Ident:	III
Account:	same as architect
Password:	PPP
Disk pages:	300
Allocation group:	GGG
Default protection:	770000
Person's name:	Richard R. Wolff

5a

Ident Info: 5b

Address: 5b1

Code 3511
Naval Weapons Center
China Lake, Ca. 93555 5b1a

Phone: 5b2

714-939-3040 5b2a

FGB 23-NOV-74 11:13 31380

ident-request

(J31380) 23-NOV-74 11:13;;;; Title: Author(s): Frank G. Brignoli/FGB; Distribution: /JHB([ACTION]) JCN([INFO-ONLY]) FEEDBACK([INFO-ONLY]) ; Sub-Collections: NIC FEEDBACK; Clerk: FGB;

FGB 23-NOV-74 16:38 31381

Shall we take a KWAC at the news?

Hello fellow KWAC-ers. 1

As the time for the next KWAC meeting draws near, it occurs to me that there might be some interest in the newsletter discussed briefly at the last meeting, I had in mind status reports from the various sites, gripes , experiences, etc. In short, anything that each of you might care to share with the rest of the community. Let me know if there is any interest (e.g., be sending me anything "sharable") and I'll try to get something together. Regards, Frank 2

FGB 23-NOV-74 16:38 31381

Shall we take a KWAC at the news?

(J31381) 23-NOV-74 16:38;;;; Title: Author(s): Frank G. Brignoli/FGB; Distribution: /KWAC([ACTION]) ; Sub-Collections: NIC KWAC; Clerk: FGB;

IMM 25-NOV-74 12:02 31382

EQUIPMENT

This is the breakdown as I see it which differs from Rene's sheet,,do you agree?

EQUIPMENT

WRITE-OFF ITEMS			1
9 Business Telephone Lines	(19,00 ea)	171,00	1a
9 Vucom 1 display ter.	(77,00 ea)	693,00	1b
9 103A2 Data Sets	(32,30 ea)	292,50	1c
9 Display Expansions	(10,00 ea)	90,00	1d
8 Speed Calling Features	(3,50 ea)	28,00	1e
7 Block Transfers	(7,00 ea)	49,00	1f
2 Impact Printers & Interface		285,00	1g
a) 1 friction printer	130,00		1g1
b) 1 sprocet printer	145,00		1g2
c) 2 interfaces (5,00 ea)	10,00		1g3
2 Mag. Tape Cassette Rec.	(90,00 ea)	180,00	1h
1 1202 G.D.C. Multiplexer (Cdn)		231,00	1i
4 113 BR Data Sets (Ports)	(17,75 ea)	71,00	1j
1 Equivalent feature (mux line)		,50	1k
1 Local Loop		3,10	1l
1 201B3 Data Set (U.S.)		75,00	1m
1 201B3 Data Set (Canada)		90,00	1n
1 Station Termination		16,50	1o
5 LSMS Channel Cards		62,50	1p
Conditioning of the line (U.S.)		19,00	1q
Conditioning of the Line (Canada)		45,15	1r
Interchange conditioning $35,00 Intrachange conditioning $10,15			1r1

Note: 2 List 1 terminals
2 List 11

EQUIPMENT

5 List 111			
Both List 1 & 11 include block tranfer			1s
Total Monthly Rate,.....2,402,25			1t
Total Annual Rate,.....28,827,00			1u
BUDGETED ITEMS			2
PRIVATE LINE			2a
1x Mileage San Jose - Port Huron	1,819,15		2b
1x Mileage Port Huron - Montreal	1,816,00		2c
Total Monthly cost	3,635,15		2d
Total Annual Cost	43,621,80		2e
			2f
1 - 1202 G,D,C, Multiplexer (US)	223,00		2g
Monthly maintenance		22,50	2h
California Sales Tax 7%	15,61		2i
Total Monthly Cost	261,11		2j
Total Annual Cost	3,133,32		2k
			2l
TOTAL ANNUAL BUDGETED COST	46,755,12		2m

EQUIPMENT

(J31382) 25-NOV-74 12:02;;;; Title: Author(s): Inez M. Mattiuz/IMM;
Distribution: /MIKE([ACTION]) IMM([INFO-ONLY]) ;
Sub-Collections: BELL-CANADA; Clerk: IMM; Origin: < MATTIUZ,
RENTALS.NLS;1, >, 25-NOV-74 11:55 IMM ;;;;####;

DLS 25-NOV-74 12:26 31383

Critique of IBM/SP Documentation Standards Document...Vol.VII

Should we let this report be published in its current form?

Critique of IBM/SP Documentation Standards Document...Vol.VII

This is a summary of the IBM Report on the impact of Structured Programming on Documentation Standards and my reactions to it. 1

The 3 significant findings (under the title of CONCLUSIONS) of the study were: 2

"1. The use of structured programming technology reduces documentation requirements, facilitates the preparation of software documentation and improves the quality of the documentation. 2a

2. The use of structured programming technology reduces the cost of software documentation and the cost of program maintenance. This assertion was not quantified during the study, but if the requirements are reduced, the production facilitated and the quality improved, then the cost will be reduced. 2b

3. The existing standards can be amended to have a single standard apply to both the projects using traditional development technology and the projects using structured programming technology." 2c

The specific impact in terms of the content and effort required to prepare the 10 documents defined in DOD 4120.17M was stated as follows: 3

Functional Description	No Impact	3a
Requirements DOcument	No Impact	3b
Program Specification	Some Impact if PDL is used	3c
Data Base Specification	No Impact	3d
Users Manual	No Impact	3e
Computer Operations Manual	No Impact	3f
Program Maintenance Manual	Substantial Reduction (if PSL is available)	3g
Test and Implementation Plan	No Impact	3h
Test and Analysis Report	No Impact	3i

My reactions 4

The document seems to be excessively wordy, repeating in a tutorial manner, the basic concepts of SP and a PSL. This may be

desireable if it is to be a stand-alone document. The document seems to be a subjective restatement of IBM's beliefs and is devoid of any quantitative data. 4a

In my opinion, CONCLUSIONS 1 & 2 ARE NOT JUSTIFIED in light of the above list. Only one document out of the 10 is significantly effected by SP techniques. The reduction in effort is attributed to the elimination of flowcharts (an assumption for which no data is given) and a reduction in narrative due to better commenting (something which can be done regardless of SP). The cost is effected only if one is willing to write off the cost of a PSL for other purposes. 4b

> There is an indication that each of these documents have to be updated several times during the software development life cycle, however no specific frequency statistics are given, therefore it is impossible to judge what quantitative effect the reducion in documentation effort for the MM will have. 4b1

Perhaps the most important impact of the use of SP techniques and a PSL is not stated in the conclusions. It may well be the reduction in lag time, ie the time between a decision to change something and the time when it is documented and made known to other members of the project team. Many parts of a programming effort cannot proceed in parallel, ie, step n can only happen when step n-1 is completed. The serial nature of the process is magnified when changes cause recycling through previously "completed" steps. A reduction in lag time could therefore contribute to a lowering of the cost, a shortening of the delivery schedule, and an improvement in the delivered product, but only if these decisions were at the level that was reflected in the MM document. 4c

Finally, the very thing which might tend to support their conclusions, was not considered, as indicated in the background section of the report: 4d

> "This task is not intended to address such related areas as document control or the production of documentation. These and other related topics are beyond the scope of the task." 4d1

It has been the experience of in-house, SRI and other NSW people, that an integrated document production and control system such as NLS (where narrative documentation is not treated differently than source code) is where the most gain in terms of currency, quality, and cost can be expected. 4e

DLS 25-NOV-74 12:26 31383

Critique of IBM/SP Documentation Standards Document...Vol.VII

(J31383) 25-NOV-74 12:26;;;; Title: Author(s): Duane L. Stone/DLS;
Distribution: /RN2([ACTION]) JLM([ACTION]) FJT([ACTION])
JPC([INFO-ONLY]) EJK([INFO-ONLY]) RWW([INFO-ONLY]) ;
Sub-Collections: RADC; Clerk: DLS;

MAP2 25-NOV-74 13:18 31384

Reference to journal item

At the request of Doug Engelbart this is to make you aware of a
journal item I've recently authored:
Notes On The Application Of The Arc Utility At SRI
Location: (GJOURNAL, 31374, 1:w)

1

Reference to journal item

(J31384) 25-NOV-74 13:18;;;; Title: (Unrecorded) Title:
Author(s): Michael A. Placko/MAP2; Distribution: /KLM([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: MAP2;

MAP2 25-NOV-74 15:07 31385

Reference to journal item

At the request of Doug Engelbart this is to make you aware of a
journal item I've recently authored:
Notes On The Application Of The Arc Utility At SRI
Location: (GJOURNAL, 31374, 1:w)

1

Reference to journal item

(J31385) 25-NOV-74 15:07;;;; Title: (Unrecorded) Title:
Author(s): Michael A. Placko/MAP2; Distribution: /JCN([INFO-ONLY])
JHB([INFO-ONLY]) RLL([INFO-ONLY]) ; Sub-Collections: NIC;
Clerk: MAP2;

FGB 26-NOV-74 05:23 31388

idents

Hi Jim, 1

You may have already gotten this, if so sorry for duplicaion.
Please make RWC (Bob Calland) valid under the NALCON directory.
Also, why is it that idents are generated but never are made valid
under a directory, Frank 1a

idents

(J31388) 26-NOV-74 05:23;;;; Title: Author(s): Frank G. Brignoli/FGB; Distribution: /JHB([ACTION]) JCN([INFO-ONLY]) FEEDBACK([INFO-ONLY]) ; Sub-Collections: NIC FEEDBACK; Clerk: FGB;

JI 26-NOV-74 06:42 31389

New Protocol Info [FYI]

See (GJournal, 31203) for new information on Protocols. The document is fairly long [approx, 12 pages] and has Output Processor Directives embedded within the text.

Jean

1

JI 26-NOV-74 06:42 31389

New Protocol Info [FYI]

(J31389) 26-NOV-74 06:42;;;; Title: Author(s): Jean Iseli/JI;
Distribution: /JNH([ACTION]) SGG([ACTION]) SPN([ACTION])
TEH([ACTION]) ; Sub-Collections: NIC; Clerk: JI;

SRL 26-NOV-74 08:21 31390

Some Impressions on Using NLS for the DCA Internetting Report

This is based on a conversation with Dr. Lyons last Friday.

Some Impressions on Using NLS for the DCA Internetting Report

During the time I was at DCA Friday, November 22nd, I talked with Dr. Lyons about his impressions of using NLS for the Internetting Report as compared to using typists. I thought I'd pass on his comments to those of you who might be interested. 1

One question he had was - at what point does NLS become advantageous. He wasn't sure but felt we had started using NLS too soon. The first drafts typed online were very rough and some were changed almost entirely before finishing. And of course one factor was that the initial entry and editing was done slowly because of the inexperience of the secretaries using NLS. The point of this comment was that he saw no real advantage to using NLS at the beginning stage of the report. 2

The question as to whether it takes a new user of NLS longer to make extensive edits than to retype should be looked at probably in light of the advantages that are obtained through the use of NLS by an experienced person. Even if initially the time required for making edits is the same as the time required for retyping (which I doubt) the experience gained will offset the lack of a clear cut advantage. 2a

Dr. Lyons felt that NLS was very advantageous when the project was nearing completion. Very small changes could be made and a printout made with relatively little effort. Two completely different formats were used for the 2nd (one sided printing) and 3rd (two sided printing) editions. He also pointed out that on Monday and Tuesday before the final printing on Wednesday, meetings were held and significant changes were suggested. These were all made in about four hours of editing on Tuesday night. The printing on Wednesday then took about five hours once all the machines used were working properly. He felt this was an example of the kind of advantage one has with NLS. 3

I don't know how many pages an hour an average secretary can type but one of the DCA secretaries estimated she could type between 6 and 10 pages an hour. This seems fast but even at this rate a 350 page report would take at least 35 hours to type in its entirety which is much longer than making edits and printing (9 hours for the last edition). 3a

Another advantage he felt while using NLS was the degree of control he had over this report which in its final state is about 350 pages. He mentioned that being able to at any time read up-to-date portions of the report and to be able to actually do some editing himself gave him a control which he felt would have been impossible otherwise. 4

Some troublesome problems came up during the final printing. For example, he had forgotten to allow enough blank pages for a two page

diagram which threw off the rest of the printout since it was being prepared for a two sided printing. He said if he had it to do over again he would not number his pages consecutively throughout because it is too hard to correct when there's a mistake. If each chapter were numbered separately, then at most one chapter would have to be reprinted when a mistake occurs. 5

It seems to me this is not good because documents to be published will be long and should be numbered consecutively without causing so much difficulty when a mistake is made. A couple of messages have been sent to feedback dealing with this question. For example, the ability to start a print file in the middle would be useful as well as the use of a directive such as . 5a

His overall feelings were positive after using NLS for this large project and he is willing to talk with any one who may have additional questions about his experience using NLS in this way. 6

Memo to ARPA Users that Accompanied Transition Documentation

This memo was sent with the materials listed to all 'casual' users at ARPA who had been through an NLS course but were unable to attend a transition course. A similar memo was sent to ARPA users who use NLS to a greater degree (who also could not come to a transition course) which had items 1-3 from the second list moved to the first list.

Memo to ARPA Users that Accompanied Transition Documentation

MEMO TO ARPA NLS USERS 1

An improved version of NLS is now available at OFFICE-1 for your use. Currently there are two versions of NLS running at OFFICE-1, NLS-7 (old version) and NLS-8 (new version). The following timetable describes how and when you may access a particular version: 2

	Type		
			2a
now - Nov. 4	nls	for NLS-7	
	preview	for NLS-8	2b
Nov. 5 - Nov. 19	oldnls	for NLS-7	
	nls	for NLS-8	2c

After November 19 NLS-7 will not be available for your use. 2d

Attached you will find several documents to help you in the transition from NLS-7 to NLS-8. 3

1. A summary of new and changed features 3a

   This document has been tailored especially for ARPA users. It lists changes and will hopefully give you enough information to make the transition smoothly. 3a1

2. It is suggested in the above document that you change the defaults for prompts and heralds. The second attachment is an example showing how to do this. 3b

3. The third attachment is a set of copies of viewgraphs used in the transition courses showing examples of new features with brief explanations. 3c

I would suggest that you discard all old obsolete documentation you possess. 4

Some additional documentation is also available on special request. 5

1. Updated copies of the handouts you received in the courses at ARPA. 5a

2. A Primer that may be used for your practice. 5b

3. A Cue Card designed to be used for quick reference. 5c

4. A complete list of TNLS-7 equivalents in TNLS-8. 5d

NOTE: The attached summary of new and changed features lists all changes in commands taught in courses at ARPA. 5d1

5. A command summary listing all NLS-8 commands. 5e

If you have any questions or feel you need some additional training in NLS please contact Susan Lee or the MIS Division. A schedule of advanced classes in NLS will be distributed in the near future.

6

Constance K. McLindon
Chief, MIS Division 7

SRL 26-NOV-74 08:41 31391

Memo to ARPA Users that Accompanied Transition Documentation

(J31391) 26-NOV-74 08:41;;;; Title: Author(s): Susan R. Lee/SRL;
Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC;
Clerk: SRL; Origin: < LEE, MEMO,NLS;2, >, 18-NOV-74 08:25 SRL
;;;;####;

TNLS-8 - A SUMMARY OF NEW AND CHANGED FEATURES 1

The major motivation for changing the NLS command language was to facilitate learning and use through making the system: 1) conceptually simpler, 2) more consistent, and 3) easier to discover. 1a

Changed Commands 1b

Commands taught in the first and second courses at ARPA which have changed are as follows, with the old name first, <> before a command word indicates you have to type a space. 1b1

Null File = <>Create File 1b1a

<> A: = Jump (to) Address A: 1b1b

Update = Update File 1b1c

Viewspecs Change = <>Set Viewspecs 1b1d

Viewspecs Reset = <> Reset Viewspecs 1b1e

Print = Print Rest 1b1f

Output Sequential = Output Sequential File 1b1g

OutPut Device Teletype = OutPut Terminal 1b1h

Output Device Printer = Output printer 1b1i

New Commands 1c

Print File = prints the entire file eliminating the need to move the CM to the beginning first 1c1

To eliminate the necessity of returning to Tenex for many commands some new commands have been added to NLS with equivalent functions as follows: 1c2

delete = Delete File 1c2a

undelete = <>Undelete File 1c2b

expunge = <>Expunge Directory 1c2c

directory = <>Show Directory 1c2d

Addressing 1d

Periods in Addresses 1d1

Do NOT put periods in front of statement numbers or SID's. 1d1a

Content Addresses 1d2

Quotation Marks have replaced square brackets to mark off content searches used in addresses. Thus an address that moves your CM to statement 5, then to the last character of the string "xxx", would have been ,5 [xxx] in the old system and is now 5 "xxx". 1d2a

Special Addressing Symbols 1d3

> = +e 1d3a

" = ,1 1d3b

From/To 1e

You Move and Copy things FROM someplace TO someplace else instead of vice versa. 1e1

Prompting 1f

You can set prompting in one of three modes: Full, Partial, or Off. The default is Full. We are suggesting ARPA users use Partial prompting. A list of new prompts follows: 1f1

C: calls for a Command word 1f1a

OK: calls for confirmation of the command or a field within a command, usually CR or REPEAT (<control-b>). 1f1b

S/Y/N: found only in the substitute command; choices are show status, yes or no. 1f1c

T/_: found only in HELP; choices are type in text (term you want explained) or _ (return to previous position in HELP) 1f1d

Repetition 1g

To repeat any command: 1g1

1. End the command with a <control-b> instead of a CR, or 1g1a

2. Enter <control-b> at the herald. 1g1b

The system will continue to repeat the command without your typing the <control-b> until you hit <control-x>. 1g2

Backspacing through Commands 1h

You may step back through commands word-by-word with <control-a> to retain some part of the command while changing one of the typed alternatives. 1h1

Online Help 1i

Questionmark (?) 1i1

Typing a ? at any point except when you are typing in text will print out the choices available. 1i1a

Note ? changes its output with each new step in a command. 1i1b

<Control-o> stops printing after a ? 1i1c

When the possible command words have printed out, the system will wait for you to make your choice. 1i1d

HELP 1i2

The HELP data base provides command syntax and explanations of NLS concepts with menus of related topics. You may access HELP by: 1i2a

1. Typing h CR 1i2a1
2. Typing h (an NLS term) CR 1i2a2
3. Typing <Control-q> 1i2a3

Subsystems 1j

The commands in NLS have been grouped into subsystems as follows: 1j1

Base - includes editing, file handling, and terminal handling commands 1j1a

Useroptions - allows you to change the defaults for heralds, prompts, viewspecs, noise words, etc. 1j1b

Others - Subsystems available but not yet taught at ARPA: Sendmail, Identification, Programs, and Calculator 1j1c

You Goto another subsystem, Type G for goto and then the first letter of the subsystem's name, Quit returns you to the previous subsystem. 1j2

Subsystems are identifiable by the herald, which may be from one to four letters of the subsystem title. Since ARPA personnel most often use Base, we are suggesting you change your herald to an *. 1j3

Execute allows you to execute one command in a subsystem with automatic return to the previous subsystem. 1j4

SRL 26-NOV-74 08:44 31392

Transition Document used at ARPA and DCA (NLS-7 to NLS-8)

(J31392) 26-NOV-74 08:44;;;; Title: Author(s): Susan R. Lee/SRL;
Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC;
Clerk: SRL; Origin: < LEE, PREVIEW,NLS;14, >, 18-NOV-74 08:26
SRL ;;;;<LEE>PREVIEW,NLS;4, 4-OCT-74 06:57 SRL ;####;

RHP3 26-NOV-74 10:04 31393

test

Hi folks 1

dThis is still aother test of the journal system 2

test

(J31393) 26-NOV-74 10:04;;;; Title: Author(s): Roger H. Prager/RHP3;
Distribution: /FGB([ACTION]) CMC([INFO-ONLY]) LMC([INFO-ONLY]
) AEB([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: RHP3;

Specification of the Unified User-Level Protocol

Network Working Group M.A. Padlipsky
Request for Comments: 666 26 November 1974

NIC: 31396

Specification of the Unified User-Level Protocol

After many discussions of my RFC 451, I discovered that the "Unified User-Level Protocol" proposed therein had evolved into what had always been its underlying motivation, a common command language. There are several reasons why this latter approach satisfies the original goals of the UULP and goes beyond them into even more useful areas:

1. User convenience. As evidenced by the good response to the common editor "neted", the Network Working Group has come to acknowledge the fact that the convenience of non-system programmer users of the Network must be served. Allowing users to invoke the same generic functions -- including "batch" jobs -- irrespective of which Server Host they happen to be using is surely a compelling initial justification for a common command language. Note that the concern with generic functions -- which "all" Servers do, one way or another -- is intended to emphasize the common command subset aspects of the language, rather than the "linguistic" elegance of it all. The attempt is to specify an easy way of getting many things done, not a complicated way of getting "everything" done.

2. "Resource sharing". Another area which is receiving attention in the NWG of late is that of "automatic" or program-driven invocation of resources on foreign systems. A common intermediate representation of some sort is clearly necessary to perform such functions if we are to avoid the old "n by m problem" of the Telnet Protocol -- in this case, n Hosts would otherwise have to keep track of m command languages. For the common intermediate representation to be human-usable seems to kill two birds with one stone, as expanded upon in the next point.

3. Economy of mechanism. In RFC 451, I advanced the claim that a single user-level protocol which connected via socket 1 and Telnet would offer economy of mechanism in that new responders would not be required to service Initial Connection Protocols on socket after socket as protocol after protocol evolved. This consideration still applies, but an even greater economy is visible when we consider the context of resource sharing. For if the common command language is designed for direct employment by users, as the present proposal is, there is no need for users on terminal support "mini-Hosts" (e.g., ANTS and TIPs) to require an intermediary Server when all they actually want is to work on a particular Server in the common language. (This is especially true in light of the fact that many

such users are not professional programmers -- and are familiar with no command language.) That is, if resource sharing is achieved by an intermediate language which is only suitable for programs, you would have to learn the native command language of Server B if you didn't want to incur the expense of using Server A only to get at generic functions on Server B. (And you might still have to learn the native language of Server A, even if the expense of using two Servers where one would do isn't a factor.)

4. Front-ending. Another benefit of the common command language proposed here is that it is by and large intended to lend itself to implementation by front-ending onto existing commands. Thus, the unpleasant necessity of throwing out existing implementations is minimized. Indeed, the approach taken is a conscious effort to come up with a common command language by addition to "native" command languages rather than by replacement, for the compelling reason that it would be unworkable as well as ill-advised to attempt to legislate the richness represented by existing command languages out of existence. Further, as it is a closed environment, no naming conflicts with native commands would arise.

5. Accounting and authentication. As evidenced by the spate of RFCs about the implications of the FTP in regard to both accounting for use of Network services and authenticating users' identifications (Bressler's RFC 487, Pogran's RFC 501, and my RFC 505 -- and even 491), this area is still up in the air. The generic login command proposed here should help matters, as it allows the Server to associate an appropriate process with the connection while actuating appropriate accounting and access control as well, if it chooses.

6. Process-process functions. By enabling the invocation of foreign object programs, the present proposal offers a rubric in which such process-to-process functions as "parallelism" can be performed. (See the discussion of the "call" command, below.) Note that the UULP is not being advanced as a panacea: It is assumed that the actual transactions carried out are most likely not going to be in the common command language (although some certainly could be); however, what is furnished is a known way of getting the presumably special-cased programs executing elsewhere. Also, it offers a convenient environment into which can be placed such new functions, which we would like to have become generic, as Day's File Access Protocol.

All of which seems to be a fair amount of mileage to get out of a distaste for remembering whether you find out who's logged in by saying "systat", "users", "s.whoic", "listf tty", or "who"....

Context

Although ultimately intended to become the general responder to the Initial Connection Protocol, the UULP is initially to be a Telnet Protocol "negotiated option". When the option is enabled, the Server Host will furnish a command environment which supports the common conventions and commands discussed herein.

In a sense, the UULP is a "selector". That is, the common command subset includes commands to exit from the common command environment and enter various other environments, along the lines of CCN's current Telnet Server. To exit from the UULP environment to the "native" command processor, the UULP command is "local" (see also the discussion of Case, below). Note that all commands terminate in Telnet "Newline" (currently cr-lf), unless altered by the "eol" command (below); internal separator is space (blank). (Entrance into other environments -- such as the FTP Server -- is discussed below.) There are two reasons for introducing a mechanism other than the apparently natural one of simply de-negotiating the option: First, it is bound to be more convenient for the user to type a command than to escape to his User Telnet program to cause the option disabling. Second, it is hoped that eventually the UULP will be legislated to be the default environment encountered by any Network login, in which case the natural way to enter the Server's "native" command environment would be by UULP command.

> Note: all UULP commands discussed herein are listed in Appendix 1, categorized as to optionality, with brief descriptions given. The appendix may be taken as a first-pass UULP Users' Manual.

Responses

Any optional commands which are not supported by a particular Server are to be responded to by a message of the form "Not implemented: commandname,", where the variable is the name of the command which was requested. Note that throughout this document, all literals must be sent exactly as specified, so as to allow for the possibility of Servers' being driven by programs (including "automata" or "command macros") in addition to "live" users.

In general, the view has been taken here that a small number of literal, constrained responses is superior to a vast variety of numerically coded responses in which text may vary. Again, the motivation is to achieve an economy of mechanism. For on the coded model, there must be a coordinator of code assignments, which is just as well avoided. Further, as has been experienced in the use of the FTP, when there are many codes there are many ambiguities. (The sender may have a perfectly valid case for choosing, say, 452, while the receiver may have an equally good interpretation of the codes' definitions for expecting, say, 453.) Experience with a related "error table" mechanism on Multics also bears out the assertion that coded responses create both managerial and technical problems. A final objection to numeric codes might be considered ireelevant by some, but I think that the aesthetics of the situation do merit some attention. And when the common command language is being employed by live users, it seems to me that they would only be distracted by all those numbers flying around. (Nor can we assume that the numbers could be stripped by their "User UULP", for one of the basic goals here is to make it straightforward enough for a user at a TIP to deal with.)

Arguments

During the review process, it became evident that some global comments on arguments were in order. Two areas in particular appear to have led to some confusion: the strategy of specification of arguments on the commannd line, and the question of "control arguments". On the first score, the goal of "front-endability" must be recalled. Consider two native implementations of a particular command, one of which (A) expects to collect its arguments by interrogation of the user, and the other of which (B) expects to receive them on invocation (being invoked as a closed subroutine). Now, it is easy to imagine that a "Server UULP" could feed the arguments to A as needed without requiring A to be rewritten, but it is quite difficult to see how B could be made to interrogate for arguments without extensive rewriting. Therefore, a "least common denominator" approach of specifying arguments in advance incurs the minimum cost in terms of reworking existing implementations.

On the second score, I have borrowed a notion from the Multics command language's convention called "control arguments" because it seems to be quite convenient in actual practice. The key is that some arguments are meant as literals, usually specifying a mode or control function to the command, while others are variables, specifying something like a particular file name or user identifier. A common example is a "mail" command, where the variables are the user identifiers and the Host identifiers, and the "control argument" is the designator that user identifiers have ceased and Host identifiers have begun. The convention used here is to begin the control argument with a hyphen, as this character never seems to be used to begin variable arguments. Thus, we use "-at" in the mail example. Although it is not a deep philosophical point, this approach does relieve argument lists of order-dependency, and feels right to me.

Case

Although it appears to have been legislated out of existence by the specification of the Network Virtual Terminal's keyboard in the Telnet Protocol, the question of what to do about users at upper-case-only terminals remains a thorny one in practice. There are two aspects to consider: the alphabetic case of commands, and the ability to cause "case-mapping" in order to allow lower-case input. Some Servers have no local problems with the first aspect, as they operate internally in all upper-case or all lower-case and merely map all input appropriately. (Problems do arise, though, when one is using the User FTP on such a system to deal with a mixed-case sytem, for example.) Other Servers, however, attach the normal linguistic significance to case. (E.g., Smith's name is "smith" -- not "SMITH", and not "smith".) To minimize superfluous processing for those Servers which are indifferent to case, all UULP commands are to be recognized as such whether they arrive as all upper-case or all lower-case. (They will be shown here as all lower merely for typing convenience.) Note that arbitrarily mixed case is not recognized, as it is an unwarranted assumption about local implementation to suppose that input will necessarily be case-mapped.

On the second aspect, any Server which does distinguish between

upper- and lower-case in commands' arguments (a,k,a, parameters) must furnish a UULP "map" command as specified in Appendix 2 in order to support logins from upper-case-only terminals attached to User Hosts which either do not support the Telnet Protocol's dictum that all 128 ASCII codes must be generable, or support it awkwardly. This seems a simpler and preferable solution than the alternative of legislating that upper-case Network-wide personal identifiers (and perhaps even Network Virtual Path Names) be pre-conditions to a usable common command subset. (As noted below, these latter concepts will fit in smoothly when they are agreed upon. The point here, though, is that we need not deprive ourselves of the benefits of a UULP until they are agreed upon.)

User Names

As implied above, the various Servers have their various ways of expressing users' names. Clearly, the principle of economy of memory dictates that there should be a common intermediate representation of names in and for the Network. It is probably also clear that this representation will be based upon the Network Information Center's "NIC ID's". However, it is unfortunately amply clear than an acceptable mechanism for securing up-to-date information cannot be legislated here -- muchless a mechanism for securely updating the implied data base. Therefore, at this stage it seems to be the sensible thing to specify only the UULP syntax for conveying to the Server the fact that it is to treat a user name as a Network-wide name rather than as a local name, and let the supporting mechanisms evolve as they may.

The prefacing of a name with an asterisk ("*") denotes a Network-wide name. (Such names may be either all upper-case or all lower-case, as with UULP commands' names.) The name "*free" is explicitly reserved to mean that (in the context of logging in) a login is desired on a supported or sampling account, if such an account is available. The response if no such account is available is to be "Invalid ident: *free." When Network-wide names are generally available Servers will either map them into local names or cause them to be registered as local names as they prefer. The point is that a Network-wide name will be "made to work" by the Server in the context of the UULP.

Special Characters and Signals

Another area in which the facts of life must outweigh the letter of the Telnet Protocol if the user's convenience is to be served is that of "erase" and "kill" characters. It is possible that User Telnets will uniformly facilitate the transmission of the Telnet control codes for generic character erase and generic line kill. It is certain, however, that User Telnets will differ -- and users will, if they use more than one User Telnet, be again placed in the uncomfortable position of having to develop too many sets of reflexes. Therefore, the UULP will optionally support the following commands: "erase char" and "kill char", where char is a printable ASCII character (to avoid possible conflicts with "control characters" which are recognized in the innermost areas of particular

operating systems). Presumably, unwary users can be instructed not to choose an alphabetic, so as to avoid being placed in a position where they cannot invoke certain commands (erase and kill themselves, for example, in which case they couldn't be changed).

These commands are supplements to the related Telnet control codes, and have the same meanings. The point here is that it may be far more convenient for a User to be able to say "erase #" and get the "#" to be recognized as the erase character by the Server than for the user to get his User Telnet to send the Telnet equivalent. The commands are designated as optional because they may lead to severe implementation problems on some Servers, and because the equivalent functions do, after all, exist in Telnet.

> Note: the erasing is assumed to be performed "as early as possible". That is, the sequence "erase x" "erase x" should come out equivalent to "erase x" "erase" -- the second appearance of "x" resulting in the erasing of the space in the command line. Presumably, this is a sufficiently uncommon path that anomalous results would be tolerated by the user community, but the intent ought to be clear.

The Telnet "synch" and "break" mechanisms are, by their very nature, best left to Telnet. End of line, however, might well be a different story. Therefore, as a potential convenience, the UULP optionally supports "eol char" to ask the Server to treat char as the end of line character thenceforth. To revert to Telnet Newline, "eol" (i.e., no argument, current terminator).

Prompts

Another aspect in which Servers vary while being the same is how they indicate "being at command level". Some output "ready messages"; others, "prompt characters". For the UULP, where some functions will be performed by means of a command's logging in to another system, the ability to specify a known prompt character is extremely desirable. The UULP command is "prompt char" where char is the character which is to be sent when the user's process (on the Server) is at command level. It is explicitly permitted to prefix char to a line consisting of a "native" prompt or ready message. Also, this command is explicitly acknowledged to be permissible prior to login. (Again, warning must be made of the bad results which can ensue if an alphabetic character is chosen.)

> Note: "prompt", "eol", "erase", and "kill" may all be re-invoked with a new value of char in order to change the relevant setting; all may be turned off by invocation with no argument.

Login

Perhaps the stickiest wicket of them all is the attempt to specify a generic login, but here we go. The UULP login command is "login userident", where userident is either a locally-acceptable user identifier or a Network-wide identifier as discussed above. Note that

for utility in contexts to be discussed later, the locally-acceptable form must not contain spaces. Servers may respond to the login attempt with arbitrary text (such as a "message of the day"), but some line of the response must be one of the following: a prompt (as discussed above; indicating, in the present context, successful login); "Password:"; or "Invalid ident: userident." When passwords are required, it is the Server's responsibility either to send a mask or to successfully negotiate the Hide Your Input option.

Note that "login *free" is specifically defined to require no password. (If a "freeloader" has access to a User Telnet and has learned of the "*free" syntax, it is fruitless to assume that he couldn't have also read the common password.) If a password must be given, acceptable responses are arbitrary text containing a line beginning either with a prompt or with "Login unsuccessful." or with "Account:". If an account is requested, the responses must be either the "Login unsuccessful" message or the text containing a prompt already described. If any errors occur during the login sequence, users are to re-try by starting from the login command. (I.e., it is not required that the Server "remember" idents or passwords.)

It is explicitly acknowledged that an acceptable response to "login *free" is "Limited access only." (followed by a prompt). This is intended to warn (human) users that the free account on the Server in question exists only to allow such functions as accepting mail and telling if a particular user happens to be logged in. (For objections to "loginless" performance of such tasks, see RFC 491. Note also that nothing here says that a Server must do anything other than return a prompt in response to "login *free" in the event that loginless operation is natural to it.) Given the UULP login discipline and the "prompt" command, it is reasonably straightforward for a program to login on a free account and perform one of these functions, for if the login command succeeded, the program will "see" a guaranteed prompt character.

To make life simpler for those Hosts which normally have some sort of "daemon" process service mail and the like, a further expansion to login is in order. The point here is that some Hosts may not know what sort of process to pass an unqualified "login *free" to, whereas they'd be sure what to do with an explicit request to process mail, do a who command, or set up console to console communications. Therefore, UULP "login" will allow a "control argument" (as discussed above) of either "-mail", "-who", or "-concom", and the respective UULP commands involved must use the respective strings in any login line they transmit. Again, nothing is being said about what a Server has to do with the information, but some Servers need/want it.

Usage Information

Most Servers offer some sort of on-line documentation, from calling sequences of commands to entire users' manuals. There are two sorts of information of interest in the UULP environment: "normal" system information, and information about the particular Server's UULP implementation. To learn how to get descriptions of "native"

commands, the UULP command is "help -sys" (abbreviation: "?"). Note that "-sys" is viewed as a "control argument" and as such prefaced by a hyphen ("-") to facilitate distinction from other sorts of name (e.g., command names). To get a description of the Server's UULP implementation, "help -uulp". To get a description of a particular UULP command's implementation, "help comname". To be reminded of how to use the help command, "help".

Note: as with command names and Network-wide user names, control arguments may be either all upper-case or all lower-case.

It is specifically acknowledged that "No peculiarities." is an appropriate response to "help comname" if nothing of interest need be said about the Server's implementation of the UULP command in question. (After all, we're sparing users the necessity of studying a dozen or so users' manuals; the least they can do is to read the UULP command list.) Appropriate information for less taciturn Hosts to furnish would be such data as local command invoked (if such be the case), argument syntax (e.g., pathname description, or name of help file about pathnames), "To be implemented.", or even "Not to be implemented."

"Mail"

Even though a separate mail protocol is being evolved for general purposes, the UULP needs to address this topic as, by virtue of being login based, it allows systems which do access control and sender authentication on mail to make these abilities available to users within its framework of generic functions. Therefore, to read one's mailbox, the UULP command is "readmail" . To have "live" input collected and sent to a local user, "mail userident"; to a remote user, "mail userident -at hostname", where the arguments have the "obvious" meanings. To send a previously-created file, "mail -f filename userident -at hostname". Several userids may be furnished; the delimiter is space (blank). Similar considerations apply to hostnames. If both are lists, they sould be treated pairwise. (A more elaborate syntax could be invented to deal with the desire to send to several users at a given host and then to other users at other hosts, but it seems unnecessary to do so at this point, for multiple invocations would get the job done.)

The mail command prefaces the message with a line identifying the sender (Host and time desirable, but not mandatory). For "live" collection, the end of message is indicated by a line consisting of only a period (".") followed by the regnant line terminator (usually the Telnet Newline, but see also the discussion of the eol command). If remote mail is not successfully transmitted, it is to be saved in a local file and that file's name is to be output as part of the failure message. ("Queueing" for later transmission is admired, but not required.) The transmission mechanism will follow the general mail protocol. Note that when invoked with a "-at" clause, the mail command will send "login *free -mail" to the remote Host(s), followed by a mail command with no "-at" clause.

A desirable, but not required, embellishment to "readmail" would be the accepting of a Host name ("-at hostname") to cause the local Host to go off to the named Host (via "login *free -mail") and check for mail there. Several hostnames could, of course, be specified. A further embellishment, which would probably be quite expensive, would be to accept "-all" as a request to check all Hosts (or, perhaps, all Hosts known to have a free account for the purpose) for mail.

Direct Communication

The ability to exchange messages directly with other logged in users is apparently greatly prized by many users. Therefore, despite the fact that there is a sense in which this function is not within the purview of the UULP, we will address it, after a digression.

> Digression: The UULP assumes that there can be straightforward "front ends" at the various Servers which translate generic function calls in a common spelling to calls for specific, pre-existing "native" functions. In the area of console to console communications, however, this premise does not really hold. The problem is that both major "native" implementations known to the author are seriously flawed. The TENEX "link" mechanism is both insecure (you've got no business seeing everything I type even if I'm careless enough to let you) and inconvenient (why should I be forced to remember that pesky semi-colon? how do I get back into phase after I've forgotten one?). It is also likely to be extremely difficult to simulate on systems which do not force Network I/O through local TTY buffers, even if the user interface were not subject to criticism. The Multics "send_message" mechanism, on the other hand, has a more sophisticated design, but is absurdly expensive. Therefore, the UULP mechanism to be described assumes that, for this function, new local implementations will be developed to support it.

To permit console to console communications: "concom -on"; to refuse, "concom -off". Default is off. To enter message-sending mode: concom userident -at hostname" ("-at" clause is optional). To exit from message-sending mode, type a line consisting of only a period (cf. Mail, above). While in message-sending mode, each line will be transmitted as a unit. The first message sent by concom must be prefaced by an identifying line, beginning "From:" and containing an appropriate address to which to reply. The closing period-only line should be transmitted, so as to allow the other concom to close as well. Acceptable error response is "Not available: userident," (which neither confirms nor denies the existence of the particular user -- a matter of concern on the security front). The command must, of course, do whatever is necessary to transmit the messages; i.e., if locally invoked, access the local mechanism, and if invoked for remote communications, access the remote Host's concom command (via "login *free -concom"). Thus, a user at a TIP would use the local form of concom on the Host of the other party if this is convenient, or would use the remote form on his "usual" Server if the direct use is inconvenient for some reason (such as having no account there, say).

The prerequisites for establishing communications are to find out if the user is logged in, and what "address" to use if so. The mechanism for gathering this information is an expanded "who" command. (Note that "who" is the UULP command to invoke the Generic 'who's logged in function, with no constraints on format of reply.) The syntax is "who userident -at hostname", where both arguments may be multiple. If no "-at" clause, then check local Host only. Response must begin "From hostname: userident:" followed by either an appropriate address (e.g., "11" if local "concom" uses TTY numbers and userident is logged in on TTy 11), or "Not available."

As with mail, a "-all" embellishment might be pleasant. Note that the search for the specified user(s) -- whether or not "-all" is used -- still assumes that a "login *free -who" login will be used on the appropriate remote Host(s), followed by "who userident". This is why responses to the expanded who command must be so rigidly specified. Note also that regardless of whether the inquiry is made in terms of Network-wide or local user name, the response must be appropriate for use in "concom".

"Good" concom implementations will presumably do an expanded Who command automatically, so as to spare the user the necessity of having to do it separately. Indeed, the -concom control argument to login is defined to imply the ability to do a who as well as a concom to cater to this possibility. It is tempting to legislate that such an approach be the rule, but the implementation implications are not quite clear enough to do so. The implicit who should be viewed as a strong hint to implementers, though.

File Creation and Manipulation

The common command subset must furnish the ability to create and manipulate files. Creation is necessary in order to send mail on the one hand, and to produce source files for subsequent compilation on the other hand. Manipulation (such as copying, renaming, typing out, and the like) is necessary both as a convenience aspect for users who seek to operate only in the common command language and as a means of performing desired batch functions (see below). For file manipulation commmands, the user could enter the File Transfer Protocol environment. However, the FTP user interface is constrained by a very high degree of program-drivability. It also lacks abbreviations and suffers from the lack of mnemonicity dictated by limiting command names to four characters. Further, some valuable functions (such as causing a file to be typed out) are not dealt with. Therefore, various UULP file manipulation commands are given in Appendix 1. They need not be addressed in detail here. However, some context would be useful:

The file manipulation commands assume that all Servers have some notion roughly corresponding to "the user's working directory". All file names, whether the yet to be invented Network Virtual Pathname or the "local" variety, are taken to refer to files in this directory unless otherwise indicated. That is, the user should not have to furnish "dsk:" or the like; it is taken as given that when he refers

to file "x" he means "the file named 'x' in my current working directory" and the Server "knows" what that means.

At the present stage of development of the UULP, it does not seem fruitful to go into a reasoned explication of the following statement. For now, suffice it to say that those file manipulation commands (a copy of a foreign file, for example) which need to employ the FTP do employ the FTP and let it go at that. As the context and implications of the protocol become more widely understood, the detailed implementation notes will be added to the file commands -- and refined for the other commands, doubtless. In a way, the common file commands may be viewed as a kind of "User FTP" of known human interface when they deal with foreign files. (And, of course, until there's a Network virtual pathname, the issue doesn't really arise.) I expect that an "identify" command might be desirable, so that UULP commands which have to access other Servers in turn on behalf of the specific current user can have the necessary login information available to them. Such a command is included in Appendix 1, but should rank as speculation for now.

On the topic of file creation, matters are rather complicated. It is clear that the ability to create files in the UULP environment is extremely desirable. It is also clear that using mail to a fake address to get the file created, then renaming the "unsent mail" file is too byzantine to expect users to do. Unfortunately, it is not clear exactly what the alternative is. That is, it's fairly clear that we need a common editor, but it's not at all clear which editor it should be.

Two widely-known editors come to mind: TECO and QED. However, not everybody has them. Even if everybody did, the "dialects" problem is bound to be a large one. Even if all the relevant system programmers could agree, there remains the question of whether the intended user population would be willing to bother learning a language as complex as TECO or QED. Therefore an optional UULP command to be called "neted" is proposed. (See also RFC 569.) This editor is a line-oriented context editor (no "regular expressions", but also no line numbers). It is copiously documented in Chapter 4 or the Multics Programmers' Manual, including an annotated listing of the (PL/I) source code. A simple user's guide has been prepared (see Appendix 3). Several implentations already exist, and commitments have been made for more. It may also be repugnant to some of the system programmers who would be called upon to implement it -- which is why it is optional, until and unless higher authority makes it mandatory.

Other Protocols

The nominal initial impetus for proposing a UULP was to allow new Network user protocols to be invokable through a common mechanism, rather than requiring a new responding mechanism to be built for a new contact socket for each new protocol. Although this goal has been shunted into the background by the admission of the true goal of the UULP, it has not been dropped completely. Therefore, to enter the FTP Server environment, the UULP command is "ftp"; to enter the RJE

Server environment, the UULP command is "rje". Exit is as per the respective protocols. (Where possible, exit should be back to the UULP environment.)

Invoking Foreign Programs

There are two broad contexts in which it is desirable to cause a specific local program to be invoked from the common command environment: The User side of the connection may itself be a program, and the desired Server side program a specifically cooperating one; this is the more sophisticated context, of course. The less sophisticated context assumes that the User side is a "live" user, and the desire is to invoke a compiler or an object program the user has already compiled in the common language -- again as a convenience to the user so that he may operate in a sort of "Server-transparent" mode. (The latter case also covers "batch" use of the Server; see below.) In both contexts, the important role of the UULP is to specify the mechanisms through which the particular programs may be invoked, irrespective of the idiosyncrasies of the Servers' command languages.

Programming languages are much too big a problem to tackle here. However, assuming that a user somehow manages to create a source program, he still wants some commonality of spelling in invoking the appropriate compiler, or even the object program. As an optional but strongly recommended UULP command, then, "call name" should invoke object program name (where the named program may be a "native" command with agruments specified as appropriate). The values "-pl1", "-basic", "-fortran", "-lisp", etc., should be recognized as requesting the invocation of the appropriate language processor (to operate on a named source file or interpretively/interactively if no source file was named), with "reasonable" defaults in effect. Note that this all is meant to imply that "native" commands are not directly invokable from the UULP environment (other than by "call"), to avoid potential naming conflicts between system commands and new UULP commands.

> Note that the "call" command in the UULP environment constitues a rubric for "parallel" computation, given any ad hoc convention for the return of completion information. (Writing on the Telnet write socket plus 2 would seem appropriate, provided the initiator has the ability to "listen" for the rfc; but even a response in the data stream would do, as a special-cased program is assumed on the "user" side anyway.)

Other Matters

The topic of "batch" mode merits some attention. As with the file manipulation commands, more consultation is necessary for a firm spec. However, I suspect that a "-batch" control argument to login should initiate batch mode processing by the Server, and given the call and identify commands all we might then require is a convention for designating the output file in order to return it via a copy command in the "job" itself (if output is to be returned rather than

stored at the Server). Of course, -batch will probably need some substructure as to password and timing matters. More details will emerge in this area in future iterations.

An admittedly fictionalized scenario might look like this:
login Me -batch -Pw xxx -shift 3
copy *452<me>source.text source.pl2
call -pl2 source
call source input output
identify Me2 yyy
copy output *555>root>Me>output452
logout
where user "Me" wants the Server receiving the commands (either directly frm him at a TIP or perhaps from some other Server on which he has created a file containing them) to set up a batch job for him, with password "xxx", to be run on Shift 3 (whenever that is). The job first copies file "source.text" from directory "<me>" on Host 452 into local file "source.pl2", thn compiles it with the local PL2 compiler, executes it (assuming a "Not found" response would go into a known file if compilation had failed) with specified arguments (presumably the names of files for input and output), then copies the "output" file to Host 555's file hierarchy at the indicated place, using the user identifier "Me2" and the password "yyy". It's not elegant, but it ought to work.

Finally, on the topic of logging out, the UULP command is "logout". The Server must close the Telnet connection after doing whatever is appropriate to effect a logout. To retain the Telnet connection, "logout -save". Having the Server close is viewed as a convenience for the user, in that it spares him the necessity of causing his User Telnet to close. It is also desirable for program-driven applications, so as not to leave the connections "dangling" and not to require possibly complex negotiations with the User side to break the connection.

APPENDIX 1. THE COMMON COMMAND SUBSET

Syntax	Opt
I. "Set-up" Commands	
login id arg The id may be Network-wide or Host-specific, "*free" is reserved, The arg may be "-mail", "-who", "-concom", "-batch", or may be absent. Result is to be either logged in or passed off to appropriate daemon.	
prompt char Specifies that char is to become or precede the normal prompt message. Acceptable prior to login.	
erase char	X

Specifies that char is the erase character.
Invocation with no argument reverts to default.

kill char X
Specifies that char is the kill character.
Invocation with no argument reverts to default.

eol char X
Specifies that char is the newline character.
Invocation with no argument reverts to default.

local
Enter the local command environment.

ftp
Enter the FTP environment.

rje
Enter the RJE environment.

logout
Logout and sever the Telnet connection.

logout -save
Logout but keep the Telnet connection.

map
Apply the case-mapping conventions of Appendix 2.
Required on Hosts to which case is significant.

identify id arg X
Specifies that id is to be used as the user
identifier in any "fanout" logins required.
If arg is specified, it is to be either the
password to be used in such logins or "-pw", in
which case the Server will furnish a mask or negotiate the Hide Your
Input Telnet option; if no arg, then no password is to be furnished
on fanout logins.
Default id is "*free".

II. Communications Commands

readmail
Type out "mailbox".

readmail (id) -at host X
Type out "mailbox" on remote Host host.
Multiple Hosts may be specified,
separated by spaces (blanks).
Implies ability to change working directory
at host to directory implied by known
user identifier, or (optionally) by id.

readmail -all XX

Search for mail.
Extremely optional.

mail id
Collect input until line consisting of
only a period (".") for mailing to local
user specified by id.

mail -f file id
Send contents of specified file to specified
local user.

mail id -at host
Collect input until line consisting of
only a period (".") for mailing to remote
user(s) at specified Host(s). Both id and
host may be multiple, separated by spaces.
(If multiple, they should be taken pairwise.)

mail -f file id -at host
Send contents of specified file to specified
remote user(s).

who
The generic who's logged in command.

who id
Is id logged in? Constrained responses.

who id -at host
Is the specified user logged in at the
specified host. Constrained responses.

concom -on
Enable console to console communications.

concom -off
Disable console to console communications.

concom id
Send messages to specified local user
until line consisting of only a period (".").

concom id -at host
Send messages to specified remote user.

III. File Commands

type path
Type out the contents of the specified file.
Pathname may be local or Network-wide.
Default to current working directory.

listdir

List the contents of the current working directory. (Local format acceptable.)

listdir path
List the contents of the specified directory.

rename old new
Change the specified file's name as indicated.

addname old new X
Give the specified file the specified extra name.

delete path
Get rid of the specified file.
("Expunge" if necessary.)

copy from to
Make a copy of the file specified by the first pathname at the second pathname.

link from to X
If your file system has such a concept, make a "link" between the two pathnames. If no second argument, use same entry name in working directory.

status path st X
If your file system has such a concept, give status information about the specified file or directory.

changewd path X
If no argument, return to the "home" directory.

typewd X
Type out the pathname of the current working directory.

neted path X
See Appendix 3.

IV. Invoking "Native" Programs

call name (args) X
Invoke the specified program with the specified arguments (if any).
The following names are reserved to indicate the invocation of the corresponding language processor: "-pli", "-basic", "-fortran", "-lisp".
(If no source file indicated, invoke "interpretively" if possible.)

V. On-line Documentation

help name
Type out information about the specified UULP command. If name is "-sys", type out information about how to use the local system's help mechanism; if

"=uulp", about the local system's UULP implementation. If no name given, describe the command itself.

APPENDIX 2, MAP COMMAND CONVENTIONS

This appendix will eventually contain the case-mapping conventions detailed in RFC 411.

APPENDIX 3, EDIT COMMAND REQUESTS

This appendix will eventually contain descriptions of the neted command requests (a draft of which now exsits), or a reference to the Resource Notebook version, if that gets published first. For now, it should be sufficient to point out that the requests are basically locate, next, top, change, save,and quit -- i.e., it's the "old-fashioned" flavor of context editor.

NWG/RFC# 666 MAP 26-NOV-74 12:49 31396
Specification of the Unified User-Level protocol

(J31396) 26-NOV-74 12:49;;;; Title: Author(s): Michael A. Padlipsky/MAP; Distribution: /NLG([INFO-ONLY]) NAG([INFO-ONLY]) ; Sub-Collections: NWG NIC NLG NAG; RFC# 666; Clerk: JAKE; Origin: < NETINFO, RFC666.NLS;2, >, 26-NOV-74 12:45 JAKE ;;;;####;

FGB 26-NOV-74 16:28 31397

valid idents for NALCON directory

Jim, 1

As far as I know, RWC was the only ident not working. However, I have the following requests for idents outstanding and they should be valid under the NALCON directory. Also, could you send me 20 or so NLS cue cards and perhaps 10 each of the command summaries and nls primers. Thanks. Frank 1a

The outstanding ident requests are: 1b

James Peterson Shores 1b1

Manley W. Turner 1b2

Louis M. Robertson 1b3

Richard R. Wolff 1b4

FGB 26-NOV-74 16:28 31397

valid idents for NALCON directory

(J31397) 26-NOV-74 16:28;;;; Title: Author(s): Frank G. Brignoli/FGB; Distribution: /JHB([ACTION]) FEEDBACK([INFO-ONLY]) ; Sub-Collections: NIC FEEDBACK; Clerk: FGB;

test of ident fdbk

Hi..if this works, thanks, if not thanks anyway....and have a happy goble!

FEED 26-NOV-74 23:21 31398

test of ident fdbk

(J31398) 26-NOV-74 23:21;;;; Title: Author(s): Special Jhb Feedback/FEED; Distribution: /FDBK([ACTION]) MLK([INFO-ONLY]) ; Sub-Collections: SRI-ARC FDBK; Clerk: FEED;

EJA2 27-NOV-74 07:20 31399

Request for Userguide (Hardcopy)

This is really from Dave Potter. Could you please send me a copy of the OUTPUT PROCESSOR USER'S GUIDE? I managed to get the Introduction online and printed on my terminal via OUTPUT TERMINAL, but that didn't work for the sections dealing with lists and explanations of directives, which is what I really need (I think). Aside from which, they're too long to print on a TTY. I'd appreciate hardcopy through the mail to: David A. Potter, Educational Testing Service, Princeton, NJ 08540. Thanks...

1

EJA2 27-NOV-74 07:20 31399

Request for Userguide (Hardcopy)

(J31399) 27-NOV-74 07:20;;;; Title: Author(s): Ernest J. Anastasio/EJA2; Distribution: /JHB([ACTION]) EJA2([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: EJA2;

MIKE 27-NOV-74 08:11 31400

draft of KSH reply to Sears

Mr. M.F. Anderson
Simpson-Sears Limited
222 Jarvis Street
Toronto, Ontario M5B 2B8 1

Dear Mr. Anderson: 2

For the past several months Bell Canada's H.Q. Planning Department and Bell-Northern Research's Systems Engineering Group have been exploring the possibilities of cooperating with Sears in a project designed to test the technical and operational feasibility of a dial pulse coding feature for the your Automated Order Service, as outlined in your letter of July 9, 1974. 3

After considerable negotiations with various groups within Bell-Northern Research we have reached the conclusion that it would be impossible for us to participate in this project at this time. Previously established research priorities within BNR have reduced the emphasis on work of this nature. Specifically, the emphasis in the Automated Transactions and Remote Monitoring project of he Apparatus Development group has shifted away from automated transactions. Since this group was the one that we believed to be the most qualified to tackle a prject of this nature, and since their support is no longer available to us, we are unable to make the technology contribution that we had hoped. 4

I regret the long delay involved in developing this reply, and I hope you will understand that we have done everything in our power here to steer this project toward completion, with an apparent lack of success. I wish you continuing success with the A.O.S. project, and in your plans for extension of the service in the future. 5

Yours sincerely, 6

K.S. Hoyle
Assistant Vice-President (Planning) 7

MIKE 27-NOV-74 08:11 31400

draft of KSH reply to Sears

(J31400) 27-NOV-74 08:11;;;; Title: Author(s): Michael T. Bedford/MIKE; Distribution: /DAY([ACTION]) ; Sub-Collections: NIC; Clerk: MIKE;

NDM 27-NOV-74 12:21 31401

(mattiuz,sanjuan,) to COM

(mattiuz,sanjuan,nls;3,) is ready to go to COM. I made some minor updates to the directives in parallel to minor changes in the Format Library. You had a space on each side of the %i directives; when the directive is pulled out two spaces would have been left. I deleted one of the spaces. The V directives count visibles, not words; I changed a few of the numbers in the References branch to correct a couple errors. Should look good. Will send next week. 1

NDM 27-NOV-74 12:21 31401

(mattiuz,sanjuan,) to COM

(J31401) 27-NOV-74 12:21;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /IMM([INFO-ONLY]) DVN([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: NDM;

advantages/improvements in CMI-II over CMI-I

Multiple addressing for private messages	1
Max. message length is variable	2
Warning for end-of-line	3
Better editting capability	4
Delete line, old/new, blank line	4a
Newly editted messages are distributed again	5
Message restrictions	6
Cypher, time delay, reserved message numbers	6a
Variable security levels	7
- open - open to max. no. of members - open to specific individuals	7a
Conference parameters are now variables	8
Can specify a login code even if there are to be no proposals in Conference	9
Greater no. of display options in effect	10
Time of day, time/cost to date	10a

advantages/improvements in CMI-II over CMI-I

(J31402) 27-NOV-74 13:30;;;; Title: Author(s): Michael T. Bedford/MIKE; Distribution: /DAY([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: MIKE;

draft of memo to KSH, accompanying Consensor literature and asking for his okay

to KSH re the Consensor: 26-NOV-74 1

For over a year I have been monitoring the development and marketing of a compact, portable device for use in facilitating the management decision making process. "The Consensor" is a sort of instant-Delphi machine; it permits a number of people gathered in a meeting to vote anonymously on issues and proposals as they come before the meeting, and it records and displays the aggregate statistics for review by the members of the meeting. The anonymity and the rapid feedback of group opinion permit the members to learn a great deal about the group's true feelings on the subject matter, as well as giving them insights into how they function as a group. (Hopefully they will be able to sharpen their skills as they become more aware of how they are influencing each other and their combined productivity.) 1a

The accompanying literature (prepared by the marketer, Mr. Bill Simmons of W.Applied Futures, Inc.) outlines the various applications and benefits of The Consensor better than I could in this short space. I have also enclosed a sample of the sales agreement we should have completed within the next week, if we are to take advantage of a temporary discount period offerred by Mr. Simmons. 1b

The accompanying Purchase Agreement No. 008 outlines the expected costs involved for the Consensor configuration I would recommend for this group's use. The cost of the Consensor display panel, 16 individual terminals, and a permanently installed wiring harness is (US)$8200.00. An additional portable wiring harness (permitting us to set up the Consensor apparatus in any conference room on a few hours notice) lists for (US)$800.00. The (US)$300.00 charge for the shipping case would be refunded upon return of the case to Applied Futures, Inc. The net purchase price would thus be (US)$9000; a Canadian customs duty of approximately 30% would then be levied against this, raising the cost to H.Q. Planning to approximately $11,700.00 1c

I believe that the expenditure of approximately $11,700 for the Consensor would enable this group to considerably enhance its ability to guide the Company's senior managers in their group decision making processes, and would reinforce the identification of this group with a sound futures planning image. 1d

ADVANTAGES OF THE CONSENSOR 1e

participants in a meeting can express their opinions with shades of meaning; they do not have to answer "yes" and "no". 1e1

draft of memo to KSH, accompanying Consensor literature and asking for his okay

Individuals, in taking a position, can weight their position in terms of such items as their confidence, their competence, or any parameter that has meaning in the consensus. 1e2

Subjects are discussed with clarity, since the individual participation in each level of decision results in an individual alertness. 1e3

Monopolization of time by an individual is avoided through a group decision on the importance of the discussion. 1e4

Unpopular opinions which may not be expressed can be brought out and may have more support than the group would suspect. 1e5

A large number of items, which may be resource allocation, projects, programs, people, occasions, can be easily rated with a quantified index on each item. 1e6

The individuals in the group which is meeting can establish a group profile of their own, covering either physical characteristics or attitudinal characteristics, very quickly and without embarrassment. 1e7

Any of the output of the CONSENSOR can be quickly charted from a overlay, and hung up in the room to permit later comparison of positions. 1e8

An unstructured discussion can be given focus by a branching technique, brainstorming the original items, selecting with the CONSENSOR the most important item, brainstorming again, subheading, and so on as the discussion proceeds. 1e9

Eliminate embarrassment, since all positions are anonymous. 1e10

Avoid leadership by the articulate, since positions do not require articulation. 1e11

MIKE 27-NOV-74 13:53 31403

draft of memo to KSH, accompanying Consensor literature and asking for his okay

(J31403) 27-NOV-74 13:53;;;; Title: Author(s): Michael T. Bedford/MIKE; Distribution: /LHD([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: MIKE;

this is the title of the message withnin nls

herre's the message 1

MIKE 27-NOV-74 14:25 31404

this is the title of the message withnin nls

(J31404) 27-NOV-74 14:25;;;; Title: Author(s): Michael T. Bedford/MIKE; Distribution: /MIKE([ACTION]) ; Sub-Collections: NIC; Clerk: MIKE;

JMB 28-NOV-74 10:35 31405

Trip to Washington SOON?

Dear Susan, I understand (from Bair) that you're into showing me around ARPA etc sometime beofre you leave Washington on the 13th. The JIMs are encouraging me to do that (as well as look into the house you're living in). They see this as preferable (though not crucial) to sending you back to Wash with me in January. Are you still interested in this? The possible days for me to be there are either FridaySaturday or SundayMonday of the weekend of Dec 6-9. Which day could you have free at ARPA--the Friday or the MOnday (if either); SundayMonday is better for me? Also, is what Bair said about the house you're leaving true--that the room is for rent starting in Dec but not in January (if your housemates and I get on together)? Anyway, we haven't lost too much if this trip can't work out, so let me know if it's convenient. Either call me at SRI (ext 3722) this coming Monday Dec 2, or sndmsg (SRI-ARC) me your phone number for that MOnday. Therwise, my home number is (707) 887-2129, before Monday. --Jeanne Beck 1

JMB 28-NOV-74 10:35 31405

Trip to Washington SOON?

(J31405) 28-NOV-74 10:35;;;; Title: Author(s): Jeanne M. Beck/JMB; Distribution: /SRL([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: JMB;

MIKE 28-NOV-74 16:08 31406

draft description of what you and JHK did on the FORUM conf. (for a BPG newsletter release on CAMS)

how does this look ? I'd like to change some of the wording so that is will sound a little more like I know what I'm talking about. Words that are bothering me are'categorizing', 'typology', and 'characteristics'. (also, 'positive and negative')

MIKE 28-NOV-74 16:08 31406

draft description of what you and JHK did on the FORUM conf. (for a BPG newsletter release on CAMS)

Research into the entire area of Computer-Augemented Management Systems has progressed on numerous fronts. A great deal of time and effort has gone into the development of a generalized teleconferencing framework, of which computer-augmented conferencing and Computer-Augmented Management Systems form a subset. A major, macro-level project of the Business Planning Group involved the survey of a number of business travelers to determine the reasons why these travelers preferred travel to telecommunications alternatives for conducting business in distant locations. On a more micro-level, the group has analyzed the interaction patterns occurring in a number of computer-augmented conferences and CAMS-oriented environments. Currently the group is working on the development of a typology for categorizing different types of CAMS-type systems, and it is expected that this typology will be useful in identifying the positive and negative characteristics of any particular CAMS system, and thus compare it in a reliable manner to any other CAMS system. 1

MIKE 28-NOV-74 16:08 31406

draft description of what you and JHK did on the FORUM conf. (for a BPG newsletter release on CAMS)

(J31406) 28-NOV-74 16:08;;;; Title: Author(s): Michael T. Bedford/MIKE; Distribution: /GCE([ACTION]) ; Sub-Collections: NIC; Clerk: MIKE;

DLS 29-NOV-74 08:17 31407

Directory for HILBING

I would appreciate it if you would set up a directory for the individual below. He is a Maj. assigned as Assistant Branch chief to Loreto's branch. He has a background in computers (Dick Watson was his instructor at Stanford in '65) He is interested in networks and from his comments during a recent meeting on the Network Operating system RFP, looks like he will be a real asset to the Div. He went through the course given by Susan, and now uses Loreto's directory. 1

Directory name:	HILBING	
Ident:	FJH	
Account:	40	
Password:	FJH	
Disk pages:	300	
Allocation group:	RADC	
Default protection:	775252	
Person's name:	Francis J Hilbing	
----------		1a

Ident Info: 1b

Address: 1b1

Computer Technology Branch (ISC)
Rome Air Development Center
Griffiss AFB NY 13441 1b1a

Phone: 1b2

315-330-2041 1b2a

DLS 29-NOV-74 08:17 31407

Directory for HILBING

(J31407) 29-NOV-74 08:17;;;; Title: Author(s): Duane L. Stone/DLS; Distribution: /FEED([ACTION]) RWW([INFO-ONLY]) JCN([INFO-ONLY]) DRL2([INFO-ONLY]) ; Sub-Collections: RADC; Clerk: DLS;

DLS 29-NOV-74 09:21 31408

Distribution of NSW Documentation

Just wanted to say thanks for including Mike and I on the distribution list for NSW design documents. It helps us explain what's going on, fight internal battles, get funds for next year, etc. There are two other people at RADC who should be on the distribution list for technical documents...Tom Lawrence and Francis Hilbing (idents= TFL & FJH). They work in a sister branch (ISC) here at RADC, and have planning, technical support and procurement spec responsibility for the AFSC Network, WWMCCS Network, and an upcoming Defense Mapping Agency (DMA) Network. All use or are modeled after the ARPANET. Tom in particular is in charge of the AFSC technical committee and has to develop specs for procurement of interfaces for CDC-6000 machines, protocols, etc. 1

Part of the recent problem with the parallel Network Operating System study RFP that came out of RADC, was due to the lack of knowledge on the part of the ISC branch as to what was being accomplished under the NSW project. We (Tom, Mike and I) exchange notes often, but it would be much better if Tom got things directly. Thanks for your help.

Regards,

Stoney 2

Distribution of NSW Documentation

(J31408) 29-NOV-74 09:21;;;; Title: Author(s): Duane L. Stone/DLS; Distribution: /RWW([ACTION]) TFL([INFO-ONLY]) DRL2([INFO-ONLY]) MAW([INFO-ONLY]) CHI([INFO-ONLY]) EKM([INFO-ONLY]) JEW([INFO-ONLY]) JBP([INFO-ONLY]) ; Sub-Collections: RADC; Clerk: DLS;

Programming Support Libaries and NLS

Dick, 1

Just to let you know some of the developments here at RADC, and to ask your help, guidance etc. 1a

If you remember, last Spring on one of my first visits to find out about the NSW, I showed you a couple of documents which were the initial output of a contract with IBM. The intent of that effort was to get a "core dump" from IBM on their use of "Structured Programming" practices, and to use this as a base line for implementing within the AF. More of that series of documents is now coming out, and RADC is starting to push implementation of some of the practices and procedures at various AF organizations. 1b

One of the directions this push is taking is towards gathering data on the effects of introducing SP practices into organizations which are now using software development practices from the "dark ages". This direction is a result of our own convictions and of guidance from highter level DOD R&D types, who need something other than IBM's say-so to start forcing people to using SP techniques. 1b1

Before one can think of conducting an experiment, the programmers and their management must be indoctrinated in the SP philosophy and techniques and they must be given tools to support these procedures. This is where I start to have problems with internal management. They tend to think that the tools should be implemented on the machine for which the software is being developed, and in the cases where security is a big thing, this is probably true. 1c

However, some preliminary estimates indicate that it would cost $350K to get a Programming Support Libary (PSL), as defined by IBM, up and running on a 360-65, for example. Because of the cost, the inconsistencies with the NSW approach and the inferiority of the PSL to NSW tools, I have been trying to push people toward the NSW, with little success so far. 1d

The PSL supports the input, editing and control of source code, but does not address the more difficult problem of document production and control problem. One of the PSL modules also collects management data (which we would also like to have in any experimental setting). Many of the data elements collected are now available in various places in NLS and I have the feeling that a management data collection system could be built fairly easily under NLS. If this is the case, then it would perform all the functions of the PSL as defined by IBM, plus attack the document production and control problem, which IBM does not even address. 1e

I'd like to discuss some of these questions with you, and maybe even get some preliminary estimates from you...presuming that you would like to tackle some of these problems in the future. I will be on the West Coast the week of the 9th at Vandenburg AFB (when you are in Boston). I am free Friday of that week and could stay over if you were coming back. I will bring copies of the latest documentation with me in any event. 1ei

Programming Support Libaries and NLS

(J31409) 29-NOV-74 11:18;;;; Title: Author(s): Duane L. Stone/DLS;
Distribution: /RWW([ACTION]) JLM([INFO-ONLY]) ; Sub-Collections:
RADC; Clerk: DLS;

SMT 29-NOV-74 13:16 31410

BRL MESSAGE.TXT--UHLIG & GILBERT

RON AND JOHN
THE "ND WEEK --opps, starting from go again, The 2nd week BRL, Messages.txt has been copied into an 'nls' file titled: wk-#2/msg-file, You can try your hand at the delete file operation, then you can do as you please with the componenets of the message text, Let me know how this operation goes "-- will you? I will get ot the directories thing this week-end ..... spent Wednesday at CSSEA, working on our new system procurement specs, What can you tell me about the budgetplans for the purhcse of some major portion of the new BRL system, considering the current "re-labeling" operation that is going on with PEMA funds, ????? Dr, Odell will likely phone you about proper strategies, etc., to make sure that all the previous lines have remained connected, i.e., previous committments will be honored, Any comments I can pass along about the 'nls Primer' course, I am told by tthS,R,I, man that he had not planto be given without personalface-to-personal fact-to-face instruction! Hope you had a HAPPY HOLIDAY! "-- STAN...

1

SMT 29-NOV-74 13:16 31410

BRL MESSAGE.TXT--UHLIG & GILBERT

(J31410) 29-NOV-74 13:16;;;; Title: Author(s): Stan M. Taylor/SMT;
Distribution: /BRL([ACTION]) SMT([ACTION]) SMT([INFO-ONLY])
BRL([INFO-ONLY]) ; Sub-Collections: NIC BRL; Clerk: SMT;

EJK 29-NOV-74 14:56 31411

Just a test and a query

Please let me know if you get this OK.

EJK 29-NOV-74 14:56 31411

Just a test and a query

Just want to check to see if your directory is working OK. There was a one-day problem a couple of weeks ago which may have lost some of the info in your file and may have caused a glitch in yur mail handling. 1

EJK 29-NOV-74 14:56 31411

Just a test and a query

(J31411) 29-NOV-74 14:56;;;; Title: Author(s): Edmund J. Kennedy/EJK; Distribution: /RDK([ACTION]) ARB([INFO-ONLY]) ; Sub-Collections: RADC; Clerk: EJK;

MIKE 1-DEC-74 09:52 31412

description of STORET by MIKE

this will go into the next Business Plannng Group newsletter for the v.p.'s. It looks okay ?

MIKE 1-DEC-74 09:52 31412

description of STORET by MIKE

In response to a need for accurate and timely distribution of SERTI committee working papers (agendas, minutes of meetings, up-to-date status of Bell-funded BR research program proposals, memos from H.Q. Planning, etc.), H.Q. Planning developed a computer-based information storage and retreival package known as STORET. With the aid of STORET, members of the SERTT working committee are provided with timely information regarding their upcoming meetings. The STORET program was developed in H.Q. Systems Planning, with the encouragement of the Business Planning Group. As users of STORET become more familiar with the utility it provides them, its capabilities will be increased to permit them to input messages directly into the system, and to permit much of the administrative functions of the face-to-face meetings to be replaced by more efficient, asynchronous communications. 1

description of STORET by MIKE

(J31412) 1-DEC-74 09:52;;;; Title: Author(s): Michael T. Bedford/MIKE; Distribution: /PAN([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: MIKE;

EJA2 2-DEC-74 05:48 31413

Directory for Potter

Jim, this is Dave Potter again. As you may have guessed from my continued use of Ernie's directory, I still don't have one. My ident is on file (without a hardcopy address), but no directory. Help??? 1

EJA2 2-DEC-74 05:48 31413

Directory for Potter

(J31413) 2-DEC-74 05:48;;;; Title: Author(s): Ernest J. Anastasio/EJA2; Distribution: /JHB([ACTION]) EJA2([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: EJA2;

TEH 2-DEC-74 08:32 31414

Test Message

This is a test message for you to read sent whilst on the course. 1

TEH 2-DEC-74 08:32 31414

Test Message

(J31414) 2-DEC-74 08:32;;;; Title: Author(s): Tom E. Hassing/TEH;
Distribution: /JNH([ACTION]) TEH([INFO-ONLY]) ; Sub-Collections:
NIC; Clerk: TEH;

JNH 2-DEC-74 08:43 31415

fun & games

Sam had aa little lamb iest 1 1

test 2 2

subtest 2 2a

fun & games

(J31415) 2-DEC-74 08:43;;;; Title: Author(s): Jesse N. Hill/JNH;
Distribution: /SRL([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: JNH;
Origin: < HILL, TEST,NLS;1, >, 2-DEC-74 07:54 JNH ;;;;####;

IMM 2-DEC-74 09:41 31416

test re fdbK report

test 1

IMM 2-DEC-74 09:41 31416

test re fdbk report

(J31416) 2-DEC-74 09:41;;;; Title: (Unrecorded) Title: Author(s): Inez M. Mattiuz/IMM; Distribution: /FEED([ACTION]) DSM([INFO-ONLY]) ; Sub-Collections: BELL-CANADA; Clerk: IMM;

DLS 2-DEC-74 13:16 31417

Decision on SAMSO Plan

Why am I going on the trip?

Decision on SAMSO Plan

Col Krutz, Barnum, Tomaini, Nelson and McNamara met to discuss the briefing and plan to be presented to Col Thayer on the 9th-11th of Dec. I was not present at the meeting, but am documenting one of the decisions reached, as I understand it from Mac, for the record and to clarify my own thinking. 1

A decision was reached to present only a plan to implement a PSL on their 360-65 and to exclude the ARPANET or NSW from the plan and briefing. Mac indicated that we were "not to even mention the words". His attempts to get higher management to at least consider these alternatives were unsucessful. 2

This decision was apparently based on political criteria. Apparently Col Thayer has been "accused" in the past of leaning too much toward "researchy" projects. Apparently, since the ARPANET and NSW are research projects, they were judged too risky for an operational organization. Therefore, it would be unwise for us to present these to Col Thayer as viable alternatives for obtaining the necessary tools to support a SP experiment. 3

Needless to say, this decision and the basis on which it was apparently made, are not appealing to me. I would have hoped that management would have at least considered the alternatives, before ruling out two of them. I would think that SAMSO might want to consider all options available to them, since they will be investing as much money and more time in this venture than we will. Let me try to address a few of the issues. 4

RISK 4a

Risk has to be a subjective judgement in this case...more of a confidence factor, since we do not have a large number of trials in implementing such a project, and cannot therefore assign probabilities based on frequency statistics. 4a1

Some of the factors involved in making a judgement like this are: 4a2

EXPERIENCE WITH THE TECHNOLOGY...Few people can argue any longer that computer networking is experimental, in the sence that it could fail as easily as it could succeed. There are a number of large nationwide and international networks that are in operational use every day. Companies depend on them and make money on them. In my opinion, the ARPANET has passed the "critical mass" stage, where sufficient dollars and manpower have been invested to assure its success. Gen. Robbins apparently thinks so. He has committed his operational organizations to not only the ARPANET, but the as yet unproven NSW. 4a2a

SYSTEM AVAILABLILITY...There is a general feeling that a local system can be made to stay up a greater % of the time than a remote facility, particularily one on a network like The ARPANET, where there are a multitude of minicomputers and communication lines between one's terminal and the host machine. The ARPANET was specifically designed to provide for reliability. There are at least 2 50KB lines running out from each site. There have been instances where the network had trouble, but these are infrequent and generally cleared up in a few minutes. The host machine, a PDP-10X running NLS, has been exceptionally reliable, with a record of 98+% up time during the first 9 months of operation. The second machine will be installed in Jan '75, the third in Jul and the 4th next Jan; so there should be plenty of redundancy in NLS support. 4a2b

APPLICATION PROGRAM PERFORMANCE...Will the application program perform as advertized, can it be easily modified to meet changing customer needs, is it supported by a broad base of users, etc. NLS has at least 15 organizations who are now using it. The NSW community of users has just begun. Based on solid interest, Office 3 & 4 are being ordered. Its a growing thing, not just a toy for a few "nuts". Since a PSL, as defined by IBM has never been built, it is difficult to say whether it will attract a similar group of users. So far, IBM has been unsuccessful in getting their commercial marketing division to offer it as a standard product. It helps only in the production and management of source code and could not be modified to fill the more general document production and control problem. 4a2c

COST 4b

Initial estimates indicate that it would cost less to connect to the ARPANET than it would to develop a PSL specifically for the 360-65. There is an yearly communications charge associated with the ARPANET that would not be incured with the local PSL. However, there are a host of software production tools available on the ARPANET, which are not included in a PSL, and would have to be developed eventually for the 360-65. 4b1

DELIVERY SCHEDULE 4c

IBM indicates that it would take 9 months for a basic PSL to be developed and another 6 months to develop the management data collection module. They can start in March '75. This means that we cannot start collecting data on the effects of SP practices until Jun of '76. There is no reason to expect another contractor could implement a PSL sooner or for less

money, since IBM has completed some of the work under a previous effort. 4c1

All the basic functional requirements of a PSL are now met by NLS. However, the management data is generated several places in NLS and TENEX. A subsystem should be built for systematically collecting, organizing, retrieving, reporting and plotting management data. Initial estimates indicate this would take 6 months. It could also take this long to get the 360-65 connected to the ARPANET, depending on the schedule for IMP and long distance line installation. 4c2

In addition to the above, there is always the long range question of where to place our limited development resources so they will do the AF the most good. What happens when the AFDSDC needs a PSL? Do we develop one for the B-4700? Or another for the CDC-6600 when AFSC needs one? Or another for AFDSC under Multics? In classified environments like WWMCCS we have no other choice, but to do this in all instances goes contrary to our reasons for involvement in the NSW project and common sence. 5

DLS 2-DEC-74 13:16 31417

Decision on SAMSO Plan

(J31417) 2-DEC-74 13:16;;;; Title: Author(s): Duane L. Stone/DLS; Distribution: /RDK([ACTION]) ARB([ACTION]) FJT([ACTION]) JLM([INFO-ONLY]) RN2([INFO-ONLY]) JPC([INFO-ONLY]) MAW([INFO-ONLY]) ; Sub-Collections: RADC; Clerk: DLS;

NDM 2-DEC-74 14:28 31418

From IMM: SND MESS IN NLS8

SNDMSG from Inez Mattiuz,

NDM 2-DEC-74 14:28 31418

From IMM: SND MESS IN NLS8

28-NOV-74 0631-PDT MATTIUZ: SND MESS IN NLS8
Distribution: MEYER, mattiuz
Received at: 28-NOV-74 06:31:27 1

REMEMBER THAT VERSION YOU WROTE AND WE USED A COUPLE OF TIMES? IS IT AVAILABLE IN THE NEW VERSION? IF SO COULD YOU JUST JOT DOWN THE COMMANDS FOR ME SO I CAN USE IT AGAIN.. 1a

NDM 2-DEC-74 14:28 31418

From IMM: SND MESS IN NLS8

(J31418) 2-DEC-74 14:28;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /FDBK([ACTION]) ; Sub-Collections: SRI-ARC FDBK;
Clerk: NDM;

Addendum to (31390,)

is a valid directive,

The Post directive may be used to start printing in the middle of a document. Of course the Output Processor has to process the whole file whether or not it is printed to know the exact state of the directives at the starting point. The printing time will be shortened, though. 1

Addendum to (31390,)

(J31419) 2-DEC-74 14:44;;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /SRL([INFO-ONLY]) FDBK([INFO-ONLY]) ;
Sub-Collections: SRI-ARC FDBK; Clerk: NDM;

RJM2 2-DEC-74 18:46 31420

ANOTHER DUMB TEST MESSAGE

Hi Chuck, isn't it great to recieve mail. Too bad you never read it. 1

RJM2 2-DEC-74 18:46 31420

ANOTHER DUMB TEST MESSAGE

(J31420) 2-DEC-74 18:46;;;; Title: Author(s): Roger J. Martin/RJM2;
Distribution: /CMC([ACTION]) ; Sub-Collections: NIC; Clerk: RJM2;