Revised Revised JUN 24 - 30: A WEEK IN REVIEW

WEEKLY ANALYSIS REPORT:

WEEK: JUN 24 - 30, 1973 (24 HOURS/DAY)

TOTAL SYSTEM CPU: 49.430

(ARC)

IDENT	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1
(STAFF)					
(DCE)	.147	12.270	.012	.297	83.469
(SRL)	.211	18.036	.012	.427	85.479
(NDM)	1.206	51.459	.023	2.440	42.669
(JCN)	.858	16.685	.051	1.736	19.446
(DVN)	.806	16.249	.050	1.631	20.160
(PR)	.466	18.761	.025	.943	40.260
(RWW)	.019	.773	.025	.038	40.684
(TOTAL)	3.713	134.233		7.512	
(PSO)					
(KFB)	.072	7.882	.009	.146	109.472
(BAH)	.942	25.026	.038	1.906	26.567
(MEJ)	.482	37.321	.013	.975	77.429
(KIRK)	1.708	45.527	.038	3.455	26.655

	-----	-----		-----		6a4e
(TOTAL)	3.204	115.756		6.482		6a4f
						6a4g
(NIC)						6a5
(JDC)	.004	.064	.062	.008	16.000	6a5a
(EJF)	.325	10.606	.031	.657	32.634	6a5b
(CBG)	.011	1.158	.009	.022	105.273	6a5c
(MDK)	.330	8.747	.038	.668	26.506	6a5d
(MLK)	.247	15.244	.016	.500	61.717	6a5e
(JBN)	.274	16.072	.017	.554	58.657	6a5f
	-----	-----		-----		6a5g
(TOTAL)	1.191	51.891		2.409		6a5h
						6a5i
(HARDWARE)						6a6
(MEH)	.109	17.176	.006	.221	157.578	6a6a
(JR)	.003	.506	.006	.006	168.667	6a6b
	-----	-----		-----		6a6c
(TOTAL)	.112	17.682		.227		6a6d
						6a6e
(TENEX)						6a7
(DIA)	.431	15.057	.029	.872	34.935	6a7a
(KEV)	.841	17.543	.048	1.701	20.860	6a7b
(DCW)	.017	1.059	.016	.034	62.294	6a7c
	-----	-----		-----		6a7d
(TOTAL)	1.289	33.659		2.607		6a7e

6a7f

(NLS) 6a8

(CFD)	-	-	-	-	-	6a8a
(JDH)	.406	15.782	.026	.821	38.872	6a8b
(CHI)	2.929	25.826	.113	5.926	8.817	6a8c
(DSK)	1.176	27.804	.042	2.379	23.643	6a8d
(HGL)	1.213	30.874	.039	2.454	25.453	6a8e
(EKM)	.454	15.500	.029	.918	34.141	6a8f
(JEW)	.563	63.961	.009	1.139	113.607	6a8g
	-----	-----		-----		6a8h
(TOTAL)	6.741	179.747		13.637		6a8i

6a8j

(GROUP) TOTALS 6b

GROUP	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU	
						6b1
						6b2
(STAFF)	3.713	134.233	.028	7.512	36.152	6b3
(PSO)	3.204	115.756	.028	6.482	36.129	6b4
(NIC)	1.191	51.891	.023	2.409	43.569	6b5
(HARDWARE)	.112	17.682	.006	.227	157.875	6b6
(TENEX)	1.289	33.659	.038	2.608	26.112	6b7
(NLS)	6.741	179.747	.038	13.637	26.665	6b8
	-----	------		-----		6b9
(TOT)	16.250	582.399		32.875		6b10

6b11

(STATS) 6c

Revised Revised JUN 24 - 30: A WEEK IN REVIEW

HIGHEST CPU: CHI 2.929 hrs LOWEST CPU: JR .003 hrs 6c1

HIGHEST CON: JEW 63.961 hrs LOWEST CON: JDC .064 hrs 6c2

HIGHEST CPU/CON: JDC .062 HIGHEST CON/CPU:1: JR 168.667 6c3

6c4

(OVERHEAD) 6d

(JCP)	1.613	39.238	.041	3.263	24.326	6d1
BACKGROUND	2.982	133.145	.022	6.033	44.650	6d2
CAT	9.116	17.123	.532	18.442	1.878	6d3
DOCUMENTATION	.006	.072	.083	.012	12.000	6d4
NETINFO	.271	8.888	.030	.548	32.797	6d5
OPERATOR	.658	20.241	.033	1.331	30.761	6d6
PRINTER	5.565	107.606	.052	11.258	19.336	6d7
SYSTEM	7.301	215.264	.034	14.770	29.484	6d8
	-----	-----		-----		6d9
(TOTAL)	27.512	541.577		55.657		6d10

6d11

(XEROX) 6e

6e1

NAME	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	
						6e2
						6e3
(DDC)COWAN	.020	.551	.036	.040	27.550	6e4
(LPD)DEUTSCH	.073	1.243	.059	.148	17.027	6e5
(CMG)GESCHKE	.020	.744	.027	.040	37.200	6e6
(JGM)MITCHELL	.111	11.826	.009	.225	106.541	6e7
(EHS)SAT-WTE	.466	13.440	.035	.943	28.841	6e8

(RES)SWEET	.106	3.646	.029	.214	34.396	-
(TOTAL)	.796	31.450		1.610		

(RADC)

NAME	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	DIR
BAIR	.266	12.979	.020	.538	48.793	223
BERGSTRM	-	-	-	-	-	16
BETHKE	.043	3.279	.013	.087	76.256	54
CAVANO	.137	8.000	.017	.277	58.394	109
IUORNO	.017	1.618	.011	.034	95.176	34
KENNEDY	.212	13.178	.016	.429	62.160	36
LAMONICA	.242	12.013	.020	.490	49.640	86
LAWRENCE	-	-	-	-	-	44
MCNAMARA	-	-	-	-	-	121
PANARA	.125	7.068	.018	.253	56.544	112
RADC	.074	5.901	.013	.150	79.743	90
RZEPKA	-	-	-	-	-	39
SLIWA	.015	1.103	.014	.030	73.533	19
STONE	.239	12.931	.018	.484	54.105	300
THAYER	.001	.012	.083	.002	12.000	4
TOMAINI	.270	15.215	.018	.546	56.352	31

(TOTAL)	1.641	93.297		3.320	1318.000	6f21
(PER CENT TOTAL DISK CAPACITY)					2.706%	6f22
						6f23

(NETUSERS) TOP FIVE 6g

6g1

NAME	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	
						6g2
						6g3
ILLINOIS	.573	52.923	.011	1.159	92.361	6g4
UCLA-NMC	.392	18.408	.021	.793	46.959	6g5
MITRE-TIP	.378	21.641	.017	.765	57.251	6g6
NBS-TIP	.266	12.862	.021	.538	48.353	6g7
UCSB	.256	11.946	.021	.518	46.664	6g8
	-----	-----		-----		6g9
(TOTAL)	1.865	117.780		3.773		6g10
						6g11

(NET) TOTAL 6h

6h1

NET	3.232	207.543	.016	6.539	64.215	6h2
						6h3

7

Revised Revised JUN 24 - 30: A WEEK IN REVIEW

(J17754) 11-JUL-73 21:59; Title: Author(s): Beauregard A. Hardeman/BAH; Distribution: /WAR; Sub-Collections: SRI-ARC WAR; Clerk: BAH;

More data on the ' searching error

I did Replace Character '; , and replaced the first character in my file (the "<" of <Ucla-NMC> in the source statement) rather than the character far into the file, that it should have been 1

17755 Distribution
Diane S. Kaye, Harvey G. Lehtman, Charles H. Irby,

More data on the ' searching error

(J17755) 9-JUL-73 17:45; Title: Author(s): David H. Crocker/DHC;
Distribution: /BUGS; Sub-Collections: NIC BUGS; Clerk: DHC;

Retaining punctation after deletions

I seem to recall that a delete word would retain punctuation. That is, if I deleted word [ord] from "This is a deleted word." It would then read "This is a deleted."

This is not happening now.

1

17756 Distribution
Diane S. Kaye, Harvey G. Lehtman, Charles H. Irby,

Retaining punctation after deletions

(J17756) 9-JUL-73 17:57; Title: Author(s): David H. Crocker/DHC;
Distribution: /BUGS; Sub-Collections: NIC BUGS; Clerk: DHC;

JBN 9-JUL-73 21:31 17758

Thanks for Content Analyzer Primer and Request for Scenario as Appendix

The Content Analyzer Primer is a fine thing. I haven't tried any but the simplest operations, but the directions are clear and they work as advertised. 1

There is still a basic need for assistance to our distant friends. 2

Now the need is for a scenario to show clearly how a file may be created in TNLS by use of Execute Assimilate, so that the results of the Analyzer can be saved, and printed out as a small bibliography. 3

The use to which the Content Analyzer is to be put is to work on lists of citations in somewhat free format. Then a keyword search, or author search, or search for organization name, can be made by typing in the wanted string (3a2). The usefulness of this is limited unless the searcher can transfer the items found into a new file. The facility is there, but the primer is too vague regarding Execute Assimilate to lead the searcher through the steps. 4

So I urge you to add an Appendix to the primer in the form of a TNLS scenario of the steps necessary to do a content search and make the results into a file. This file could have a dummy heading with directives and directions for a title, IRest =3, and LBS=1. Then the command ODT would give them a bibliography master. 5

17758 Distribution

N. Dean Meyer, Michael D. Kudlick, Richard W. Watson,

JBN 9-JUL-73 21:31 17758

Thanks for Content Analyzer Primer and Request for Scenario as Appendix

(J17758) 9-JUL-73 21:31; Title: Author(s): Jeanne B. North/JBN;
Distribution: /NDM MDK RWW; Sub-Collections: SRIARC NIC ; Clerk: JBN;
Origin: <NORTH>NDMJLMEMO.NLS;1, 9-JUL-73 20:52 JBN ;

Journal Delivery -- Options and Combinations of Options Assigned to Individuals

Journal Delivery -- Options and Combinations of Options Assigned to Individuals 1

Dean Myer wrote and executed a User program, journalized as (17746,), which gave us the following information on the Journal options presently attached to individuals in the Ident file.

2

Numbers of Individuals With Options and Combinations of Options

3

	online	hardcopy	network	all
online	137	104	12	
hardcopy	104	593	6	
network	12	6	0	
all	14	14	14	14
	267	717	32	14

4

The table shows the numbers of individuals receiving Journal delivery by: 5

Online only: 137
Hardcopy only: 593
Network only: 0

5a

Online and Hardcopy: 104
Online and Network: 12
Hardcopy and Network: 6
Online, Hardcopy and Network: 14

5b

The table totals show: 6

Total individuals receiving Online delivery: 267
Total individuals receiving Hardcopy delivery: 717
Total individuals receiving Network delivery: 32 7

JBN 12-JUL-73 07:47 17761

Journal Delivery -- Options and Combinations of Options Assigned to Individuals

(J17761) 12-JUL-73 07:47; Title: Author(s): Jeanne B. North/JBN;
Distribution: /NDM MDK RWW SRL PR; Sub-Collections: SRIARC NIC ; Clerk: JBN;
Origin: <NORTH>JLMEMOJL.NLS;2, 11-JUL-73 18:06 JBN ;

Response to DHC (17756,) and (17755,)

Re: (17756,) Retaining punctuation after deletions. Ijust tried the test you suggested and find that everything is fine-- punctuation is retained as advertised. Did you do something else which would cause the error? 1

Re: (17755,) Searching error. Yes, this is a known bug which (for other reasons) cannot immediately be fixed. It is being worked on, however. You may be interested to knoe that a simialr problem occurs if the character searched for is '[, '(, or '< as well as with ';. Could you try to get around the problem for a while by doing [;] or something similar? Sorry. 2

Response to DHC (17756,) and (17755,)

(J17762) 12-JUL-73 08:53; Title: Author(s): Harvey G. Lehtman/HGL;
Distribution: /DHC BUGS; Sub-Collections: SRI-ARC BUGS; Clerk: HGL;

Notes from Display Meeting

Notes from Meeting on New Displays 1

Attending were chi, kev, dia,wrf, dcw, meh, rww. 1a

The motivations for new displays were discussed. 1b

1) At some time in the future, say next 12-30 months, we will probably use computing power supplied by a Utility over the ARPANET for development and ARC operations as well as for application users. This will require a local configuration to support terminals, and devices like line printers. The TASKERS are intimately connected to the PDP 10 at present and while they could be interfaced to some other local computer, the cost and effort hardly seems worth it. 1b1

2) The TASKERS are expensive to maintain, costing several thousand per month with associated hardware. 1b2

3) As part of our plans to offer DNLS to application clients it is important that we be able to show them running displays commercially available which we think highly enough of to use ourselves and they could order and install themselves. 1b3

4) We need to move toward a system organization which can support a range of terminal types; inexpensive DNLS terminals (probably alpha-numeric at first) to support most of our day to day work, a few experimental or high quality terminals for graphics, special fonts for document design etc. 1b4

It was pointed out that we do not yet have explicit funds for a new display system, that funds would probably have to be found for rental within the normal operating budget rather than being able to obtain a special one shot increase in funding for a capital equipment buy. 1c

Even though the funding picture is unclear it is important to go ahead and put together a concrete proposal to meet the needs described above so that we can deal with the funding problem from real knowledge. 1d

There are two problems, one, to decide what configuration of equipment should support our network connection and interface to terminal support hardware, two, to study display systems on the market to see what should be recommended for bulk ARC usage (cost to average to range 6-10K $ per terminal). 1e

Ken and Don A. are the ones with the task area to get DNLS out to the world, but will be tied up for the next three weeks when we would like some feeling of the possibliities available for

the purposes of our proposal. Smokey is more or less free at this point so he agreed to look at the first problem and make a recommendation for network connection 1e1

He suggested four possibilities. 1e1a

Get one of the new high speed modular IMP=TIPs. 1e1a1

Use the IMP and get an ANTS. 1e1a2

Use the IMP and the BBN PDP 11 approach to terminal control being designed for TENEX. 1e1a3

Use the IMP and get some other system and modify or develop software available for it. 1e1a4

Smokey will prepare a document that details the costs hardware and development software to go each of these directions and discuss other arguments pro and con. It would be useful to have a first cut at the problem within the next three weeks for use in the proposal. 1e1b

KEV or DIA will make a suvey of the display piece as soon asp possible. Ken when he gets back from the trip east and Don when he gets the MCS 4 system overthe hump. 1e2

RWW 12-JUL-73 09:13 17763

Notes from Display Meeting

(J17763) 12-JUL-73 09:13; Title: Author(s): Richard W. Watson/RWW;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC SRI-ARC; Clerk: RWW;

VGC 12-JUL-73 10:12 17764

Host Name Format/Policy report

Jake, please list file <su-ai>hostnames to get a first draft of my report on host name issues. feel free to modify, comment, append, etc. This is just a draft. Perhaps a copy should be sent to Crocker, Schelonka, (and others?) as well as you and Mike Kudlick. After yu have had a chance to look thie thing over, call me and we will get together again for one more session. Vint 1

Host Name Format/Policy report

(J17764) 12-JUL-73 10:12; Title: Author(s): Vinton G. Cerf/VGC;
Distribution: /EPS; Sub-Collections: NIC; Clerk: VGC;

AAM 12-JUL-73 12:05 17765

Comments on Remote Controlled Transmission and Echoing

Dave and Jon,
Here are the set of comments on RCTE generated by McKenzie, Cosell, Walden, Thomas, and Burchfiel. It is alleged that Tomlinson wants to comment also, but he hasn't yet read the document. Crowther probably should have read the document, but he has been on vacation for most of the time and "catching up" during the rest of the time. 1

It seems a bit strange that "-" (minus sign) is in Group 7 with all the parens, rather than in Group 8 with the other arithmetic operators. Is there a reason for this? 1a

ESC is in Group 5, since it is a "Control Character". Perhaps this should be specifically mentioned. Incidentally, the phrase "Control Characters" probably has little meaning for non-Teletype-oriented people; perhaps the code values for each character should be listed, thus avoiding the potential questions such as "Is ESC a 'Control Character'". 1b

It should be noted that TELNET may yet specify a "right paren" for subnegotiation strings. 1c

In the absence of a "Break Class" character in the input string being supplied by the user, there is no reason why the user's computer MUST not transmit the input string to the server computer when the user's buffer gets full. Thus, in particular, your note C.4 (bottom of page 6) should probably be modified to say that the user should be "notified" that his characters are being discarded if this situation is FORCED to occur, but that the user system should get rid of use type-ahead by sending it to the server if allocation is available. 1d

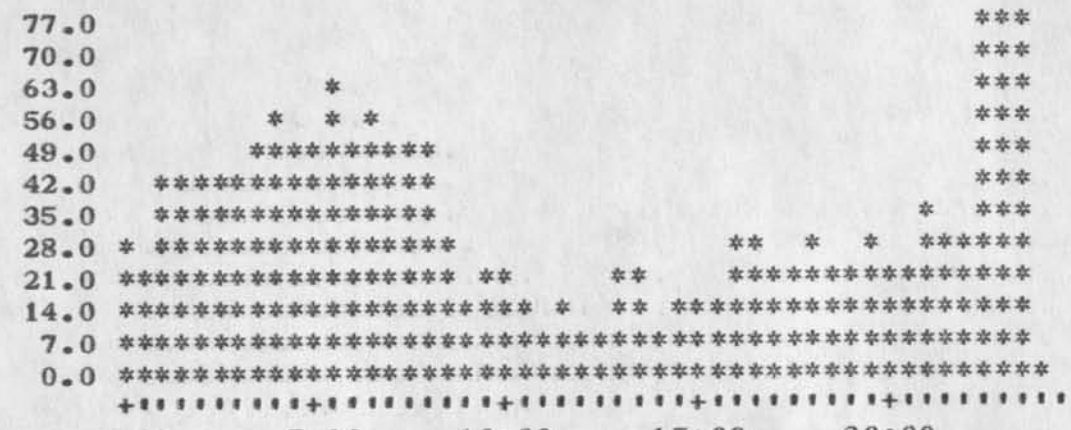
AAM 12-JUL-73 12:05 17765

Comments on Remote Controlled Transmission and Echoing

(J17765) 12-JUL-73 12:05; Title: Author(s): Alex A. McKenzie/AAM; Distribution: /DHC JBP DCW3 BPC RHT JDB; Sub-Collections: NIC; Clerk: AAM;

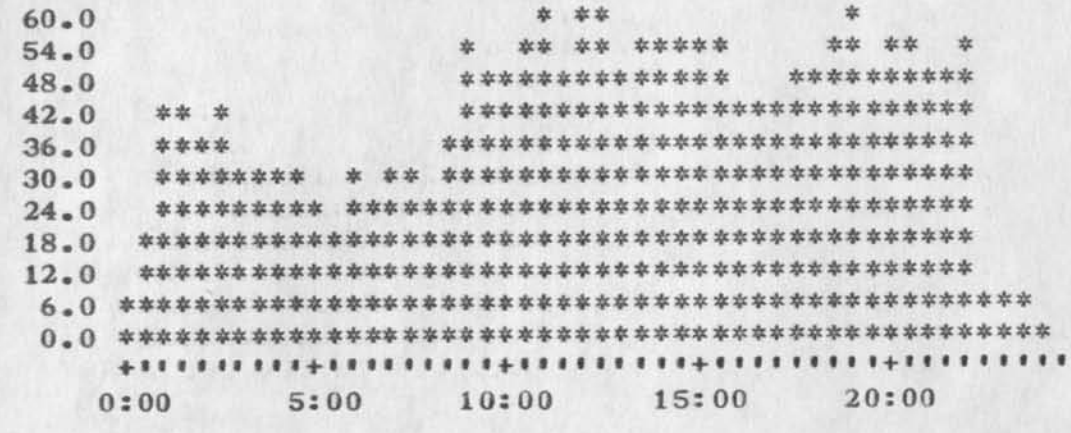
Superwatch Average Graphs for Week of 7/2/73

TIME PLOT OF AVERAGE IDLE TIME FOR WEEK OF 7/2/73
x axis labeled in units of hr:min, xunit = 30 minutes 1



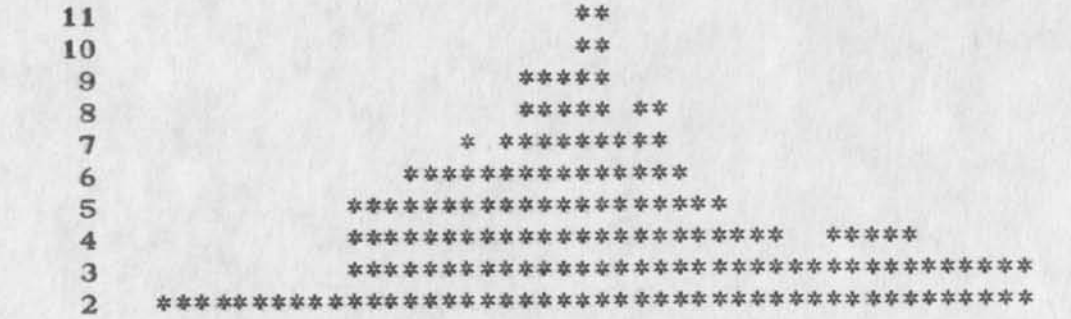
1a

TIME PLOT OF AVERAGE PER CENT OF CPU TIME CHARGED TO USER ACCOUNTS
FOR WEEK OF 7/2/73
x axis labeled in units of hr:min, xunit = 30 minutes 2

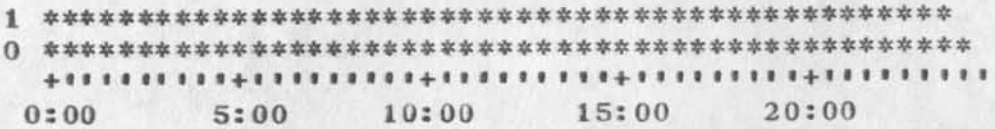


2a

TIME PLOT OF AVERAGE NUMBER OF NETWORK USERS FOR WEEK OF 7/2/73
x axis labeled in units of hr:min, xunit = 30 minutes 3



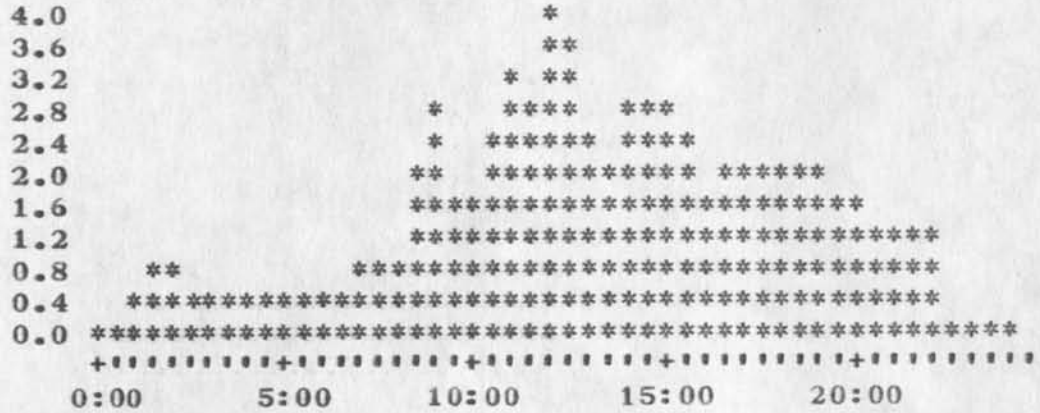
Superwatch Average Graphs for Week of 7/2/73



3a

TIME PLOT OF AVERAGE NUMBER OF GO JOBS FOR WEEK OF 7/2/73
x axis labeled in units of hr:min, xunit = 30 minutes

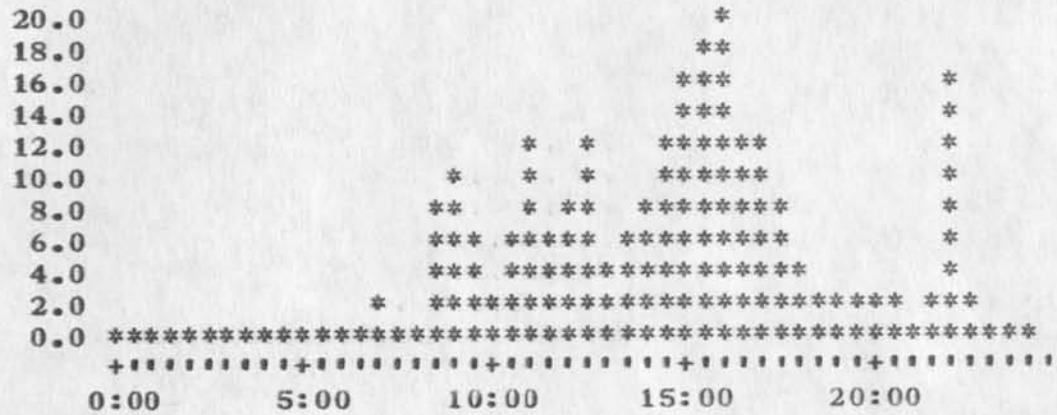
4



4a

TIME PLOT OF AVERAGE PER CENT OF SYSTEM USED IN DNLS FOR WEEK OF 7/2/73
x axis labeled in units of hr:min, xunit = 30 minutes

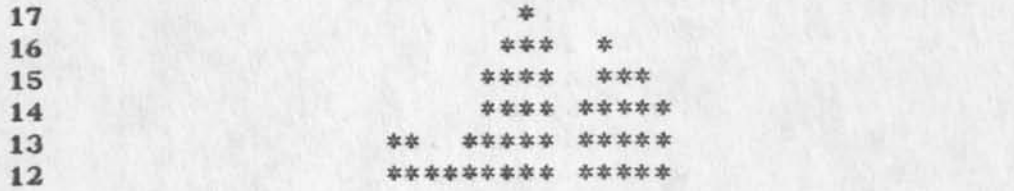
5



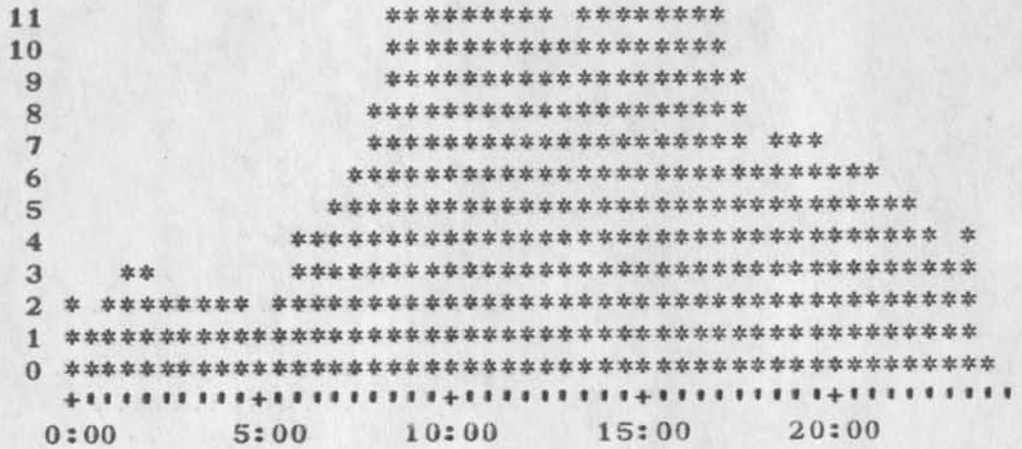
5a

TIME PLOT OF AVERAGE NUMBER OF USERS FOR WEEK OF 7/2/73
x axis labeled in units of hr:min, xunit = 30 minutes

6



Superwatch Average Graphs for Week of 7/2/73



6a

Superwatch Average Graphs for Week of 7/2/73

(J17766) 12-JUL-73 12:17; Title: Author(s): Susan R. Lee/SRL;
Distribution: /JCN RWW DCE PR DCW JCP DVN JAKE CFD KIRK DLS BAH;
Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>WEEK7/2GRAPHS.NLS;3, 12-JUL-73 12:13 SRL ;

JULY 1-7, 1973: A WEEK IN REVIEW

JULY 1-7, 1973: A WEEK IN REVIEW

WEEKLY ANALYSIS REPORT: 1

2

WEEK: JUL 1 - 7, 1973 (24 HOURS/DAY) 3

4

TOTAL SYSTEM CPU: 49.555 5

6

(ARC) 6a

IDENT	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	
						6a1
						6a2
(STAFF)						6a3
(MFA)	.002	.220	.009	.004	110.000	6a3a
(JMB)	.092	5.604	.016	.186	60.913	6a3b
(DCE)	.645	23.013	.028	1.305	35.679	6a3c
(SRL)	.333	6.949	.048	.674	20.868	6a3d
(NDM)	.816	84.692	.010	1.651	103.789	6a3e
(JCN)	.561	15.414	.036	1.135	27.476	6a3f
(DVN)	.428	9.886	.043	.866	23.098	6a3g
(PR)	.364	18.905	.019	.736	51.937	6a3h
(RWW)	.306	13.813	.022	.619	45.141	6a3i
	-----	-----		-----		6a3j
(TOTAL)	3.547	178.496		7.176		6a3k
						6a3l
(PSO)						6a4
(KFB)	.042	6.011	.007	.085	143.119	6a4a
(BAH)	1.206	52.598	.023	2.440	43.614	6a4b

(MEJ)	1.261	76.723	.016	2.551	60.843	6a4c
(KIRK)	1.726	47.555	.036	3.492	27.552	6a4d
	-----	-----		-----		6a4e
(TOTAL)	4.235	182.887		8.568		6a4f
						6a4g
(NIC)						6a5
(JDC)	.003	.065	.046	.006	21.667	6a5a
(EJF)	.045	1.494	.030	.091	33.200	6a5b
(CBG)	.004	.485	.008	.008	121.250	6a5c
(MDK)	.832	19.272	.043	1.683	23.163	6a5d
(MLK)	.207	18.548	.011	.419	89.604	6a5e
(JBN)	.234	13.371	.018	.473	57.141	6a5f
	-----	-----		-----		6a5g
(TOTAL)	1.325	53.235		2.680		6a5h
						6a5i
(HARDWARE)						6a6
(MEH)	.040	31.858	.001	.081	796.450	6a6a
(JR)	.004	.142	.028	.008	35.500	6a6b
(EKV)	-	-	-	-	-	6a6c
	-----	-----		-----		6a6d
(TOTAL)	.044	32.000		.089		6a6e
						6a6f
(TENEX)						6a7
(DIA)	1.000	17.187	.058	2.023	17.187	6a7a
(KEV)	.727	11.200	.065	1.471	15.406	6a7b

JULY 1-7, 1973: A WEEK IN REVIEW

(DCW)	.091	1.942	.047	.184	21.341	6a7c
	-----	-----		-----		6a7d
(TOTAL)	1.818	30.329		3.678		6a7e
						6a7f
(NLS)						6a8
(CFD)	-	-	-	-	-	6a8a
(JDH)	.689	36.608	.019	1.394	53.132	6a8b
(CHI)	.156	30.643	.005	.316	196.429	6a8c
(DSK)	.136	4.365	.031	.275	32.096	6a8d
(HGL)	.486	13.699	.035	.983	28.187	6a8e
(EKM)	.418	12.455	.034	.846	29.797	6a8f
(JEW)	.623	117.082	.005	1.260	187.933	6a8g
	-----	-----		-----		6a8h
(TOTAL)	2.508	214.852		5.074		6a8i
						6a8j

(GROUP) TOTALS 6b

GROUP	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU	
						6b2
(STAFF)	3.547	178.496	.020	7.176	50.323	6b3
(PSO)	4.235	182.887	.023	8.568	43.185	6b4
(NIC)	1.325	53.235	.025	2.681	40.177	6b5
(HARDWARE)	.044	32.000	.001	.089	727.273	6b6
(TENEX)	1.818	30.329	.060	3.678	16.683	6b7
(NLS)	2.508	214.852	.012	5.074	85.667	6b8
	-----	------		-----		6b9

(TOT)	13.477	691.799		27.266		6b10
						6b11
(STATS)						6c
HIGHEST CPU: KIRK 1.726 hrs			LOWEST CPU: MFA .002 hrs			6c1
HIGHEST CON: JEW 117.082 hrs			LOWEST CON: JDC .065 hrs			6c2
HIGHEST CPU/CON: KEV .065			HIGHEST CON/CPU:1: MEH 796.450			6c3
						6c4
(OVERHEAD)						6d
(JCP)	1.932	51.382	.038	3.909	26.595	6d1
BACKGROUND	1.764	204.111	.009	3.569	115.709	6d2
CAT	10.293	58.725	.175	20.823	5.705	6d3
DOCB	-	-	-	-	-	6d4
DOCUMENTATION	.003	.068	.044	.006	22.667	6d5
GILBERT	-	-	-	-	-	6d6
NETINFO	.422	5.582	.076	.854	13.227	6d7
NIC-WORK	-	-	-	-	-	6d8
OPERATOR	.238	6.202	.038	.481	26.059	6d9
PRINTER	4.536	119.608	.038	9.177	26.369	6d10
SYSTEM	9.968	238.771	.042	20.166	23.954	6d11
	-----	-----		-----		6d12
(TOTAL)	29.156	684.449		58.985		6d13
						6d14
(XEROX)						6e
						6e1
NAME	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	6e2

(LPD)DEUTSCH	.134	3.986	.034	.271	29.746	6e4
(CMG)GESCHKE	-	-	-	-	-	6e5
(JGM)MITCHELL	.233	68.276	.003	.471	293.030	6e6
(WHP)PAXTON	-	-	-	-	-	6e7
(EHS)SAT-WTE	.749	23.061	.032	1.515	30.789	6e8
(RES)SWEET	.069	5.920	.012	.140	85.797	6e9
	-----	-----		-----		6e10
(TOTAL)	1.185	101.243		2.397		6e11

6e3 6e12

(RADC) 6f

6f1

NAME	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	DIR	
							6f3
BAIR	.461	46.240	.010	.933	100.304	209	6f4
BERGSTRM	-	-	-	-	-	1	6f5
BETHKE	.090	6.012	.015	.182	66.800	54	6f6
CAVANO	.026	3.477	.007	.053	133.731	101	6f7
IUORNO	.004	.181	.022	.008	45.250	37	6f8
KENNEDY	.165	12.276	.013	.334	74.400	38	6f9
LAMONICA	-	-	-	-	-	86	6f10
LAWRENCE	-	-	-	-	-	59	6f11
MCNAMARA	.009	.460	.020	.018	51.111	113	6f12
PANARA	.010	.254	.039	.020	25.400	112	6f13
RADC	.009	.456	.020	.018	50.667	?	6f14

RZEPKA	.165	12.808	.013	.334	77.624	39	6f15
SLIWA	.034	3.576	.010	.069	105.176	22	6f16
STONE	-	-	-	-	-	283	6f17
THAYER	-	-	-	-	-	23	6f18
TOMAINI	.082	5.132	.016	.166	62.585	36	6f19
	-----	-----		-----		-----	6f20
(TOTAL)	1.055	90.872		2.127		1213.000	6f21
(PER CENT TOTAL DISK CAPACITY)						2.491%	6f22
							6f23

(NETUSERS) TOP FIVE 6g

6g1

NAME	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	
						6g3
UCLA-NMC	2.146	16.796	.128	4.341	7.827	6g4
MITRE-TIP	.494	27.389	.018	.999	55.443	6g5
UCSB	.435	12.039	.036	.880	27.676	6g6
HELP	.263	14.432	.018	.532	54.875	6g7
ARPA	.183	5.278	.035	.370	28.842	6g8
	-----	-----		-----		6g9
(TOTAL)	3.521	75.934		7.122		6g10
						6g11

(NET) TOTAL	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	
						6h1
NET	4.660	148.589	.031	9.427	31.886	6h2
						6h3

BAH 12-JUL-73 12:59 17767

JULY 1-7, 1973: A WEEK IN REVIEW

(J17767) 12-JUL-73 12:59; Title: Author(s): Beauregard A. Hardeman/BAH; Distribution: /WAR; Sub-Collections: SRI-ARC WAR; Clerk: BAH;

cc: NDM MDK JBN JMB DVN

Dirk -- Tutorial files (Xed,Xparcop,Xprint,andXview) are accessible from both ARC and NIC locators. They are branch 2D of the ARC locator and are accessible when someone picks userguides in the NIC Locator. However, the links point to archived journal files and the problem still remains who should be responsible for making sure the files are there, ARC or NIC? 1

This is a basic problem that needs to be resolved and is brought about by the ever growing division of ARC and NIC into two seperate groups, coupled with the decision to eliminate the NIC userguide functional document and have ARC maintain all NLS documentation. This brings several questions to my mind. 2

Is ARC and NIC documentation the same? 3

If not 3a

What is the difference and what is the overlap? 3a1

Should a clear distincton be made betweeen the two? 3a2

Should the same person(s) be responsible for both ARC and NIC documentation. 3a3

If so 3b

Will ARC documentation meet NIC needs? 3b1

Should there be special emphasis on NIC needs in the ARC documentation? 3b2

Are there answers to these questions? 4

**11 17768

(J17768) 12-JUL-73 13:11; Author(s): Kirk E. Kelley/KIRK;
Distribution: /DVN MDK JBN NDM JMB; Sub-Collections: SRI-ARC; Clerk:
KIRK;

Some Initial Comments about the NIC

The following is a list of the data I have gathered as a first attempt to review the NIC. I am working on a file which will include the information gathered with suitable explanations, but thought I would keep you informed of what was currently available. 1

Also, if you have any suggestions for further explorations in an area, or other ways to present the data feel free to let me know. 2

1) A list of the NIC output 2a

2) Comments on ways to save money on postage 2b

3) A breakdown of journal usage by site, as well as by major individuals 2c

4) The percentage of people who used the system during '71 or '72 and have never used it again. (I have considered journal usage as the sole indicator of system usage.) 2d

5) A breakdown of costs per document for the various functional documents, excluding the user guide. 2e

Immediate Suggestions 3

The following suggestions are simply ones where I could see an obvious place to save money assuming we continued to operate as we are. Some of these may very well affect our service, but I suppose the amount saved must be weighed with the degree to which our service is changed. 3a

Publishing the directory every 2 months rather than every month would appear to save $15,000 annually. 3a1

Send all overseas mail by Air Printed rather than Air Mail. Mail sent Air Printed goes by Air to the country and by First Class within the country. For a mailing such as an update to the directory, there would be a savings of $200 per mailing (about $12 less per each item). The service is said to be practically as good as Air Mail. 3a2

Mail all items sent on Thursdays or Fridays (which happen to be two big mailing days) by First Class rather than Air Mail as I am told that items to the east should arrive by either means the following Monday. 3a3

Explore an alternative means for creating a catalog. The current method of periodically sending a gigantic pile of paper, most of which is identical to what is being thrown out, seems very wasteful. Some means for updating what is there

seems very desirable and certainly not impossible. It seems that the more efficient thing to do would be to issue a monthy or bimonthly update to the catalog which would consist of only those pages on which there was a change. This mailing would replace the monthly bulletin and would eliminate printing and mailing such a bulk of material. This would necessitate at least one additional printing of the catalog in order to change page numbering and possibly do some reformatting, but certainly not continuing in the present manner. 3a4

Some Initial Comments about the NIC

(J17769) 12-JUL-73 14:08; Title: Author(s): Susan R. Lee/SRL;
Distribution: /MDK PR; Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>NIC.NLS;1, 12-JUL-73 13:00 SRL ;

DCE 12-JUL-73 15:17 17772

Helping NASA Langley look for STAR System Programmers

Explicit attention, please, from MDK and CFD; and anyone else who might have a lead on high-level, experienced, SYSTEM people

Helping NASA Langley look for STAR System Programmers

I had a phone call 11 July from Gene Gribble, of NASA's Langley Research Center (Gene was our ARPA/NASA project monitor for four years,good and is a very friend of mine -- and of ARC's). He would like some staffing leads. I promised him what help we could provide, and I really would like to follow through, so please give serious consideration to feeding me with leads. 1

They have been working with very large, complex computer systems for many years -- for instance they innovated a large, multi-machine system involving two 6600s, four 6400, interconnected for flexible and dynamic resource sharing, with real-time connection to wind tunnels, and to a very large analog system; do real-time data reduction as wind-tunnel tests are run, real-time control of very large simmulation systems -- like a moon-landing simulator that puts an astronaut trainee in a mock-up cockpit, give him realistic landing experience, complete with windshield-display of what he'd see at that altitude and attitude. They had a 7600 ordered to add to this -- I'm not sure if that ever happened. 2

In any event, they ended up with a firm plan for acquiring a CDC Star, and are going ahead with deveopment of whatever software-system development Star customers must do -- their service support is complicated enough as it is, if they also have to develop the operating system, they really are in a bind. 3

They want to take on staff that can be of significant help. Staffing has been made very complicated by a cutback procedure that simply said "No new hires until we get down to budget." They are now free of that restriction, and desperately anxious to add to their under-manned central-system staff. They would like to get people with good backgrounds in modern practices; civil service salaries have become almost more than competetive in the past few years; this is truly a challnging system, and a very unusual and interesting application environment. 4

If you know of any leads, let me know soon, please. Like, any individuals who would seem likely, or any university staff who are strongly oriented to systems and might either have good PhD's (MS??) coming out, or would possibly be able to refer Gene on to other people. 5

(Note: If you think it would be helpful to Gene to forward this request to someone else via secondary distribution, please do so -- I'll still serve as collection agent for him; "dce" is my Journal ident, "Engelbart@SRI-ARC" is my SNDMSG address.) 5a

(Second note: Just in case anybody would like to seek further information directly, Gene's phone number is (804) 827-3317.) 5b

DCE 12-JUL-73 15:17 17772

Helping NASA Langley look for STAR System Programmers

Mike: Please look over whatever stack of applications you have on file and bring any possible candidates to my attention. 6

Helping NASA Langley look for STAR System Programmers

(J17772) 12-JUL-73 15:17; Title: Author(s): Douglas C. Engelbart/DCE ; Distribution: /rww jcn mdk dia cfd jdh chi dsk hgl ekm kev dcw jew lpd jgm bwl ; Sub-Collections: SRI-ARC; Clerk: DCE ;

Reply to letter of 5-July.

Thank you for your letter of 5-JULY. I have been quite busy and unable to reply earlier.

There is a special place in Hell for students of computer science. IT consists of two rooms, separated by a wall containing a small slot. On one side of the wall are the unfortunate souls of the computer scientists. On the other are ten thousand apes, each with an IBM Selectric typewriter. Periodically, the apes' random typings are shoved through the slot to the computer scientists, who are doomed to try their hardest to decide what the letters are abbreviations for.

I unconsciously oriented my announcements of the Network Graphics Group (NGG) meeting to a group of people who were either members of the graphics group or were Network Liason Agents and hence would be expected to recognize the abbreviation (which was not a deliberate act, by the way). A friendly, helpful (?) member of the group mentioned that several of the Principal Investigators have been directing work involving non-standard character sets and pointed out the fact that the current and (proposed) future graphics protocol does not in any way address this issue. Forgetting that I had not done so with the prior announcement, I distributed the note you recieved to the Principal Investigator group. (One of the problems with network mail is the ease with which one can wantonly distribute mail.) Since the delineation of junk seems to be a subjective thing, please accept my apologies for subjecting you to my note. I agree that such announcements, particularly when semi-indiscriminately distributed, should be written in a semantically context-free subset of computer English, and should explicitly mention points like the one above. If I am ever in the position of having to arrange a meeting of this sort again, you may rest assured that you either will not hear about it or will find the announcement readable.

Sincerely,

Steve Bunch

Reply to letter of 5-July.

(J17776) 12-JUL-73 21:47; Title: Author(s): Steve R. Bunch/SRB;
Distribution: /MM3; Sub-Collections: NIC; Clerk: SRB;
Origin: <ILLINOIS>MMNOTE.NLS;2, 12-JUL-73 21:46 SRB ;

**-73 11:07 17777

Network Journal Submission and Delivery

SRI-ARC

21 JUL 73

Augmentation Research Center

STANFORD RESEARCH INSTITUTE
MENLO PARK, CALIFORNIA 94025

Network Journal Submission and Delivery

The on-line documentation will be maintained as (userguides,journal-netsub,). Hard copies are available from Marcia Keeney.

RFC # 543
NIC # 17777

Dean Meyer (NDM)
SRI-ARC
July 13, 1973

The first implementation of a Network Journal Submission and Delivery system is now experimentally up. This system allows use of the NIC's NLS Journal System without entering NLS. Network users may submit text files written on their host systems using their mail subsystems (e.g. SNDMSG, FTP, TELNET). The mail will then be converted at SRI-ARC into NLS files, journalized, and sent to the specified recipients according to their preset Journal delivery options. A newly added option permits the user to receive automatic Journal delivery (of citations to journalized documents) at his host via the Network mail protocol. 1

OVERVIEW 2

Network mail sent to SRI-ARC (NIC) will be entered into the NIC Journal system if a slash appears in the user-name. To get the mail to the NIC, you may use either the FTP, TELNET, or mail subsystem provided by your local system.
The authors' NIC Ident(s) are assumed to appear before the slash; the recipients' NIC Ident(s) after it. Idents should be separated by spaces. (see scenarios in branch 3)
(e.g. jew / mdk dhc) 2a

When this format is detected by the NIC, the Network Journal system will be invoked. At SRI-ARC the mail will be transformed into an NLS file, assigned a unique catalog number, stored permanently under that number, and a notice of it will be sent to all the listed recipients. If the slash is not found, the mail will be handled in the normal way. 2a1

Delivery of Journal citations may now be obtained via the Network (as well as to an NLS file at SRI-ARC and in hard copy). If you wish to receive your Journal mail at your host computer, contact the NIC (see RFC 510 -- 16400,). 2b

A more detailed description follows. 2c

NETWORK JOURNAL SUBMISSION 3

The remote user prepares the text of his Journal article in his host using whatever tools he has available to him. He may wish to prepare long articles beforehand using his text editor (e.g. TECO if he's a TENEX user). For short messages, he may be content with the basic editing features (such as backspace character and line delete) provided by his submission subsystem. 3a

Connecting to the NIC 3b

To get the mail to the SRI-ARC FTP server, you must either: 3b1

1) via FTP and TELNET mail subsystems, connect to SRI-ARC's FTP server process, then issue the FTP mail command, or 3b1a

2) use the mail subsystem provided by your local system. 3b1b

For TENEX SNDMSG mail: put "@nic" at the end of the "User:" field.
(e.g. jew / mdk dhc@nic)

If you wish to send the mail as a SNDMSG message to some people as well as submit it to the Journal, you may treat the Journal form as one name, follow it with a comma, and then list other names of which SNDMSG is aware, separated by commas.
(e.g. jew/mdk dhc@nic, meyer, white)

Specifying Authors and Recipients 3c

The user invokes Network Journal submission via his mail subsystem. Network Journal Submission is invoked by a user-name field of the following format: 3c1

author $(SP author) [SP] / [SP] recipient $(SP recipient) [SP] [; conversion-algorithm] 3c1a

"$(..)" means "any number of occurrences, possibly zero, of what's inside the parentheses"
"SP" means "space"
"[..]" mean "the contents of the brackets are optional"

i.e., author(s), slash, recipient(s), optional semicolon and conversion-algorithm 3c1b

e.g., jew/mdk rww or dce rww jcn / sri-arc ;h 3c1c

'Author' is the NIC Ident of (one of) the user(s) submitting the article, and 'recipient' the Ident of (one of) its intended recipient(s). An Ident, as usual, may designate either a "group" or an "individual". SRI-ARC will verify the idents. If it finds them correct, it will accept the mail. An invalid Ident will cause the mail to be rejected; the user will get an error message and have to start over. The first author Ident will be taken to be the clerk. 3c2

If the SRI-ARC mail subsystem finds the slash in the user-name field, the Network Journal Submission system will be invoked; otherwise, the mail will be treated as normal Network mail (delivered to the directory specified by the user-name). 3c3

Specifying an NLS Conversion Algorithm 3d

Optionally, the sender may specify the algorithm by which his sequential message file is to be converted to NLS format. This choice is made by inserting:

; conversion-algorithm

anywhere in the 'user-name' field (e.g. jew/mdk rww;s). (This should be before the "@nic" for SNDMSG.) Legal values for conversion-algorithm are: 3d1

s -- Insert Sequential, each line an NLS statement (default conversion-algorithm)
a -- Insert Assembler with structure
m -- Insert Assembler without structure
h -- Heuristic Insert Sequential, double <CR>s indicating end of statements, assuming no right justification in the source file
j -- Heuristic Insert Sequential, double <CR>s indicating end of statements, assuming right justification in the source file (for those who put multiple spaces between words to line up the right margin, multiple spaces will be removed) 3d1a

By "Heuristic Insert Sequential", we mean that the Insert Sequential algorithm attempts to be smarter about handling statements and levels. Statements are delimited by two successive carriage returns. Statement level will be determined by the amount the statement is indented. If it is indented more than the previous statement, it will be taken to be a substatement and put down a level; if it is the same as the previous statement, it will be on the same

level. If the statement is indented less than the previous statement, the program will look for a past statement with the same indentation and put it at that level. The indentation of a statement is taken to be that of either the first or second line of the statement, whichever is less (to ignore paragraph indentation, for example). This is good from 1 to 12 levels. Carriage returns at the end of full (within 10 characters of the right margin, i.e. 62nd column) lines are replaced by spaces.

This algorithm is an attempt to answer a very difficult need. It won't always do just the right thing, but it should often provide the intended result. The user is encouraged to experiment with it; suggestions will be welcomed.

Titling the Message 3e

Once the conversion has been performed, an optional title, signalled by the label 're:', 'title:', or 'subject:', is searched for in the first statement of the message text. (The label may either be all upper or all lower case, or the first character upper and the rest lower case.) If a label is found anywhere in the statement, the line of that statement beginning with the first non-blank character following the label and going up to the first carriage return (and line feed) or else to the end of the statement is taken as the Journal title, and the statement containing the title is deleted from the file. Any substructure will be moved up a level. 3e1

The submission is equivalent to the NLS 'Submit Message' command if the NLS file (after the title statement (if any) has been deleted) has only one statement in it besides the origin statement; in such a case, the message in its entirety will be delivered as part of the Journal citation. Otherwise the Network submission is equivalent to 'Submit File'; only a reference to the Journal document will be delivered to each of the recipients. 3f

TENEX SCENARIOS 4

If you're a TENEX user, you can do Network Journal Submission with any of the following subsystems (system responses are in square brackets): 4a

(1) SNDMSG (The header and trailer supplied by SNDMSG aren't stripped off, and one can only title the document by using the h or j conversion-algorithms and beginning the message with a carriage return (and line feed).) 4a1

```
[@] SNDMSG <CR>
[Type ? for help]
[Users:] JEW/DHC@NIC <CR>
[Subject:] Title of Message <CR>
[Message: (? for help):] Text of message ... <↑Z>
   (Note: ↑B allows the insertion of a sequential
    file at any point in the text of the message.)
[jew/dhc at NIC -- ok]
```

4a1a

(2) FTP 4a2

For short messages: 4a2a

```
[@] FTP <CR>
[HOST FTP User process x.xx.x]
[*] CONN <SP> NIC <CR>
[   Connection opened]
[   Assuming 36-bit connections.]
[*< SRI-ARC FTP Server x.xx.x - at DAY DATE TIME]
[*] QUO <ALT> MAIL JEW/MDK RWW <CR>
(pause)
[*< Type mail, ended by a line with only a "."]
[*] QUO <ALT> Re: Title of Message <CR>
[*] QUO <ALT> line one of the message <CR>
[*] QUO <ALT> line two of the message <CR>
[*] ...etc...
[*] QUO <ALT> .<CR>
(pause)
[*< Mail completed successfully]
[*] DISC <CR>
[*] QUIT <CR>
```

For longer ones: 4a2b

```
[@] FTP <CR>
[HOST FTP User process x.xx.x]
[*] CONN <SP> NIC <CR>
```

```
[   Connection opened]
[   Assuming 36-bit connections.]
[*< SRI-ARC FTP Server x.xx.x - at DAY DATE TIME]
[*] MAIL <ALT> sequentialfilename <CR> [Confirm] <CR>
[   to remote-user] JEW/MDK RWW <CR>
(pause)
[<Begin mail file transfer.]
[   xx. bytes transferred, run time = xxx. MS,]
[   Elapsed time = xxxxx. MS, Rate = xxxx Baud]
[*< Mail completed successfully]
[*] DISC <CR>
[*] QUIT <CR>
```

(3) TELNET (for short messages only) 4a3

```
[@] TELNET <CR>
[User Telnet x.x DATE  Type HELP<cr> for help.]
[*] NIC <SP> FTP <CR> [is complete.#]
[300 SRI-ARC FTP Server x.xx.x.x - at DAY DATE TIME]
MAIL JEW/MDK RWW <CR>
(pause)
[350 Type mail, ended by a line with only a "."]
re: Title of Message
line one of message <CR>
line two of message <CR>
...etc...
. <CR>
(pause)
[256 Mail completed successfully]
<↑Z>
[*] DISC <CR>
[*] QUIT <CR>
```

4a3a

NETWORK JOURNAL DELIVERY 5

Three modes of Journal delivery are currently available to NLS users; each user can select any one or a combination of ways of receiving journal mail: 5a

(1) ONLINE -- an entry containing the text of the mail or, for longer items, a citation to it, is made in the user's initial file, which resides in his directory at SRI-ARC. 5a1

(2) HARDCOPY -- the text of the mail is sent to the user (i.e., to an address of his choosing) via the U.S. Postal Service. 5a2

(3) NETWORK -- Journal mail will be delivered to a user via the Net, to a host and mailbox of his choosing. If you wish this option, let the NIC know and give them the name of your host and mailbox. 5a3

Short messages ('Submit Message') will be delivered in their entirety to the remote user, preceeded by the usual sort of header giving author, date and time, citation number, and title: 5a3a

```
JEW 4-APR-73 11:21  15490
SMFS Runs on TENEX 1.31 at the NIC
Message: Dave-- The NIC came up on TENEX 1.31 on
1-APR...
```

A citation to larger Journal articles ('Submit File') will be sent: 5a3b

```
JEW 4-APR-73 17:51  15491
Farming Batch Work out to UCSB -- A Scenario
Location: SRI-ARC <MJOURNAL>15491.NLS;XNLS
```

In place of the usual link (which appears in ONLINE delivery) is a host name (SRI-ARC) and a pathname to the file at that host. Using it, the remote user or a process running on his behalf can fetch a copy of the file from SRI-ARC via FTP. The parameter ';XNLS' signals SRI-ARC's FTP server process to convert the NLS file to sequential form (using a default conversion algorithm) before transmission to the user through the Net.

By Network Journal delivery, mail will be delivered via FTP mail command to a host (i.e., to it's FTP server process) and mailbox address of the user's choosing.

These two parameters will be maintained in the NIC Ident file for each user who selects NETWORK delivery, and can, like his delivery mode, be viewed or changed from the Ident System in NLS. Initial values for host and mailbox address have been solicited from the Network community (see RFC 510 -- 16400,). 5a3c

The implementation of Network Journal submission and delivery described here is a first-cut. A more flexible and slightly cleaner user interface will be fashioned when the File Transfer Protocol (FTP), upon which both implementations will rely, is revised to deal more comprehensibly with the issues of mail delivery, forwarding, and recording (see RFC 524 -- 15146,1). 6

17777 Distribution

Robert T. Braden, Arvolo Chan, Steve D. Crocker, Eric F. Harslem, John F. Heafner, Jerry Fitzsimmons, John T. Melvin, Robert M. (Bob) Metcalfe, Jonathan B. Postel, Ray S. Tomlinson, James E. (Jim) White, Richard W. Watson, J. D. Hopper, Diane S. Kaye, Walt Bass, L. Peter Deutsch, James C. Norton, Michael D. Kudlick, Charles H. Irby, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews, Paul R. Johnson, Milton H. Reese, Nancy J. Neigus, Ric Werme, Alex A. McKenzie, Peter Kirstein, Bradley A. Reussow, Michael A. Padlipsky, Robert H. Thomas, Robert G. Merryman, James M. Pepin, L. Peter Deutsch, Michael D. Kudlick, John D. Day, Robert D. (Bob) Bressler, Neal D. Ryan, Richard A. Winter, Richard W. Watson, Gregory P. Hicks, James E. (Jim) White, Stephen M. Wolfe, Kenneth T. Pogran, A. Wayne Hathaway, Robert C. Clements, Marc S. Seriff, Thomas F. (Tom) Knight, Abhay K. Bhushan

Shirley W. Watkins, Janet W. Troxel, Connie D. Rosewall, Linda M. Webster, Anita L. Coley, Carol J. Mostrom, Rodney A. Bondurant, Jeanne M. Beck, Mark Alexander Beach, Judy D. Cooke, Marcia Lynn Keeney, Carol B. Guilbault, Susan R. Lee, Elizabeth K. Michael, Charles F. Dornbush, Elizabeth J. (Jake) Feinler, Kirk E. Kelley, N. Dean Meyer, Kay F. Byrd, James E. (Jim) White, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, William H. Paxton

Dan Dechatelets, Nancy C. Thies, Travis L. Greening, Robert Silberski, Marcia Lynn Keeney, W. A. Martin, Margaret A. (Maggie) Bassett, J. A. Smith, Leina M. Boone, Diana L. Jones, Nancy J. Neigus, Terry Sack, Frances A. (Toni) McHale, Lucille C. (Lucy) Gilliard, Ed J. Collins, Gary Blunck, John F. Heafner, Kathy Beaman, David J. King, C. Jane Moody, Sue Pitkin, Jerry Fitzsimmons, Gregory P. Hicks, Gloria Jean Maxey, Roberta J. Peeler, Craig Fields, Ermalee R. McCauley, Margaret Iwamoto, Dee Larson, Robert E. Doane, Brenda Monroe, Jeanne B. North, Pam J. Klotz Cutler, Barbara Barnett, Stan Golding, Steve G. Chipman, John P. Barden, Martha A. Ginsberg L. Peter Deutsch, John Davidson, Thomas O'Sullivan, Sol F. Seroussi, Scott Bradner, Robert H. Thomas, John C. Thomas, Michael J. Romanelli, Ronald M. Stoughton, A. D. (Buz) Owen, Robert L. Fink, Jeanne B. North, Steve D. Crocker, Thomas F. Lawrence, John W. McConnell, James E. (Jim) White, A. Wayne Hathaway, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Joel M. Winett, Abhay K. Bhushan, Thomas N. Pyke, B. Michael Wilber, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, Barry D. Wessler, John T. Melvin, Barbara A. Nicholas, Jackie A. Priest, Terence E. Devine, Paul M. Rubin, Paula L. Cotter, O. A. Hansen, H. A. Thompson Robert F. Hargraves, C. D. (Terry) Shephard, Maurice P. Brown, Robert L. Ashenhurst, Steven F. Holmgren, Terence E. Devine, David J. King, William L. Andrews, Milton H. Reese, Kenneth M. Brandon, Lou C. Nelson, Jeffrey P. Golden, Richard B. Neely, Dan Odom, Ralph E. Gorin, Robert G. Merryman, P. Tveitane, Adrian V. Stokes, David L. Retz, Reg E. Martin, Gene Leichner, Jean Iseli, James E. (JED)

Donnelley, William Kantrowitz, Michael S. Wolfberg, Yeshiah S. Feinroth, James Hurt, Anthony C. Hearn, Eric F. Harslem, Robert M. (Bob) Metcalfe, Bradley A. Reussow, Daniel L. Kadunce, George N. Petregal, Michael B. Young, Michael A. Padlipsky, Schuyler Stevenson Joshua Lederberg, Connie Hoog, Leonard B. Fall, James A. Blumke, David Hsiao, Michael L. Marrah, Vinton G. Cerf, Richard G. Powell, Gerald L. Kinnison, Paul Baran, Henry Chauncey, J. T. Sartain, Robert N. Lieberman, Ralph Alter, Nils Maras, Philip H. Enslow, Robert M. Dunn, Joseph B. Reid, William T. Misencik, Toshiyuki Sakai, Louis Pouzin, Yngvar Lundh, Robert H. Hinckley, Marvin Zelkowitz, Don D. Cowan, Louis F. Dixon, Michael O'Malley, Peter Kirstein, David J. Farber, Dave Twyver, Art J. Bernstein, Dave E. Liddle, A. Kenneth Showalter, D. D. Aufenkamp, Derek Leslie Arthur Barber, Tjaart Schipper, Richard M. Van Slyke, E. M. Aupperle, Hubert Lipinski

Network Journal Submission and Delivery

(J17777) 16-JUL-73 11:07; Title: Author(s): Stanford Research Institute /&SRI-ARC; Distribution: /NAG NLG NSAG SRI-ARC FTPIG JDDT JDRT; Sub-Collections: NIC NWG SRI-ARC NAG NLG NSAG FTPIG JDDT JDRT; RFC# 543; Clerk: NDM;
Origin: <USERGUIDES>JOURNAL-NETSUB.NLS;14, 16-JUL-73 08:38 NDM ;

Preliminary Information about NIC-Costs

This is a first compilation of data about NIC-Costs and should be treated as a draft. Any comments or suggestions for further explorations are welcome.

Preliminary Information about NIC-Costs

NIC OUTPUT 1

1) RFC's and any other document that someone requests to be distributed are mailed once a week to liaisons, associates, and station-agents. Often an additional mailing is done for liaisons. These mailings now necessitate making 165 copies of each document. 1a

2) Liaisons, associates and station-agents also get periodically: 1b

functional document updates 1b1

catalog bulletins (monthly) 1b2

ARPANET News (monthly) also distributed to Principal Investigators 1b3

Directory updates (monthly) 1b4

author and number NIC journal indexes (monthly) 1b5

monthly Status of Revision notices 1b6

3) Group notes are distributed ASAP to group members and according to the group's wishes, to station-agents. 1c

4) New group members receive all old notes often amounting to 90 documents 1d

5) Miscellaneous document requests are all filled (if reasonable) ASAP 1e

6) All journal hardcopy is mailed ASAP 1f

TYPES OF DOCUMENT REQUESTS 2

In my earlier document on NIC-PSO there was a section on "Other NIC-PSO Activity" in which there was a count of the number of transmittals. This indicates the number of letters but not really the volume of work they required. In order to better understand the work required of miscellaneous requests for documents a count has been made as to the number of documents actually sent out which accompanied each of these letters. 2a

The document requests have been divided into three groups, requests for functional documents, requests for miscellaneous documents, and documents sent to a new group member. 2b

Miscellaneous Functional Groups Total 2b1

Preliminary Information about NIC-Costs

JAN	18	9	55	82	2b2
FEB	27	9	123	159	2b3
MAR	33	9	385	427	2b4
APR	38	13	192	243	2b5
MAY	42	8	294	344	2b6
JUN	32	12	168	212	2b7

POSTAGE RATES 3

One big savings can be made by using Air Printed rates as opposed to Air Mail rates for overseas mail. An item going Air Printed will travel by air to the country and by First Class within the country. According to the mailroom officials, the difference in time of arrival is very small compared to the difference in cost. For example, the recent directory update cost $4.70 each by Air Printed and would have cost $17-18 each by Air Mail. 3a

There is a 4 lb. limit on Air Printed, but if the material can be classified as a book, the Air Book rate can be used. (Air Book is identical to Air Printed, but is used for an item between 4 and 11 lbs. which fits the post office definition of a book.) 3b

A book is a permanently bound document, at least 22 pages long, or any supplement to a book. 3b1

Another way to save money, as suggested by the mailroom, is to send items mailed on Thursday or Friday First Class even to the East. I am told they should arrive on Monday no matter how they are mailed. One more detail, if the package weighs between 12 and 16 ounces, the price for Air Mail is the same as for First Class, and therefore, any package in this weight range should be sent Air Mail, regardless of day mailed. 3c

JOURNAL USAGE BY THE NETWORK 4

The following is a listing by site which indicates the number of items journalized during the three years, 1971, 1972, and the first half of 1973. If one individual accounted for a large percentage of journalized items in 1973, his name is noted and followed by the number which he journalized so far this year. The only sites included are those which had journalized at least 3 messages during the first half of 1973. 4a

Site 71 72 73 Major Individual Users 4b

Preliminary Information about NIC-Costs

AFETR			4	Young(4)-Liaison	4c
ALOHA			3	Harrison(3)	4d
ARPA	1	27	48	O'Sullivan(19),	4e
BBN-NET	6	129	171	McKenzie(84)-Liaison, Neigus(65)-St.Ag., Walden(9)	4f
BBN-TENEX	2	11	20	Leavitt(11)	4g
CASE-10		4	16	Barden(12)-St.Ag.	4h
CCA			13	Stern(9)	4i
ILL-ANTS	1	4	9		4j
MIT-DMCG	3	13	16	Bhushan(14)-Liaison	4k
MIT-MULTICS		6	16	Padlipsky(15)-Liaison	4l
MITRE-TIP	11	25	77	Iseli(50)-Liaison, Silberski(10)	4m
NBS-CCST	3	14	14	Cotton(10)	4n
NSRDC			11	Lieberman(11)	4o
PARC-MAXC	5	48	44	Deutsch(43)-Liaison	4p
RADC	1	5	7		4q
SDAC-TIP		19	20	Owen(20)-Liaison	4r
SRI			3		4s
SRI-AI		9	5		4t
SU-ERL		31	13	Cerf-Associate	4u
SU-HP		17	10	Masinter(6)	4v
UCLA-CCN			5		4w
UCLA-NMC	14	147	248	Crocker(151), Postel(59), Maxwell(14), Kline(12)	4x
UCSB-MOD75	1	40	38	Pickens(16), Stoughton(14)-Liaison	4y
USAF			3	Kohl(3)	4z

Preliminary Information about NIC-Costs

UTAH-10 2 3 Hicks(3)-St.Ag. 4a@

TOTAL 48 551 817 4aa

In conjunction with these findings it was found that 27% of the people who used the system in 1971 never used it again, and that 46% of the people who used the system in 1972 never used it again. 4ab

Also, in 1971 there were 22 different people who journalized something, 68 in 1972 and so far, 85 in 1973. 4ac

FUNCTIONAL DOCUMENT COSTS 5

The following costs are based on the current size of a document and present means of reproduction and distribution. All printing costs are based on the May 1973 "Press and Bindery F.P.Q. Rates" as supplied by Report Services. Mailing costs are based on rates quoted from the mailroom. Xerox costs are figured at the rate of .03 per copy. Salaries were based on a yearly rate of 20K per person with the exception of Jake Feinler. 5a

Directory Updates 5b

Variable Costs 5b1

	6/year	12/year	
			5b1a
Printing	4338	8676	5b1b
Mailing	2220	4440	5b1c
Xeroxing	162	324	5b1d
Proofing, Collating, Creating Fronts, Beau's time----------	7500	15000	5b1e

Fixed Costs 5b2

Identfile	7600/year	5b2a
TOTAL	21820 36040	5b3
#copies	1200 2400	5b4
cost/copy	$18.00 $15.00	5b5

Add $5.00 to the cost/copy for an entire directory (includes binder, dividers, extra cost of mailing, and sheet lifters). 5b6

Preliminary Information about NIC-Costs

Catalog Updates 5c

Variable Costs 5c1

	3/year	6/year	9/year	12/year	3/year	
(excluding associates)						5c1a
Printing	3780	7560	11340	15120	1110	5c1b
Mailing	1455	2910	4365	5820	945	5c1c
Xeroxing	81	162	243	324	80	5c1d
Collating	195	390	585	780	195	5c1e
Beau's time	1170	1755	1755	2340	1170	5c1f
TOTAL	6681	12777	18288	24384	3500	5c1g

Fixed Costs 5c2

Mil's time	20,000/year					5c2a
TOTAL	26681	32777	38288	44384	23500	5c2b
#copies	675	1350	2025	2700	600	5c2c
cost/copy	$40.00	$24.00	$19.00	$16.00	$40.00	5c2d

Add $5.00 to the cost/copy for an entire catalog (includes binder, dividers, extra cost of mailing, and sheet lifters). 5c2e

Resource Notebook Updates 5d

Variable Costs 5d1

	4/year	
		5d1a
Printing $780/time	3100	5d1b
Mailing 370/time	1480	5d1c
Xeroxing $27/time	108	5d1d
Collating and Fronts	390	5d1e

Fixed Expenses 5d2

Preliminary Information about NIC-Costs

Jakes's time	32000/year		5d2a
Typist's time	10000/year		5d2b
TOTAL	47078/year		5d3
	11770/time		5d4
# copies	225/time		5d5
cost/copy	$52.00		5d6

Add $5.00 to the cost/copy for an entire catalog (includes binder, dividers, extra cost of mailing, and sheet lifters). 5d7

Protocol Notebook 5e

Updates 5e1

Printing (50 pgs-2 sided, 275 copies)	304.00		5e1a
Mailing	550.00		5e1b
Collating and Fronts - 10 hrs	100.00		5e1c
TOTAL	954.00		5e1d
# copies	275		5e1e
cost/copy	$3.50		5e1f

Whole Notebook 5e2

Collating 10 hrs	195		5e2a
Printing 100 copies	742		5e2b
TOTAL	937		5e2c
price/copy		$9.37	5e2d
Binder, dividers, mailing, etc.		5.00	5e2e
TOTAL/COPY		14.37	5e2f

Preliminary Information about NIC-Costs

(J17778) 13-JUL-73 09:52; Title: Author(s): Susan R. Lee/SRL;
Distribution: /MDK PR JBN MLK; Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>NICDATA.NLS;5, 13-JUL-73 09:48 SRL ;

Additional Response to Meeting about NIC

In the meeting I attended following Larry Robert's visit, the matter of developmental versus operational costs was discussed. Of the major costs I have considered, the cost for DDSI seems to be the only one which is developmental. 1

The question was also raised about the xerox machine (whether NIC should be responsible for paying the whole bill). It seems that the only people who request xeroxing to any degree are Mil, Beau, and Doug. It could be argued that all of their work was NIC related and therefore it seems that there is no one who uses the machine to any degree who is not associated with the NIC. (Doug might be the only exception but the volume just isn't that great.) 2

Additional Response to Meeting about NIC

(J17779) 13-JUL-73 10:10; Title: Author(s): Susan R. Lee/SRL;
Distribution: /MDK PR; Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>NOTES.NLS;1, 13-JUL-73 09:54 SRL ;

Locating On-Line Documentation at SRI-ARC

RFC # 544
NIC # 17782

Dean Meyer (NDM)
Kirk Kelley (KIRK)
SRI-ARC
July 13, 1973

Locating On-Line Documentation at SRI-ARC

Where there used to be one, there are now two files to help users locate user documentation and other files available in NLS: 1

<NIC>LOCATOR will lead the user to NIC functional documents by means of links. Its branch labeled "ARC SYSTEM DOCUMENTATION" will direct the user to <USERGUIDES>ARCLOCATOR. 1a

(nic, locator, 1:w)

<USERGUIDES>ARCLOCATOR includes documentation of the SRI-ARC system. Many ARC features are available for Network use, and the documents in <USERGUIDES>ARCLOCATOR should serve to introduce users to these capabilities. 1b

(userguides, arclocator, 1:w)

These files are formatted in a way that allows the documents to be easily accessed by inexperenced NLS users. Both files contain instructions for their use as branch one. To see these instructions: 2

L[oad] F[ile] <nic>locator CR 2a

P[rint] B[ranch] .1 CA wn CA 2b

Please send ideas and suggestions for the LOCATOR files to KIRK or NDM at SRI-ARC. 3

NWG/RFC# 544 NDM KIRK 13-JUL-73 14:53 17782
Locating On-Line Documentation at SRI-ARC

(J17782) 13-JUL-73 14:53; Title: Author(s): N. Dean Meyer, Kirk E. Kelley/NDM KIRK; Distribution: /NLG NSAG NAG DHC PK2 JSP GLB PRJ PH BN2 JHB DLS; Sub-Collections: NIC NWG SRI-ARC NLG NSAG NAG; RFC# 544; Clerk: NDM;
Origin: <KELLEY>LOCDOC.NLS;9, 13-JUL-73 14:45 NDM ;

17783

JEANNE/JIM, AS YOU MAY NOT KNOW, COL. HAROLD F. ARTHUR, ELECTRONIC SYSTEMS DIVISION (ESD) OF THE AIR FORCE SYSTEMS COMMAND (AFSC), HAS BEEN CHARGED BY THE AFSC TO BE RESPONSIBLE FOR THE EVOLUTION OF ALL AFSC CDC 6000 SERIES SITES INTO THE ARPANET. TO FACILITATE HIS EXECUTION OF THIS RESPONSIBILITY AND TO PROVIDE FOR THE REQUIRED COORDINATION AND COLLABORATION BETWEEN MEMBERS OF THIS COMMAND AND ASSORTED ELEMENTS OF THE ARPANET, I WOULD SINCERELY APPRECIATE THE FOLLOWING: 1

(1) Could you include: Lt. Col. Arthur, ESD-MCIF, Hanscom Field, Mass 01730, (617) 861-2922, or (617) 861-5386, on the NIC mailing lists and forward to his office [Directorate of Information Systems Technology] a set of the resource notebooks. Also, his access to the NIC is required - he could, I imagine, be included within an overall AFSC directory.

(2) Could you please call his office and notify Lt. Col. Arthur of the necessary arrangements.

Your consideration of this request is sincerely appreciated,
Jean 1a

**24 17783

(J17783) 13-JUL-73 11:24; Author(s): Jean Iseli/JI; Distribution: /JCN(jim, sent this to jeanne also for her information) JBN SSP EPS; Sub-Collections: NIC; Clerk: JI;

TPO Brief

TPO NO 14 DATA PROCESSING SOFTWARE 1

GENERAL OBJECTIVE: 2

The general objective of this TPO is to develop techniques to improve the specification, testing, evaluation and reliability of software and to improve the Air Force's ability to specify, build and utilize effective management information systems. 2a

SPECIFIC GOALS: 3

Management Information Systems - This area has essentially two thrusts: 3a

The development of non-functional software to provide users the ability to manipulate large data bases for Command and Control and Air Force Management systems with particular emphasis on multi-level security and data management modeling and testing procedures. 3a1

The development of on-line computer tools, which directly aid the Air Force knowledge worker (commander, manager, worker). 3a2

TECHNICAL APPROACH: 4

In the data management area, RADC is completing the first implementation of a data management system DM-1 (Data Manager). This system is extremely flexible in design, is programmed in JOVIAL and its overall design contains the best features of many other systems incorporated into one system design. From DM-1 will come many of the items that will aid in future Data Management acquisition. An in-house effort to investigate the potential of the ARPA sponsored MULTICS operating system as a host for data management has been highly successful. The effort concentrated on the development of a kernel of data management functions. These functions include system control, storage management with special emphasis placed on the ability to provide data protection within the MULTICS environment. The objective in developing this kernel is the maximum application of operating system capabilities to the central issues of data management design in order to achieve efficient and secure data manipulation. 4a

As a result, a GCOS Multics File Transfer Facility is being built for the Data Services Center using these functions and the program is expanding in conjunction with ESD/MCI in producing a secure data management system within a secure operating system, a modified MULTICS. Exploratory efforts are also beginning to assess the feasibility of distributed data management using the

ARPA network and also the effect of associative processing on data management requirements and capabilities. 4b

In the data management testing area, RADC & JTSA are jointly supporting research to develop data management evaluation tools. Currently, a user is forced to assess the systems on a parameter type basis. Worse yet, once he has implementeed his data, there is no second chance due to the costs involved with the Air Force's large data bases. It is the goal of this area to develop a facility where the user can analytically and empirically experiment with his problem and various DMS alternatives prior to a commitment to a specific system. 4c

AUGMENTED KNOWLEDGE WORKSHOP - The other main thrust is in the exploitation and assessment of the on-line system developed by SRI under ARPA sponsorship called Augmentation Knowledge Workshop. 4d

RADC personnel have monitored this program for the past five years and are convinced that the feasibility of significant job performance improvement in an intellectual knowledge worker environment is indeed possible. The system provides on-line tools for a set of core activities which all knowledge workers do regardless of their special interests such as studying, analyzing, conferring, communicating, and documenting. SRI has developed the system through a "Bootstrapping" process where the system's capabilities at any particular instance in time are used to further develop the system. The augmentation capabilities of the system have evolved through the individual, to the team, to the organization stage and are now approaching the community stage via use by individuals and teams around the ARPA Net. 4e

The development activity during FY-73 has been concentrated on acquiring the necessary physical plant for use and evaluation of the SRI/AKW system. RADC is connected to the ARPA Net via a standard H316 Terminal Interface Processor (TIP). The initial specification of a baseline management system complete with SOPs, file design, and personnel role assignment has been completed. The research group at RADC has progressed to the point where they are doing the bulk of their daily work using the system; in fact, this TPO was prepared, coordinated and edited a number of times using the system. The FY-74 activity will be concentrated on training the rest of the ISI branch (approximately 40 people), procuring additional terminals and a medium speed line printer, and refining the baseline management system to include interfacing it with MASIS. 4f

The assessment of a system as complex as AKW must be conducted over an extended period of time, an extended set of jobs, and across a representative sample of Air Force people to allow the

results to be generalized to other environments. The assessment at RADC will cover a two-year period, and include engineers, secretaries, administrators, and managers at three levels in the chain of command. The evaluation will evolve slightly behind the actual implementation of the system within the ISI Branch. Results on the effectiveness of the system in augmenting individuals and teams will be available near the middle of FY-74 and organizational results at the end of FY-74. If promising, it is planned to create a large scale prototype at RADC, probably the Information Sciences Division - 120 people - elements of staff and center management. 4g

APPLICATION TO AIR FORCE TECHNOLOGY PROGRAMS: 5

The knowledge gained in this area in many cases will be used directly such as the GCOS Multics File Transfer capability, secure DMS, and Data Management Modeling Facility. In other instances, knowledge gained will be used to assist SPO offices and individual using organizations in acquiring sophisticated MISs for their specific application. 5a

RELATIONSHIP TO OTHER AGENCY PROGRAMS: 6

In the case of ARPA, some of their research is exploited directly using the ARRPA Net. The SRI work is an excellent example. Research sponsored by JTSA, particularly in DMS testing will be closely followed and should complement our program in this area. 6a

Research in the areas of security data management sponsored by ARPA is of particular interest. For example, the research at USC/ISI in the area of MIS is extremely relevant. They are examining the entire question of how does a large organization have more than one MIS which can effectively serve the mission divisions and yet be responsive to the larger corporate management needs. 6b

TPO Brief

(J17785) 13-JUL-73 12:02; Title: Author(s): John L. McNamara/JLM;
Distribution: /FJT JLM EJK RFI; Sub-Collections: RADC; Clerk: JLM;
Origin: <MCNAMARA>FT.NLS;1, 13-JUL-73 11:52 JLM ;

L10 procedures: answering [17726,)

Sorry to be so long in answering. It is difficult to explain L10 in bits and pieces via messages. I would really recommend your visiting us if you are seriously interested in learning. In the mean time, allow me to refer you to the file <nls,sysgd,>. This file lists all the available procedures in the running system, followed by their formal parameters if any and then any comment at the head of the procedure. 1

Re [17726,), note the procedures: 2

getsub (stid) -- given an stid, returns stid of sub
or stid if no substatement 2a

getsuc (stid) -- given an stid, returns stid of successor
or of up if no successor 2b

getnxt, getup, getail ... 2c

cis (stid, astring, levstring) -- given an stid, the address
of a string, and the address of a string containing
u's and d's, will insert the string as a statement
after stid according to the level adjust 2d

cds, cms ... 2e

fechsig (stid, astring) -- given an stid and the address of
a string, will APPEND the statement signature to
the string 2f

fechno, getdat ... 2g

Example program: Insert signatures on end of addressed statement. 3

```
PROGRAM insig %Insert signatures on end of addressed statement%      3a
  (insig) PROCEDURE;                                                 3a1
    LOCAL TEXT POINTER pt;                                           3a1a
    LOCAL STRING sig[100] ;                                          3a1b
    IF nlmode = fulldisplay THEN %in case a DNLS guy tries this%     3a1c
      BEGIN                                                          3a1c1
      dismes(2, $"not implemented in display NLS");                  3a1c2
      RETURN;                                                        3a1c3
```

```
        END;                                                        3a1c4

    crlf( ); %type on teletype a CR LF%                             3a1d

    typeas ($"Insert Signature on end of statement at "); %type
    a string%                                                       3a1e

    tbug ($pt); %get an address from tty%                           3a1f

    *sig* ← NULL;  %clear string%                                   3a1g

    fechsig (pt, $sig) ; %get signature in string; first word of
    pointer is stid%                                                3a1h

    FIND SE(pt) ↑pt;                                                3a1i

    ST pt pt ← SP, *sig* ; %append space and sig to statement%       3a1j

    RETURN;                                                         3a1k

    END.                                                            3a1l

FINISH                                                              3a2
```

For further examples, look through (user-progs, -contents,1). 4

L10 procedures: answering (17726,)

(J17786) 13-JUL-73 12:31; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /DHC; Sub-Collections: SRI-ARC; Clerk: NDM;
Origin: <KELLEY>DHCANS.NLS;2, 13-JUL-73 12:24 NDM ;

VGC 13-JUL-73 12:33 17787

sndmsg and nls files

Jim, i tried to send a copy of an nls file via sndmsg's ↑B option but succeeded only in sending a null file to ISI. Is this because sndmsg does not understand format of NLS files, or is a simpler glitch at work here? Please respond to VGC@ISI since, for some reason, 1

sndmsg and nls files

(J17787) 13-JUL-73 12:33; Title: Author(s): Vinton G. Cerf/VGC;
Distribution: /JEW; Sub-Collections: NIC; Clerk: VGC;

MDK 13-JUL-73 12:35 17788

Sndmsg MailBox

Alex ... Sorry for the very long delay in responding to your request for a NIC sndmsg mailbox. That has now been done. The directory is <MCKENZIE> password = your NIC Ident. ... Mike Kudlick 1

Sndmsg MailBox

(J17788) 13-JUL-73 12:35; Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /AAM; Sub-Collections: SRI-ARC; Clerk: MDK;

Letter to Dan Garigan re his interest in text editing systems for the Oregon Government

Augmentation Research Center
Stanford Research Institute
Menlo Park, California
13-July-1973 12:30 1

Dan, 2

I am sorry to say that I was unable to find any survey type information about text editing systems other than the one I metioned on the phone. I would suggest that you try to get some user's manuals for ATS, SOS, TECO, QED, the BBN-LISP program editor,Stanford's WYLBER and SUPER WYLBER, Van Dam's system at Brown University, and perhaps Glantz's SHOEBOX system. In my opinion, most of these systems are pretty poor, but ... 3

The Van Dam survey is out of date and biased but the only one of its kind that I know of. I would have enclosed a copy but could not find one. It is in Computing Surveys, September 1971, vol 3, no 3 p. 93-114,
Title: On-line Text Editing: A Survey
Author: Andries Van Dam and David E. Rice
Brown University, Providence, Rhode Island. 4

5

Charles H. Irby

6

I am enclosing the following documents about our work. I hope it is of some help to you. Let us know if we can be of any help to you. 7

D. C. Engelbart and W. K. English. "A Research Center for Augmenting Human Intellect", AFIPS Proceedings, Fall Joint Computer Conference, 1968, Washington, D.C. (XDOC -- 3954.) 7a

D. C. Engelbart, SRI-ARC Summary for IPT Contractor-Meeting, summary report of work done at ARC during 1972. (Journal -- 13537.) 7b

D. C. Engelbart, R. W. Watson, J. C. Norton, The Augmented Knowledge Workshop, paper presented at the National Computer Conference, New York City, June 1973. (Journal -- 14724.) 7c

D. C. Engelbart, Design Considerations for Knowledge Workshop Terminals, paper presented at the National Computer Conference, New York City, June 1973. (Journal -- 14851.) 7d

CHI 13-JUL-73 12:38 17789

Letter to Dan Garigan re his interest in text editing systems for the Oregon Government

Online Team Environment: Network Information Center And Computer Augmented Team Interaction
Staford Research Institute Augmentation Research Center
RADC-TR-72-232 8 June 1972 (SRI-ARC Journal File 13041) 7e

CHI 13-JUL-73 12:38 17789

Letter to Dan Garigan re his interest in text editing systems for the Oregon Government

(J17789) 13-JUL-73 12:38; Title: Author(s): Charles H. Irby/CHI;
Sub-Collections: SRI-ARC; Clerk: CHI;
Origin: <IRBY>DAN.NLS;1, 13-JUL-73 12:12 CHI ;

EG 13-JUL-73 13:20 17790

resource directory - erika g-w

i've been sending you messages, but have been told by jean that you have had trouble getting them. so, i thought I'd try this method. could you please let us know how to get to the list of categories that you have developed for network resources? also, what did l. roberts think of our project? (i assume that you have talked to him). we arepretty well along in the implementation, but are still suffering a valid-data gap. keep in touch. erika. 1

resource directory - erika g-w

(J17790) 13-JUL-73 13:20; Title: Author(s): Erika Graf-Webster/EG;
Distribution: /MDK; Sub-Collections: NIC; Clerk: EG;

A Disconcerting Experience, but Thanks

Mike,

Thanks for the "personalized account. Perhaps it's unkind of me to complain about the way you did this favor for me, but it seems to be part of the general way such things usually happen and thus a complaint might be helpful to you. It was disconcerting to log in to "BBN-NET" and find my initial file gone; even stranger to call the NIC, find out my new "name" and "password" by phone, log in as that, and find a Journal message telling me what my new "name" and "password" were (since I had to know them to read the message). This seems to parallel a previous release of a new TNLS, which one had to know how to use in order to read the message that told how to use it.

On the other hand, thanks for the account.

Regards,
Alex

1

AAM 13-JUL-73 13:40 17798

A Disconcerting Experience, but Thanks

(J17798) 13-JUL-73 13:40; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /MDK JBN NJN; Sub-Collections: NIC; Clerk: AAM;

ARC Dull Writing

I off this for the consideration of the people named in the memo. My plan is to reissue it to eveyone week after next, possibly wth revisions, and call a meeting of the group named and other interested parties.

ARC Dull Writing

Background 1

Larry Robert's visit to ARC in April occasioned a flurry of thoughts and comments (0156,) about the characteristically "dull" writing at ARC. Dick Watson asked Paul Rech and me to analyze the problem and come up with suggestions. 1a

Paul and I met twice on this subject. The meetings were very stimulating, but they ended because other work drew away most of my time and drew Paul away completely. Our meetings resulted directly in my rewriting two examples of dull ARC writing (,0103), a list of the sources of difficulty which was the basis of the list (,042,) below, and the general outline of the suggestion for editorial review, but Paul is not responsible for this memo. 1b

On the back burner since April I have continued to catagorize the problem and to think of what might help. This memo also includes thoughts that came to me when I first opned an ARC report (journal,10551,). 1c

Throughout this discussion I refer to writing to be read offline, by people possibly unfamiliar with NLS, certainly without access to viewspecs or links to the journal. 1d

Sources, 2
First let me offer a list of sources of the difficulty:

Screen size: 2a

The 20-line screen makes for choppy writing. 2a1

Too easy to copy: 2b

People too easily lift part of old files into new contexts and then fail to edit the copied material word by word to see if it integrates smoothly in the new context. 2b1

Hectic environment: 2c

The main bay is full of noise and distractions which block the attention to detail necessary for good writing. 2c1

The attractiveness and usefulness of the system: 2d

Because the system is fun to use, and uniquely useful for higher level organization, many people type in bulk text where they would otherwise have hand written, or dictated a draft which would then have been typed and returned to them. In

doing so they miss the rude shock of clean copy and a clear cut editing stage. 2d1

Desire to offer examples of hierarchy to the outside world: 2e

We have offered documents with deeply hierarchical structure, indention, and statement numbers, where the reader wants to read flowingly rather than consider the hierarchic relations of the parts or be able to locate them easily out of order. 2e1

Special problem of location of introductory material in hierarchy: 2f

Say we wanted to arrange properly the exposition: Dogs -- a domestic animal found around the world, Bulldogs, Spaniels, Fox Terriers -- it would plainly be wrong to say: 2f1

"Dogs 2f1a

A domestic animal found around the world. 2f1a1

Bulldogs 2f1a2

Spaniels 2f1a3

Fox Terriers." 2f1a4

But what should we do?
Should it be: 2f2

"Dogs
A domestic animal found around the world. 2f2a

Bulldogs 2f2a1

Spaniels 2f2a2

Fox Terriers."? 2f2a3

Other abuses of heirarchy: 2g

Many people write, or assemble, documents without really following the thread of subordination. E.g. "However... " does not introduce a subordinate category. 2g1

Indifference to writing. 2h

You can't write well unless you care. The atmosphere around here often fails to encourage caring. The allocation of Paul and most of my time away from this effort is an example. 2h1

Indifference to the reader: 2i

To her ignorance: 2i1

Documents leave ARC full of words no one could be expected to understand and of concepts offered without introductory information. 2i1a

To her flow of interest: 2i2

Marked, deep hierarchy is useful to someone looking up a fact. Another type of reader exists whom we want to draw into a different experience. Let's call her the read on reader. I might go so far as to say we want to offer her an experience from which she will emerge with some altered attitude. This reader may not like us, nor like to read, and will certainly be in a hurry. 2i2a

Some one who is looking for something does not care about the flow until she begins reading. For read on readers, however, each sentence must create an expectation about the next, each paragraph about the next paragraph, etc. The expectations must be satisfied and the baton then passed on again. 2i2b

The problem reminds me of the beginning of an essay on patriotism in a recent avant guarde magazine: 2i2c

"I intend to write something of a plea for patriotism. That intention is so uncongenial to almost everybody who is likely to read the essay that I want to spell it out with some care. In doing this, I wish not to disarm the critics, but to help them find the right target." 2i2c1

To her existence: 2i3

Documents writen for the record, to be the possible object of retrieval, are dull compared to documents written by an author for some reader she imagines. 2i3a

All the usual vices of technical writing are flourishing at ARC because of x, y, and z above. They include: 2j

Jargon words
Jargon diction
Unselective use of the passive voice
Wordiness
Faulty Parallelism
General rather than concrete words. 2j1

A Suggestion: 3

One way we could improve outgoing ARC writing would be to agree to a set of guidelines and to agree to submit outgoing documents for informal review. ARC is fortunate in having several people experienced and interested in writing. The following people have told me they might like to serve as reviewers: MDK, PR, JBN, SRL, DVN, JMB. Their comments should be suggestions rather than impositions. 3a

I offer the following possible guidelines. 3b

Hold specialized words to a minimum. 3b1

E.g. We have nothing more familiar to call a plex than "plex" but an "alphabetic character" can be called a letter. 3b1a

Use no specialized grammar. 3b2

E.g. "Reference" is a noun, never a verb. The verb is "cite." 3b2a

Use the pasive voice only to emphasize that the action of the verb is passive; avoid the passive with verbs of mental action. 3b3

Reduce Acronyms to a minimum. 3b4

Use as few words as possible. "Cut words" is motherhood, but like motherhood, serious. 3b4a

Always edit a document in some other medium than you created it. e.g. if dictated, edit in display; if written on display, edit in hard copy, etc. Vary character size when editing. 3b5

Always read a document once in hard copy in a quiet place. 3b6

Always check whether parallel ideas are formed in parallel constructions. 3b7

Always check whether subordinate ideas are formed in subordinate constructions. 3b8

If the organization of statements is in NLS hierarchy, and it fails the two tests above, consider appending the elements into a single statement where their relation can be expressed by the conjunctive adverbs, word order, etc. as in (link,) below. 3b9

Always imagine you are addressing some reader. 3b10

Study The Elements of Style by Strunk and White (XDOC 3854) and take it to heart. 3b11

Guidelines such as these are always partly controversial. The report (journal,13041,) from which I draw one example and which seems to me very tough to read impressed a recent visitor, Sylvia Meyer, as exceptionally readable. "I read it from cover to cover" she said. 3b12

I suggest the prospective editors meet along with other interested parties to discuss these suggestions, particularly the guidelines. 3c

Appendix I
The following two passages cite dull ARC writing and show what I hope are more readable rewrites. 4

Item 1 (Journal,7472,5)[Up to this point the reader knows what a statement is and has seen a figure showing a hierarchic file.] 4a

PRIMARY RELATIONSHIPS BETWEEN STATEMENTS 4a1

The following relationships between statements are defined: SUBSTATEMENT, SOURCE, SUCCESSOR, AND PREDECESSOR. These are best defined by examples, with reference to Figure 1 on page 16. 4a1a

SUBSTATEMENT and SOURCE refer to the relationships between statements at different levels. 4a1a1

Statements 1, 2, and 3 are substatements of the origin statement. Statement 1a is a substatement of Statement 1. Statements 1b1, 1b2, and 1b3 are substatements of Statement 1b. 4a1a1a

Any statement may have any number of substatements. 4a1a1a1

All first level statements are substatements of the origin statement. 4a1a1a2

Given the number of a statement, the number of a substatement is obtained by adding a field to the end of the last number. 4a1a1a3

SOURCE is the inverse of substatement. Statement 1b is the source of Statements 1b1, 1b2, and 1b3. Statement 3c is the source of Statement 3c1. 4a1a1b

Every statement has just one source (except the origin statement, which has no source). 4a1a1b1

Given the number of a statement, the number of the source is obtained by removing a field from the end of the first number. 4a1a1b2

SUCCESSOR and PREDECESSOR refer to the relationships between statements of the same level. 4a1a2

Statement 2 is the SUCCESSOR of Statement 1. Statement 3d2 is the successor of Statement 3d1. 4a1a2a

Not every statement has a successor. The origin statement has no successor. No statement has more than one successor. A statement and its successor always have the same level and the same source. A successor specification with a statement having no succeeding statement of the same level and source refers to the statement itself. 4a1a2a1

Given the number of a statement, the number of the successor is obtained by incrementing the last field of the first number. 4a1a2a2

PREDECESSOR is the inverse of successor. Statement 1a is the predecessor of Statement 1b. 4a1a2b

Not every statement has a predecessor. The origin statement has no predecessor. No statement has more than one predecessor. A statement and its predecessor always have the same level and the same source. A predecessor specification with a statement having no preceding statement of the same level and source refers to the statement itself. 4a1a2b1

Given the number of a statement, the number of the predecessor is obtained by decrementing the last field of the first number. 4a1a2b2

Rewrite of (Journal,7472,5) 4b

PRIMARY RELATIONSHIPS BETWEEN STATEMENTS 4b1

In Talking about NLS files and in some commands we need to name statements according to how they stand with respect to other statements. The most obvious example is "substatement". In figure 1, "2a" is a substatement of "2". 4b1a

Every substatement hangs on a higher statement which is

called its "source." "2" is the source of "2a" and "2a" is in turn the source of "2a1". 4b1b

Note that statement numbers alternate numerals with letters. Each alternation is called a "field". "1a" has two fields. "23a" also has two but "2b4c" has four fields. 4b1c

When statements are on the same level in the hierarchy, the higher one is called the "predecessor", and the lower one is called the "successor". Thus in figure 1, 1a is the predecessor of 2a, and 2a is the successor of 1a. 4b1d

Any NLS file contains a statement 0 at the very least. Statement 0 has a special position. It has no source. It is on a level by itself with no successor or predecessor and statements "1", "2", "3" etc. are its substatements. 4b1e

COMMENT: (7472,5a2a1) and (7472, 5a2b1) are examples of how the copy command can make hard reading. 4b2

Item 2 (13041,4d1b3) [The reader knows only that this is part of a longer section: "NLS--A Technical Overview".] 4c

Portrayal generator 4c1

Display control 4c1a

The display controller is composed of 4c1a1

1) a fast formatter and data structures that allow NLS to modify portions of the display image in response to user modification of the files being displayed, and 4c1a1a

2) user controls, such as the DNLS jump commands, over what is portrayed and how much is shown. 4c1a1b

This formatter can maintain images in several "display areas" at one time, updating them as necessary. Each area may display information from several files. 4c1a2

Typewriter terminal print control 4c1b

This is a formatter that is oriented toward printing parts of a file onto a typewriter terminal. 4c1b1

Hardcopy formatters 4c1c

These include a relatively simple system, Quickprint, and

a more complicated formatting program, the Output Processor. 4c1c1

Quickprint formats the text for printing as it appears through the display or typewriter terminal formatters. 4c1c1a

The Output Processor can feed to a variety of different devices, including printers and microfilm, and controls the formatting of the document according to directives embedded within the text. For details, refer to the "Output Processor User Guide",(,11076,2). 4c1c1b

Sequence generator 4c1d

Succeeding calls on the sequence generator create a sequence of statements which satisfy system or user filters starting at a place in the file specified by the user. 4c1d1

An example of the system filters it observes in deciding whether the identifier of a statement should be part of a sequence is the level truncation viewspec which permits the display of only those statements above particular levels in the NLS hierarchical file structure. 4c1d1a

These sequences of statement identifiers are used by formatters for terminal or hard-copy portrayal, by compilers, or by processors which manipulate files, such as the sorter. 4c1d2

See--,4d1e4) for a discussion of the sequence generator with user programs. 4c1d3

User filters and reformatters 4c1e

The user may write and incorporate additional filters which the sequence generator will use as a final acceptance test. These user-supplied filters may reformat the text of the file for special applications or views. 4c1e1

User sequence generators 4c1f

The user can write his own sequence generators which can make use of any NLS routines. 4c1f1

Rewrite of (13041,4d1b3) 4d

The Portrayal Generator
A user sees the contents of an NLS file as characters on a display screen, as characters printed on a teletype-like machine, or as a page from a printer. A group of software mechanisms called the Portrayal Generator prepare the file for reproduction by these devices. 4d1

Statements in an NLS file may have any order; NLS files are random files. The first part of the Portrayal Generator, called the Sequence Generator, calls statements from the file in order to display them in the hierarchy described in (ref). 4d2

The viewspecs (ref) are applied as filters within the Sequence Generator. For example a filter in the sequence generator may display only statements above a certain level in the hierarchy. 4d2a

Other filters in the Sequence generator may modify the text as it passes. 4d2b

Users may modify the sequence generator to call statements in other orders, e.g. alphebetically by content. 4d2c

For a user at a display, statements passed by the Sequence Generator move in order to the Display Controller. The Display Controller allows restructuring what appears on the screen when the user makes changes and allows display of several files in up to 8 windows. 4d3

An alternative mechanism, the Typewriter Terminal Print Controller, formats statements properly for teletype-like instruments. 4d4

A device called Quick Print quickly formats statements passed

**from the Display or Print Controller to a line printer. Quick print makes pages that are exactly like those which emerge from a teletype except for paging. 4d5

A more complex Output Processor gives the user most of the formal devices available in offset printing. The user controls the appearance of his page by embedding bits of code in the text. (11076, 2). The Output processor can feed to a variety of devices including line printer and microfilm printers. 4d6

COMMENT: This rewrite would have to go back through a knowledgable specialist. 4d7

ARC Journal References on Writing and Allied Subjects 5

(10551,) Dirk H. van Nouhuys. Frameworks and Technical Publications. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 19-MAY-72. 5a

(11076,) No Author. OUTPUT PROCESSOR USERS' GUIDE -- Introduction. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 6-SEP-72. 5b

(13041,) SRI-ARC. Online Team Environment / Network Information Center and Computer Augmented Team Interaction. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 6-MAR-73. 5c

(15761,) Paul Rech. WHY DON'T WE WRITE BETTER?. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 12-APR-73. 5d

(15984,) Michael D. Kudlick. Dull Writing: The Reader's Problem or the Writer's Problem?. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 17-APR-73. 5e

(15985,) N. Dean Meyer. Re: Journal Header redefinition. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 17-APR-73. 5f

(15990,) Walt Bass. Proposed ACTION for Better Writing. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 17-APR-73. 5g

(16013,) Harvey G. Lehtman. When in Doubt, Leave It Out: Bad Writing at ARC. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 19-APR-73. 5h

(16018,) Richard W. Watson. Some Thoughts on NLS for High Pressure Document Creation. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 19-APR-73. 5i

(16203,) Duane L. Stone. Text Editor Comparisons--Request for Help. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 26-APR-73. 5j

(7472,) No Author. FILE STRUCTURE, CONTENT, AND INPUT/OUTPUT OPERATIONS. Augmentation Research Center, Stanford Research Institute, Menlo Park, California 94025. 4-OCT-71. 5k

FOOTNOTES: 6

(a) John H. Schaar, The Case for Patriotims, The New American Revier # 17: 6a

ARC Dull Writing

(J17799) 13-JUL-73 17:05; Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /JCN RWW JBN PR SRL MDK JMB; Sub-Collections: DPCS
SRI-ARC; Clerk: DVN;
Origin: <VANNOUHUYS>WRITING.NLS;6, 13-JUL-73 16:56 DVN ;

MEH 13-JUL-73 13:51 17800

Modems, Changes in ARC Dial-Up Procedure

Our dial-up modems now have (1) automatic hunting and (2) home on 30 cps.

(1) This means you need not worry about what number you dial in on. If busy, you will automatically be connected to the next unbusy number. (The hunting cycles regardless of where you start.)

(2) This means when you first dial in and get connected, the communication speed is 30 cps, (was previously 0).

**The new cycle: 30-10-15-60-30...

The old cycle: 00-10-15-30-00...

NOTE: Any problems, like how do you know what telephone number you're in on, or how do you connect back to a hung job, etc., should be directed to Charles or Smokey.

1

Modems, Changes in ARC Dial-Up Procedure

(J17800) 13-JUL-73 13:51; Title: Author(s): Martin E. Hardy/MEH;
Distribution: /SRI-ARC RADC; Sub-Collections: SRI-ARC RADC; Clerk: KFB;

DVN 15-OCT-73 19:24 17801

R&D Contract Status Report for February

This is the real report, the higher numbered version got a wrong number

R&D Contract Status Report for February

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

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

Dear Mr. Burns:

This responds to block 10 of DD Form 1664 with respect to contract F30602-73-C-0285 (SRI #1894). 1

The table below shows the man hours expended on the subject contract since it began in June (three weeks). 2

	Cumulative to 6/30/73	Person Hours Expended During Report Period
Supervisor	40	40
Senior Professional	0	0
Professional	200	200
Technical	0	0
Other	0	0
	240	

2a

We estimate that the percentage of technical completion at the end of June was 15 per cent. 3

Sincerely,

Dirk van Nouhuys
Research Analyst
Augmentation Research Center

dvn

17801 Distribution
James C. Norton, Duane L. Stone,

R&D Contract Status Report for February

(J17801) 15-OCT-73 19:24; Title: Author(s): Dirk H. Van Nouhuys/DVN;
Sub-Collections: SRI-ARC RADC; Clerk: DVN;
Origin: <VANNOUHUYS>JUNEMOLD.NLS;1, 15-OCT-73 11:47 DVN ; Title:
Author(s): Van Nouhuys, Dirk H. /DVN; Distribution: /JCN DLS;
Sub-Collections: SRI-ARC; Clerk: KFB;
Origin: <BYRD>R&DCONTRACT.NLS;6, 9-MAR-73 8:35 KFB ;

AAM 13-JUL-73 14:25 17802

Sending SENDMESSAGEs to Alex McKenzie

To all of you who have asked how to send me "Sendmessages", they can be sent to McKenzie@sri-arc.
Regards,
Alex McKenzie

1

AAM 13-JUL-73 14:25 17802

Sending SENDMESSAGEs to Alex McKenzie

(J17802) 13-JUL-73 14:25; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /NJN FEH RTB JBP SDC2 LGR DCW3 RHT REK2 MLK JDB VGC RCC
SSP MAP EPS SMW BPC; Sub-Collections: NIC; Clerk: AAM;

Proposal for Documentation Revision Schedule

Introduction 1

This is a plan for revising our documentation (,02) in preparation for the the changed command language described in (Irby,comlang,1:x). 1a

If we failed to set a date for command language changes by the end of July, the present documentation will need extensive updating anyway, but this plan does not consider that possibility. 1b

I assume in making this plan that ARC would need to carry it quickly to the point where TNLS users could orient themselves in the new command language. 1c

Priorities 2

To decide how to allocate resources we need to step back and consider what is the proper form for documentation. Let me repeat the destinction Marilyn drew among "Reference Manual," "User Guide," and "Primer". A reference manual is an encyclopedic document where someone may look up subjects by headings and cross references. The TNLS User Guide and the Journal User Guide strive to be reference manuals. The Output Processor User Guide is a reference manual. 2a

A user guide is a sequential document that guides a user through something. It follows a tleast loosely the order in which a user is likely to confront decisions. The Calculator User Guide (userguides,jcalc-tnls,) is a user guide. 2b

A primer, for these purposes, is a document that teaches through orderly examples. It leads a learner through an exemplory sequence with generalizing commentary. The present Primer (userguides,primer,) and tutorial files (userguides,arclocator,0190:xbb) are primers. 2c

I have long contended that a reference manual is an unnecessary drain on our resources except for certain parts of our system. The "?" command identifies commands and skillful cross referencing or use of the query language against a primer or user guide could show their function. How much more often have you heard complaints of the intractability of the TNLS or Journal "User Guide" than you have used one successfully? 2d

The two subsystems where a reference manual seems appropriate are DEX II and the Output Processor because neither have benefit of the "?" command or easy interactive play. 2e

Consequently I have assumed in making this schedule that we would

take the opportunity to cover the subjects in question with a primer on user-guide and put creation of an up-to-date reference manual on the back burner. 2f

I have devided the list of existing docmentation (,02) into three levels of priority: 2g

Subjects unaffected by the proposed command language changes. 2g1

Aspects of DNLS affected by the command changes, marked with **. 2g2

Aspects of TNLS affected by the command changes, marked with *. 2g3

On the assumption that display users are better able to cope with revolutions, I give top priority only to TNLS documentation. The total is 231 pages, including the Tenex commands since that subject matter will then need to be covered under NLS. 2h

Syntax Conventions 3

Follow those of the User Guide (userguides,tnls-contents,6). 3a

Style 4

In general we should write as if we addressed a reasonably intelegent but technically ignorant secretary. In particular follow the guidelines in (journal,17586,) and (Journal,17799,) or its suceeding drafts, as applicable. 4a

Work Allocation 5

For a qick response I imagine Dean Meyer, Susan Lee, and Kirk Kelley writing half time for a total of seven weeks and Jeannie Beck full time. In addition I would spend something like a quarter of my time and Dean Meyer would spend time setting up for printing besides his writing time. 5a

I would devide the subject into work units of about 20 pages, or combine smaller work units. After a kickoff meeting to discuss allocation, standards, and procedures, each writer would make a thorough first pass over her material in about a week, surender it to one of the other writers for editing and debugging examples, meet with the others together to discuss editing, rewrite, submit it to the design review committee (journal,14164,6a2b), for a week, rewrite in response to their suggestions, pass it through a final edit in roataion, and send it off to become operational in locator., according to the following schedule. 5b

I would take one of the editing rotations. 5c

After the first writing pass, each writer would begin a second work unit and then a third, with a schedule omitting meetings. 5d

Jeanne Beck would work full time, partly because inexperience will slow her down, and partly because she will do the index which will demand cross checking with all the others.. 5e

Schedule for one writer 5f

```
----- -wk1- -wk2- -wk3- -wk4- -wk5- -wk6- -wk7- ----- ----- 5f1
----- AB--- --C-- DE--F ---G- -HX-- ----- ----- ----- ----- 5f2
----- ----- --I-- --J-- K-L-- M--NX ----- ----- ----- ----- 5f3
----- ----- ----- --I-- --J-- K-L-- M--NX ----- ----- ----- 5f4
```

A: Crew meets to discuss overal division, work allocation,syntax conventions, style. 5f5

B-C: Writing on first work uni. 5f6

C-D: Editing-debugging the work unit from another writer. 5f7

E: Meeting to standardize editing. 5f8

E-F: Rewrite following editing. 5f9

F-G: Review by Design Review Committee. 5f10

G-H: Rewrite in response to Desing Review Committee. 5f11

X: Final editing pass by another writer, submission to Locator. 5f12

I-J: Writing on next work unit. 5f13

J-K:: Editing-debugging the work unit from another writer. 5f14

K-L: Rewrite following editing. 5f15

L-M: Review by Design review Committee 5f16

M-N: Rewrite in response to Desing Review committee. 5f17

X: Final editing pass by another writer, submission to Locator. 5f18

Printing 6

Proposal for Documentation Revision Schedule

For the line printer add ten days, for COM 3 weeks. 6a

Maintenance 7

I assume Jeannie Beck would begin maintenance as soon as the writing is done. A plan will have to be made. Marilyn left useful planning material. 7a

DNLS Documentation 8

Corresponding DNLS Documentation is at present about half as voluminous but might take say 4 weeks more because Marilyn did not leave as ship-shape a legacy in this area. 8a

Existing Documentation (from Directory <Userguides> with size in pages) 9

CALCULATOR-DNLS.NLS;19 15 9a

CALCULATOR-TNLS.NLS;19 14 9b

DEX-PRIMER.NLS;3 13 9c

DEX-TRANSCRIPTION.NLS;1 46 9d

DEX-TWO.NLS;1 20 9e

DNLS-ADDRESS.NLS;2 8 ** 9f

DNLS-EDITING.NLS;5 16 ** 9g

DNLS-ENVIRONMENT.NLS;2 11 ** 9h

DNLS-FILES.NLS;6 18 ** 9i

DNLS-INTRO.NLS;1 5 ** 9j

DNLS-SUMMARY.NLS;1 30 ** 9k

DNLS-TENEX.NLS;6 4 ** 9l

DNLS-VIEWING.NLS;4 11 ** 9m

DOC1.NLS;4 32 9n

FOLKLORE.NLS;8 21 9o

JCALC-DNLS.NLS;8 15 9p

```
JCALC-TNLS.NLS;8  15                                          9q
JOURNAL-GUIDE.NLS;57  47                                      9r
JOURNAL-NETSUB.NLS;6   7                                      9s
JPRIMER.NLS;1    10*                                          9t
L10-CONTENTANALYZER.NLS;6,5  11                               9u
L10-GUIDE.NLS;3  61                                           9v
OP-COM.NLS;3     26                                           9w
OP-DIREXP.NLS;11  59                                          9x
OP-DIRLIST.NLS;6  12                                          9y
OP-INDEX.NLS;5  17                                            9z
OP-INTRO.NLS;2    6                                           9aa
OP-PARAMS.NLS;4    6                                          9aa
OP-VALOP.NLS;3    5                                           9ab
PRIMER.NLS;9     10 *                                         9ac
SENDPRINT.NLS;17    5                                         9ad
SUMMARY.NLS;1    43 *                                         9ae
TENEX.NLS;58     30 *                                         9af
TNLS-ADDRESS.NLS;6  18 *                                      9ag
TNLS-BEGINNERS.NLS;5  46 *                                    9ah
TNLS-CHARCODES.NLS;2   7 *                                    9ai
TNLS-COMMANDSUM.NLS;2    7 *                                  9aj
TNLS-CONTENTS.NLS;4    7 *                                    9ak
TNLS-DIRECTIVES.NLS;1    9 *                                  9al
TNLS-EDITING.NLS;3  17 *                                      9am
TNLS-ERRORMESSAGES.NLS;2    5 *                               9an
```

TNLS-GLOSSARY.NLS;2 5 * 9ao

TNLS-TENEX.NLS;5 12 * 9ap

TNLS-TEXT.NLS;2 15 * 9aq

Proposal for Documentation Revision Schedule

(J17803) 13-JUL-73 15:18; Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /PR(I bring this to your attention because Susan's time is mentioned. I realize she might not be free.) JCN RWW KIRK NDM SRL JMB; I realize she might not be available) JCN RWW SRL NDM KIRK JMB;
Sub-Collections: SRI-ARC DPCS; Clerk: DVN;
Origin: <VANNOUHUYS>DOCPUSH.NLS;4, 13-JUL-73 15:13 DVN ;

NIC/QUERY Collaboration

To Erika/Jack/Jean: 1

On Monday July 9th, Dick Watson, Jake Feinler, Harvey Lehtman, and I met to discuss the evolution of NIC/QUERY, including of course the fine work that Jack and Erika have done in formulating a language syntax. 2

(Dick Watson is the head of our Software Development effort here, Harvey Lehtman is a very capable systems programmer who has been with the NLS project for a number of years, and Jake Feinler is in charge of the Resource Notebook. 2a

(The reason for the delay in getting together was that the previous week was devoted to preparations for SRI-ARC's meeting with Larry Roberts July 5th.) 2b

The NIC/QUERY meeting was very fruitful. 3

The questions that came up point to the need for a substantial continuing dialogue between you and us. It would be best to carry on the dialogue through the NIC Journal; I'm sure you all should be able to handle that easily enough. It will probably also be wise to have another visit at an appropriate early time, to discuss detailed issues at length. 4

Areas which obviously require dialogue are: 5

0) the problem of coordinating this work, with all the ramifications that entails;
1) the syntax of the query language;
2) the data base structure;
3) the implementation language;
4) problems associated with building and maintaining an index file that the query language would presumably search;
5) provisions of "help" for the users to know how to use the query language: especially, what are the keywords etc.;
6) means for continued dialogue on the language design, to provide an opportunity for collaborative design and review before implementation. 5a

The area requiring earliest design collaboration concerns the use of NLS. There has been a considerable investment by both MITRE and the NIC in collecting, editing, and inputting formatted data. This data is in NLS files. We can now see that that effort is close to resulting in a useful, usable database, and we can't afford to make design decisions that would preclude that from happening. 6

Earlier, we had discussed the possibility of using SNOBOL, and converting NLS files to Tenex-SNOBOL readable format, but we

definitely want to review that before any final design decisions are made. 7

Funds are tight. Larry Roberts made it clear that we have to re-examine all NIC services and costs, and look for additional sources of revenue where possible. We really have to work closely to get maximum results, and we're eager to do so. That's why we're especially eager to initiate a continuing dialogue through the NIC Journal, and to have at least one visit relatively soon. But the NIC won't have additional funds to spend, other than those it is already spending, counter to my original hopes. 8

NIC/QUERY Collaboration

(J17804) 13-JUL-73 16:04; Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /RWW JI HGL JAKE MDK; Sub-Collections: SRI-ARC; Clerk:
MDK;
Origin: <KUDLICK>JI.NLS;7, 13-JUL-73 16:01 MDK ;

SRL 13-JUL-73 16:33 17805

Histogram Data is now Available for the Month of June

I have finished breaking down the histogram information for the month of June. Among the multitude of facts that can be derived are the following: 1

There are 1115 logins/week on the average 1a

The most common ratio of CPU/CON is .02, accounting for 29% of the logins 1b

64% of the logins had a CPU/CON ratio of .01-.03 1c

If you have ideas or other questions about this we can get together and see if this is worth repeating over any period of time. 2

SRL 13-JUL-73 16:33 17805

Histogram Data is now Available for the Month of June

(J17805) 13-JUL-73 16:33; Title: Author(s): Susan R. Lee/SRL;
Distribution: /PR; Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>HISTINFO.NLS;1, 13-JUL-73 16:31 SRL ;

DCW 13-JUL-73 17:06 17806

A First cut at ARC people working on other projects

In connection with our meeting and your request that I talk to Dave Brown and Ralph Keirstead. I have talked to them both and the following is a summary of our conversations. 1

Ralph Keirstead 2

Ralph has a contract related to program verification.The project consists of three distict sections 2a

1. A rather theoretically treatment of the subject. 2a1

2. In the field surveys of "how do you do it" 2a2

3. A canned experiment in an attempt to valididate experimentally some of the assumptions of (1.) 2a3

Section one is already covered by SRI personnel. It is interesting to note that our work in MPS would normally include us in this aspect of the project but ARC's historical parochialism and non-participation in institute projects elininates us from consideration.. 2b

Section two is really a field survey and doesnt seem suited to our staff. 2c

Section three is the one area we may be able to participate. There is certainly nothing very interesting about this part of the project, but if our aim if to get work that requires no long term commitments this one certainly fills the bill. 2d

Ralph could possibly use 6-8 man-weeks of help from 6 people (one week) to do some rather mundain Fortran programming. The scheme is to run some tests and attempt to verify some intuitaive feelings he has about the problem. 2d1

Two groups will be contructed one to program the other to devise tests. There are 6 programs to write of varying degree of complexity both arithmetically and logically (paths). 2d1a

Dave Brown 3

I really had sort of a bluesky session with Dave. There are several possibles or maybes, but nothing concrete seems to be avialable in the immediate future. We need to follow up by talking to the people involved in the following projects. 3a

some possibles: 3b

A First cut at ARC people working on other projects

1. The National Cancer Institute 3b1

SRI people: 3b1a

Art Magee 3b1a1

Karl Drexhage 3b1a2

task: 3b1b

A data base exists on the 6400 and the client insists that it be on an IBM 370. The job was done from the bottom up and could really use some high level design as well as some IBM knowledge. 3b1b1

2. Rugged program project 3b2

SRI people: 3b2a

Green 3b2a1

task: 3b2b

What maks a program "rugged"? Sort of a practical approach to the program verification problem. 3b2b1

3. Burroughs 3b3

SRI people: 3b3a

John Wensley 3b3a1

task: 3b3b

Burroughs is trying to decide if they are going to have a commercial version of ILLIAC IV (god help us). If this is done SRI seems to be a shoo in for doing the operation system. Most bases seemed to be covered execpt for a B1700 included in the system. This is burroughs micro-programmable machine and could prove very interesting/educational to ARC's long term goals. 3b3b1

4. NSA SECURE OS 3b4

SRI people: 3b4a

Peter Neumann 3b4a1

task: 3b4b

A First cut at ARC people working on other projects

This project entails design (no implimentaion) of a secure operating system. Any machine/language etc. The job is an attempt to generalize the factors that go into building (designing) a secure system. 3b4b1

5. RADC - software methodology 3b5

SRI people: 3b5a

?? 3b5a1

RADC people: 3b5b

Nelson 3b5b1

task: 3b5c

It appears that RADC has some Air Force money to spend on software methodology research. It seems to me with our contacts at RADC and with our ongoing interest in this subject we should be able to "get involved". 3b5c1

Some General Comments 4

The most obvious thing I learned in talking to Ralph and Dave was that ARC is looked upon as a non-SRI activity and that there is a great deal of reservation, if not suspicion, to use any of our people on non-ARC projects. There is a general understanding that we have contributed considerably to the financial well being of the division but, we are a technical unknown. 4a

There would seem to be a lot of long term benifit for ARC in "getting aquianted" with the various project leaders here at SRI. At the very least there should be more dialog between the "troops". As pushers of the community dialog concept we certainly are not very good citizens and as supposed facilitators we are missing a big bet in not using the people here at SRI as part of our experiment. 4b

This attitude will not spontainously go away and I thing the burden of action is on us. We could do much to promote inter SRI-ARC dialog. and I propose we start at once. 4c

DCW 13-JUL-73 17:06 17806

A First cut at ARC people working on other projects

(J17806) 13-JUL-73 17:06; Title: Author(s): Donald C. (Smokey) Wallace/DCW; Distribution: /DCE JCN; Sub-Collections: SRI-ARC; Clerk: DCW;
Origin: <WALLACE>MANPOWER.NLS;2, 13-JUL-73 15:28 DCW ;

KEV 13-JUL-73 17:24 17807

visiting the arpa office

I will be in the arpa office on 7/18 - 7/20 to bring display NLS up on their IMLAC. I will be in touch with you to say hello, and if you are willing and available, possibly use your assistance. In addition, after i bring NLS up, i would like to teach you the procedure for getting new versions of the IMLAC program into the imlac to run DNLS. Thank you in advance for any assistance.

Ken Victor

1

visiting the arpa office

(J17807) 13-JUL-73 17:24; Title: Author(s): Kenneth E. (Ken) Victor/KEV; Distribution: /GLB; Sub-Collections: SRI-ARC; Clerk: KEV;

RFC #552 Buz Owen
NIC #17809 SDAC-TIP
References RFC's #539, #524, #486, #451 13 July 1793 1

Single access to Standard Protocols 2

Isn't the idea of a single access protocol simple enough that one could be specified, and a socket reserved for it, before the proposed mail protocol becomes official? The result would be that MP could be the first protocol implimented under UULP (or whatever it is to be called,) and the other protocols could be "moved" as soon as any problems in the official specifications could be worked out, and at the convenience of implimentors. 3

The single access protocol might have the following commands: 4

USER 4a
PASS 4b
ACCT 4c
MAIL 4d
FTP 4e
RJS 4f
DRS (?) 4g
HELP (?) 4h
BYE 4i

following Jim White's idea of nested command and reply spaces. 5

This doesn't address the question of "what is free", or of the interrelationships between the various protocols, but it doesn't make those problems any worse, only a little different. 6

NWG/RFC# 552 ADO 13-JUL-73 23:08 17809
Single Access to Standard Protocols

(J17809) 13-JUL-73 23:08; Title: Author(s): A. D. (Buz) Owen/ADO;
Distribution: /NLG NSAG FTPIG NAG RJE; Sub-Collections: NWG NIC NLG NSAG
FTPIG NAG RJE; RFC# 552; Clerk: ADO;

17809 Distribution

E. M. Aupperle, Hubert Lipinski, Robert F. Hargraves, C. D. (Terry) Shephard, Maurice P. Brown, Robert L. Ashenhurst, John D. Day, Gary Blunck, Alvin P. Mullery, Gregory P. Hicks, Abhay K. Bhushan, Mark C. Krilanovich, Eric F. Harslem, Ronald M. Stoughton, James M. Pepin, Gary R. Grossman, Mark A. Kampe, John F. Heafner, Robert L. Fink, Robert T. Braden, James E. (Jim) White, Alex A. McKenzie, Jonathan B. Postel, Stephen M. Wolfe, John W. McConnell, John Gaffney, Jonathan B. Postel, Ray S. Tomlinson, Joshua Lederberg, Connie Hoog, Leonard B. Fall, James A. Blumke, David Hsiao, Michael L. Marrah, Vinton G. Cerf, Richard G. Powell, Gerald L. Kinnison, Paul Baran, Henry Chauncey, J. T. Sartain, Robert N. Lieberman, Ralph Alter, Nils Maras, Philip H. Enslow, Robert M. Dunn, Joseph B. Reid, William T. Misencik, Toshiyuki Sakai, Louis Pouzin, Yngvar Lundh, Robert H. Hinckley, Marvin Zelkowitz, Don D. Cowan, Louis F. Dixon, Michael O'Malley, Peter Kirstein, David J. Farber, Dave Twyver, Art J. Bernstein, Dave E. Liddle, A. Kenneth Showalter, D. D. Aufenkamp, Derek Leslie Arthur Barber, Tjaart Schipper, Richard M. Van Slyke Carol J. Mostrom, Paul R. Johnson, Milton H. Reese, Nancy J. Neigus, Ric Werme, Alex A. McKenzie, Peter Kirstein, Bradley A. Reussow, Michael A. Padlipsky, Robert H. Thomas, Robert G. Merryman, James M. Pepin, L. Peter Deutsch, Michael D. Kudlick, John D. Day, Robert D. (Bob) Bressler, Neal D. Ryan, Richard A. Winter, Richard W. Watson, Gregory P. Hicks, James E. (Jim) White, Stephen M. Wolfe, Kenneth T. Pogran, A. Wayne Hathaway, Robert C. Clements, Marc S. Seriff, Thomas F. (Tom) Knight, Abhay K. Bhushan, Robert T. Braden, Arvolo Chan, Steve D. Crocker, Eric F. Harslem, John F. Heafner, Jerry Fitzsimmons, John T. Melvin, Robert M. (Bob) Metcalfe W. A. Martin, Margaret A. (Maggie) Bassett, J. A. Smith, Leina M. Boone, Diana L. Jones, Nancy J. Neigus, Terry Sack, Frances A. (Toni) McHale, Lucille C. (Lucy) Gilliard, Ed J. Collins, Gary Blunck, John F. Heafner, Kathy Beaman, David J. King, C. Jane Moody, Sue Pitkin, Jerry Fitzsimmons, Gregory P. Hicks, Gloria Jean Maxey, Roberta J. Peeler, Craig Fields, Ermalee R. McCauley, Margaret Iwamoto, Dee Larson, Robert E. Doane, Brenda Monroe, Jeanne B. North, Pam J. Klotz Cutler, Barbara Barnett, Stan Golding, Steve G. Chipman, John P. Barden, Martha A. Ginsberg, Shirley W. Watkins, Janet W. Troxel, Connie D. Rosewall, Linda M. Webster, Anita L. Coley John C. Thomas, Michael J. Romanelli, Ronald M. Stoughton, A. D. (Buz) Owen, Robert L. Fink, Jaacov Meir, Jeanne B. North, Steve D. Crocker, Thomas F. Lawrence, John W. McConnell, James E. (Jim) White, A. Wayne Hathaway, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Joel M. Winett, Abhay K. Bhushan, Thomas N. Pyke, B. Michael Wilber, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, Barry D. Wessler, John T. Melvin, Jackie A. Priest, Terence E. Devine, Paul M. Rubin, Paula L. Cotter, O. A. Hansen, H. A. Thompson, Dan Dechatelets, Nancy C. Thies, Travis L. Greening, Robert Silberski, Marcia Lynn Keeney, Diane M. MacNeil Terence E. Devine, David J. King, William L. Andrews, Milton H. Reese, Kenneth M. Brandon, Lou C. Nelson, Jeffrey P. Golden, Richard B. Neely, Dan Odom, Ralph E. Gorin, Robert G. Merryman, P. Tveitane, Adrian V. Stokes, David L. Retz, Reg E. Martin, Gene Leichner, Jean Iseli, James E. (JED) Donnelley, William Kantrowitz, Michael S.

Wolfberg, Yeshiah S. Feinroth, James Hurt, Anthony C. Hearn, Eric F. Harslem, Robert M. (Bob) Metcalfe, Bradley A. Reussow, Daniel L. Kadunce, George N. Petregal, Michael B. Young, Michael A. Padlipsky, Schuyler Stevenson, L. Peter Deutsch, John Davidson, Thomas O'Sullivan, Sol F. Seroussi, Scott Bradner, Robert H. Thomas