A RESOURCE LOCATION AND ACQUISITION SERVICE FOR THE ARPA NETWORK

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1

abstract 2

this paper disucsses a Resource Acquisition Service REX. The initial implementation of REX provides information about resources within the ARPANET. Also disucssed are the major design features and issues to extend this implementation to handle the acquisition of network resources for the user. 2a

INTRODUCTION 3

Experience with the ARPA Network has shown that its use by non-expert users is fraught with frustation. Locating a desired resource (e,g., a SNOBOL COMPILER) is done generally through personal contact and is time consuming. Frequently, a unique resource may not be located at all and almost invariably not all instances of a general resource are found. Once a suitable instance of the resource is located, the user faces the problem of gaining access to the host system and coping with host's command language. In an effort to improve the Arpa Network's user environment, we have developed a system which provides on-line information concerning network resources and have designed but not implemented the automatic acquisitin of resources. 3a

providing information about resources is a first step in their automatic acquisition. In addition to supporting resource acquisition, the existence of on-line resource information is valuable in its own right. We have implemented an initial version of a Resource Acquisition Service (REX). This version of REX only provides an information service. Later versions will include acquisition of resources and access to resource tutorials on the network. 3b

THE REX SYSTEM 4

The initial version of the REX system provides on-line access to information about resources on the ARPANET. 4a

A data base about network resources and their attributes was developed. Entities considered to be resources include the system and application software, certain unique types of hardware, and certain data bases. The resources are also categorized. Thus, a

user may query the REX system about the location of a resource or combination of resources; may request a description of the attributres of some particular resources; and may request a listing of the categories of resources that exist on specific host systems. For example, the command DESCRIBE LANGUAGES AT BBN will result in a description of all software languages available on the BBN host system. 4b

THE REX SYSTEM LANGUAGE 5

the two major REX commands are FIND and DESCRIBE. Both of these operate with a set of keywords which name the entities about which information is requested. "THE FIND COMMAND" The FIND command is used to identify a set of hosts having a requested combination of resources. For example: FIND SNOBOL AND FORTRAN will produce a list of hosts at which both SNOBOL and FORTRAN are available. This is done by searching for the specified resources in an index of keywords. "THE DESCRIBE COMMAND" The DESCRIBE command is used to obtain information about categories and attributes of resources. For example: DESCRIBE HELP FOR SNOBOL AT NOT BBN will provide information on how to get help with SNOBOL all hosts which have SNOBOL except the host BBN also, DESCRIBE COMPILERS will give information about all compilers known to exist anywhere in the network. "THE HELP FACILITIES" Some on-line assistance is also provided to REX users. The HELP command produces a short description of the REX system and its usage. Typing "?" will produce a list of all valid commands. Lists of valid keywords may be obtained with the KEYWORD command. 5a

THE REX DATA BASE 6

The type of data kept in the REX data base is designed to be useful both to a human user and to a program attempting to manage the resources. For example, the log-in commands for gaining access to each host are stored,as are the commands needed to invoke the resources and information about the cost of the resources. This data will be used in the REX ACQUIRE facility, which is described in the next section. Also, included in the data base are such data as the names and telephone numbers of experts at each host site, the types of on-line implementation: 6a

ACQUIRE FACILITY; DESIGN ISSUES 7

A rudimentary ACQUIRE capability has been designed. This command will, when implemented, obtain resources for the REX user, thus bypassing much of the network and host command language. Using the information about log-in and sub-system invocation sequences stored in the data base, REX can not only find the location of certain resources for the user, but will actually acquire the

requested resource (i.e., set up a direct connection) for the user. For example, the user request ACQUIRE SNOBOL AND CP-67 will result in the users terminal being directly connected to a SNOBOL language system on a host which has the CP-67 operating system. The next response seen by the user will be SNOBOL's signal that it is ready for input. 7a

There are many difficult problems (standard log-in, error handling, standard accounting,...) yet to be solved before the ACQUIRE capability can be made operationally available. Solutions to the problems depend on, among other things, a number of interesting design issues. Our design up to now has assumed that the REX system is totally centrallized and that it will impersonate users at the hosts to which it connects. This means that invocation strings for each host and resource must be kept in the REX database; however, supporting software is not required at each host. An alternative design would be specific to its local host, yet would communicate with other REX processes by means of a well defined protocol. A similar experiment* is underway among the TENEX systems on the ARPANET. Functionally, the major benefit of the centrallized REX system is the quickness of response to information requests, since all the required data are in one location. In the distributed system, data requests involve polling all the relevant sites. Access to resources and updating of the data is handled more easily and quickly with the distributed system, however, since fewer site-to-site connections are involved. 7b

In order to gain access to most hosts, a valid user identification and password are required. If the REX user has such at the selected host, he could be entered into that system under his own identifiers. However, THE BASIC, easy access goal of the REX system would be subverted if the user were required to have accounts at all sites. As an alternative, the REX system could have one accounnt at each host and run the user jobs under this account. If resources are accquired for the user in this manner, the cost of the resource utilization and possibly the proportional cost of the REX system should be charged to the user of the REX system; however, in many systems the charges by job are not available for recharging to the REX user. it would be necessary for the REX system to maintain accounting information for each of its users in order to bill the user. A file protection problem also arises if more than one user executes under the same identifier since they could access each others files. 7c

Another alternative is to have the REX system establish an account for the user at the time the resource is needed. This implies that the REX system has special privileges at each host and that account can be established interactively. It is not certain that

every host has the required capability or willingness to grant such privileges. 7d

SUMMARY 8

Based on the initial use of the REX system, we have found that it is useful in the locating of network resources; however, the major unsolved problem encountewred by the network user is in acquiring resources. The designed acquisition facility is a first step in vsolving that problem. A great deal of work remains to be done in the area of user support facilities, such as resource management, tutorials, and standard user interfaces. 8a

*The RSEXEC system, developed by bolt, beranek & Newman, is described by B. Thomas in "A Resource-Sharing Executive for the ARPANET," Proceedings of the National Computer Conference and Exposition, 1973, p. 155. 9

20871 Distribution
Michael D. Kudlick,

RESOURCE LOCATION AND ACQUISITION SRVICE

(J20871) 13-DEC-73 06:45; Title: Author(s): Jack William Benoit, Erika Graf-Webster/JWB EG; Distribution: /MDK(HERE IT IS, WE HOPE); Keywords: RESOURCE-PROGRAM; Sub-Collections: NIC; Clerk: JI; Origin: <MITRE-TIP>BBEREX.NLS;5, 15-NOV-73 07:22 BBE ;

Date: 13-DEC-73 0853-EST

From: WALDEN at BBN-TENEX

Re: TENEX DOCUMENTS

- - - -

KEITH,

SUGGEST YOU WRITE TO ELSIE LEAVIT OF BBN ASKING FOR A LIST OF THE TENEX DOCUMENTS AND PAPERS.

DAVE

20872 Distribution
Keith N. Sandum,

(J20872) 13-DEC-73 05:51; Title: Author(s): David C. Walden/DCW3 ;
Distribution: /KNS ; Sub-Collections: NIC; Clerk: DCW3;

ISI Data Base Maintenance

A standard procedure for accessing and maintaining the ISI I-D-S data base is available and hopefully is being used. The procedures include the Data Base Developement paper, a Data Base Maintenance Catalog (DBMC), a User Program Catalog (UPC), an ICL Vocabulary, a Record Description Catalog (RDC), an ICL Manual, and a Data Query User's Guide. Unfortunately, none of these devices are being used by personnel of the ISI branch or administration. Therefore, user feedback is not available to personnel responsible for updating the data base. 1

Intermittedly there are inquiries into the status of the ISI data base by supervisory personnel of ISI. These inquiries result in sporadic efforts to make the system reflective of an on-going information system when really it has very low priority and only one person regularly working to insure some amount of data base integrity, and, write aplications and maintenance programs, maintain ICL and Data Query systems, and perform other tasks related to the mission and contractual efforts sponsored by the branch (RADC). 2

There is one person working part time to help maintain the data base (Donna Robilotta); however, she has the understanding that this work takes a low priority and she regularly abandons the project to do other assigned tasks. Thus the required inputs to the data base continue to pile up uncoded and unpunched with little maintenance performed on the data base. 3

The necessary approach may be to have all raw data funnel through one individual who will request assistance from bodies not busy with "priority" projects. This may pose some problem in that many or not familliar with the "SOP" and do not have the time to understand how the system works. 4

Thus, it will be necessary for ISI to clearly define the "importance" of this MIS and establish a priority for its upkeep. It is clearly impossible for one person to do all the work. 5

David Daughtry 6

20873 Distribution
Frank J. Tomaini, Roberta J. Carrier, Roger B. Panara, Joe P. Cavano,

ISI Data Base Maintenance

(J20873) 13-DEC-73 07:14; Title: Author(s): David L. Daughtry/DLD2;
Distribution: /FJT RJC RBP JPC; Sub-Collections: NIC; Clerk: DLD2;
Origin: <DAUGHTRY>ISI-DB-MAINT.NLS;1, 13-DEC-73 07:12 DLD2 ;

NJN 13-DEC-73 07:52 20874

USING Meeting details

The major item here is that you inform me if and when you are coming to the meeting: NJN or NEIGUS@BBN-TENEX.

USING Meeting details

USING members-- 1

It is getting sufficiently close to the date of the USING meeting in Menlo Park (Jan. 3-4) that we would like to have an exact count of who is planning to attend. I would appreciate very much your letting me know as soon as possible if and when you are coming. 2

If you are unable to attend the meeting and wish to send an alternate representative, that is acceptable, but the same request for "who and when" still applies. 2a

I have been told that Mil Jernigan is holding a block of rooms at the Mermaid Motor Inn, so please contact her if you wish to reserve a room there. Her ident is MEJ, network mail to JERNIGAN@NIC. Other arrangements are up to you. 2b

The following items are to be on the agenda, although a time schedule has not been fixed yet. If you have additional items that you would like to be discussed, please let me know soon. 3

Common Command Language 3a

Status of NETEDS and its implementation 3b

Task Management and job tailoring 3c

Specific complaints about servers; formal gripe mechanisms 3d

Progress in availability of documentation - online and offline 3e

from servers 3e1

netwide; from NIC 3e2

New Users Packet 3e3

Send your responses to me at the NIC or via netmail to NEIGUS@BBN-TENEX. Thanks, have a Happy New Year, and see you all soon. 4

--Nancy 5

20874 Distribution

John D. Day, Robert H. Thomas, Alan R. Hill, Abhay K. Bhushan, Robert P. Blanc, Barbara Noble, Leroy (Lee) C. Richardson, Frank G. Brignoli, Elizabeth J. (Jake) Feinler, Michael D. Kudlick, James E. (Jim) White, Michael A. Padlipsky, Kenneth L. Bowles, A. Wayne Hathaway, Jean Iseli, David H. Crocker, Nancy J. Neigus, Stephen M. Wolfe, Ronald M. Stoughton, Jim O. Calvin, John D. Day,

NJN 13-DEC-73 07:52 20874

USING Meeting details

(J20874) 13-DEC-73 07:52; Title: Author(s): Nancy J. Neigus/NJN;
Distribution: /USING DAY; Sub-Collections: NIC USING; Clerk: NJN;

USING membership

Dave--
John Day has not been put into USING yet. I included him in my message, but you should get around to it soon.
--Nancy

1

20875 Distribution
David H. Crocker,

USING membership

(J20875) 13-DEC-73 07:57; Title: Author(s): Nancy J. Neigus/NJN;
Distribution: /DHC; Sub-Collections: NIC; Clerk: NJN;

Scheduled USING Meeting

USERS group--
USING is having a meeting at the beginning of January in Menlo Park. The agenda will include the following items: Common Command Language, Task management and job tailoring, status of NETEDS, specific complaints about servers and formal gripe mechanisms, progress in documentation by servers and netwide (including New Users Packet). Refer to USING Note #5 (minutes of the last meeting) if you are unfamiliar with any of these items.
If you have any complaints or specific issues that you would like the members to discuss, please contact Dave Crocker (ident=DHC or netmail to DCROCKER@ISI), me (NJN or NEIGUS@BBN-TENEX), or some other USING Member that you know. If you want something added to the agenda, let me know. I hope to hear from you.
--Nancy Neigus

1

20876 Distribution

Stan M. Taylor, Suzanne D. Landa, Donna R. Cooper, Bob L. Mobley, Clayton A. Greer, John R. Pickens, Anthony C. Hearn, Susan S. Poh, Kirk E. Kelley, Laura E. Gould, Harvey G. Lehtman, Allan R. Alberts, Alan R. Hill, Jon E. Berger, Mil E. Jernigan, Paul Rech, Joe B. Wyatt, Charles H. Irby, Edward P. Schelonka, Robert D. (Bob) Bressler, Steve D. Crocker, Jonathan B. Postel,

Scheduled USING Meeting

(J20876) 13-DEC-73 08:14; Title: Author(s): Nancy J. Neigus/NJN; Distribution: /USERS; Sub-Collections: NIC USERS; Clerk: NJN;

Anyone going to the quarterly management meeting? (journal -- 20846,) 1

20877 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews, James H. Bair, A. Jim Blum, Meredith(Reddy) E. Dively, Jeanne M. Leavitt, 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, James E. (Jim) White, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, 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, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

(J20877) 13-DEC-73 08:49; Title: Author(s): Jeanne M. Leavitt/JML;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: JML;

party

All of you who are going to the Christmas Party at Rod's tomorrow: donations will be welcome from those of you bringing bodies besides your own (the dollar apiece isn't stretching far enough)--anyone else feeling the Christmas spirit who wishes to contribute an extra penny or two in the interest of another kind of spirit, please feel free to press the money on Marcia, Carol or me. 1

20878 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews, James H. Bair, A. Jim Blum, Meredith(Reddy) E. Dively, Jeanne M. Leavitt, 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, James E. (Jim) White, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, 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, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

party

(J20878) 13-DEC-73 09:06; Title: Author(s): Judy D. Cooke/JDC;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: JDC;

XNLS complaint

Jump to File Return locates me at a seemingly random address in the old file; can the old one be recreated exactly? 1

20879 Distribution
New Nls,

XNLS complaint

(J20879) 13-DEC-73 11:36; Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /NEWNLS; Sub-Collections: SRI-ARC NEWNLS; Clerk: JMB;

CHI 13-DEC-73 12:26 20880

DCE's proposal for modifications to INMES -- a better approach

Dean, I think the IM program doug suggested should simply open the message.txt file, delete it, insert the text from it, and close it. This will provide the same protection as renaming it does and is much simpler. If you do not understand how to do this or why it is equivalent and simple, please call me. -- Charles. 1

20880 Distribution
N. Dean Meyer, Douglas C. Engelbart,

CHI 13-DEC-73 12:26 20880

DCE's proposal for modifications to INMES -- a better approach

(J20880) 13-DEC-73 12:26; Title: Author(s): Charles H. Irby/CHI; Distribution: /NDM DCE; Sub-Collections: SRI-ARC; Clerk: CHI;

Using addition

John -- I just added you to USING. Thought I had done it a long time ago (sorry). Welcome.

(I vaguely recall the NIC bouncing up and down when I was trying to put you into Using; I must have dropped my pointer to the task).

Dave.

1

20881 Distribution
John D. Day,

Using addition

(J20881) 13-DEC-73 13:21; Title: Author(s): David H. Crocker/DHC;
Distribution: /DAY; Sub-Collections: NIC; Clerk: DHC;

USING Meeting Attendance; Response to (20874,)

Nancy-- Count me in Jan 3 and 4. --Jim 1

20882 Distribution
Nancy J. Neigus,

USING Meeting Attendance; Response to (20874,)

(J20882) 13-DEC-73 13:46; Title: Author(s): James E. (Jim) White/JEW; Distribution: /NJN; Sub-Collections: SRI-ARC; Clerk: JEW;

author fjt to 13 dec 73

FJT 29-NOV-73 07:08 20621
mess
Message: I would appreciate it if you guys - when you send messages to Frank's directory, please send copy to Carrier's directory as sometimes I don't have a change to log on as both Carrier and Tomaini, if you know what I mean. And if the message should be important, please make sure you do that...Thanks much...Bobbie
*****Note: Author Copy*****

1

FJT 19-NOV-73 06:45 20370
Tickler - 19 Nov - 30 Nov 73
Location: (IJOURNAL, 20370, 1:w)
*****Note: Author Copy*****

2

Comments: Please NOTE that CONFESSIONS are this Wednesday - 21 Nov!

2a

FJT 19-NOV-73 06:31 20369
tickler
Location: (IJOURNAL, 20369, 1:w)
*****Note: Author Copy*****

3

Comments: Joe, I'm afraid I keep running out of room so I am getting rid of this also. I need December...If Donna can't do it within a day or so please let me know and I will do it...Bobbie

3a

FJT 19-NOV-73 06:31 20368
Summary of Accomplishments for ISI (past 5 years)
Location: (IJOURNAL, 20368, 1:w)
*****Note: Author Copy*****

4

Comments: This was prepared for Dr. LeBerge's visit from past accomplishment reports for GT2. It was rejected by Center staff..reason unknown.

4a

FJT 16-NOV-73 06:05 20330
Remaining part of October - Tickle
Location: (IJOURNAL, 20330, 1:w)
*****Note: Author Copy*****

5

Comments: Joe, would you please have Donna put the month of December in the tickler file. And remind her about the changes...Thanks!! - Bobbie

5a

author fjt to 13 dec 73

FJT 9-NOV-73 11:42 20139
tickler
Location: (IJOURNAL, 20139, 1:w)
*****Note: Author Copy*****

6

FJT 7-NOV-73 08:09 20081
Additional Info on Tickler
Location: (LJOURNAL, 20081, 1:w)
*****Note: Author Copy*****

7

FJT 5-NOV-73 05:33 20043
Tickler - 5 - 16 November
Location: (LJOURNAL, 20043, 1:w)
*****Note: Author Copy*****

8

FJT 1-NOV-73 06:06 19989
Tickler for 29 Oct - 9 Nov
Location: (LJOURNAL, 19989, 1:w)
*****Note: Author Copy*****

9

FJT 25-OCT-73 06:31 19852
tickler for week 22 Oct - 2 Nov
Location: (LJOURNAL, 19852, 1:w)
*****Note: Author Copy*****

10

FJT 23-OCT-73 12:08 19829
tickler 1 - 11 Oct
Location: (LJOURNAL, 19829, 1:w)
*****Note: Author Copy*****

11

Comments: Joe, am getting rid of first two weeks except for 1 day - And yes, I do have the complete month of November in my file...Bobbie

11a

FJT 9-OCT-73 07:21 19572
Additional info for Tickler
Location: (KJOURNAL, 19572, 1:w)
*****Note: Author Copy*****

12

FJT 9-OCT-73 05:54 19565
Tickler - 8 - 19 Oct 73
Location: (KJOURNAL, 19565, 1:w)

author fjt to 13 dec 73

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

13

FJT 4-OCT-73 14:03 19513
instructions for lab activity report
Location: (KJOURNAL, 19513, 1:w)
*****Note: Author Copy*****

14

FJT 4-OCT-73 13:19 19511
tickler - additional info
Location: (KJOURNAL, 19511, 1:w)
*****Note: Author Copy*****

15

FJT 4-OCT-73 11:54 19509
tickler for month of september
Location: (KJOURNAL, 19509, 1:w)
*****Note: Author Copy*****

16

FJT 3-OCT-73 05:39 19431
tickler
Location: (KJOURNAL, 19431, 1:w)
*****Note: Author Copy*****

17

FJT 27-SEP-73 06:06 19334
cjangeofreportingprocedures
Location: (JJOURNAL, 19334, 1:w)
*****Note: Author Copy*****

18

Comments: for t. bucciero

18a

FJT 26-SEP-73 05:31 19302
UC Personnel
Location: (JJOURNAL, 19302, 1:w)
*****Note: Author Copy*****

19

Comments: For info only

19a

FJT 25-SEP-73 12:03 19296
Letter from Commander on Center Computer Support
Location: (JJOURNAL, 19296, 1:w)
*****Note: Author Copy*****

20

author fjt to 13 dec 73

FJT 25-SEP-73 11:24 19293
WPB Blast
Location: (JJOURNAL, 19293, 1:w)
*****Note: Author Copy*****

21

Comments: Have a ball!! 21a

FJT 25-SEP-73 05:35 19280
tickler for week of 24 sep - 5 Oct
Location: (JJOURNAL, 19280, 1:w)
*****Note: Author Copy*****

22

FJT 21-SEP-73 08:05 19178
Tickler - 24 Sep - 5 Oct (2 week time period)
Location: (JJOURNAL, 19178, 1:w)
*****Note: Author Copy*****

23

FJT 20-SEP-73 13:23 19143
tickler - 24 Sep - 5 Oct (2 week layout)
Location: (JJOURNAL, 19143, 1:w)
*****Note: Author Copy*****

24

FJT 12-SEP-73 07:28 18992
tickler - Sorry but more Info
Location: (JJOURNAL, 18992, 1:w)
*****Note: Author Copy*****

25

FJT 12-SEP-73 06:35 18989
tickler for week of 17 Sep 73
Location: (JJOURNAL, 18989, 1:w)
*****Note: Author Copy*****

26

FJT 12-SEP-73 06:17 18988
tickler - month of August
Location: (JJOURNAL, 18988, 1:w)
*****Note: Author Copy*****

27

FJT 7-SEP-73 07:18 18844
tickler for week of 10 september
Location: (JJOURNAL, 18844, 1:w)
*****Note: Author Copy*****

28

author fjt to 13 dec 73

FJT 6-SEP-73 13:54 18833
Tickler for week of 10 Sep
Location: (JJOURNAL, 18833, 1:w)
*****Note: Author Copy*****

29

FJT 4-SEP-73 10:42 18807
Tickler for week of 4 Sep 73
Location: (MJOURNAL, 18807, 1:w)
*****Note: Author Copy*****

30

FJT 27-AUG-73 07:51 18672
tickler for week of 27 Aug
Location: (MJOURNAL, 18672, 1:w)
*****Note: Author Copy*****

31

FJT 20-AUG-73 08:39 18505
WWMCCS Progress Meetings
Message: WWMCCS Progress Meetings, directly following Branch Chief's meetings on Monday mornings wil no longer exist. They will be replaced by on-call meetings as required by Capt daughtry or management personnel WHEN REQUIRED and you will be notified as far as in advance as possible. FJT
*****Note: Author Copy*****

32

FJT 20-AUG-73 08:34 18504
toll calls
Message: All toll calls to Utica & Syracuse will be made via tie lines. There will be no direct toll charges to Utica or Syracuse while tie lines are in effect. Hopefully, this and your strict control of other toll calls will rec reduce the base's large toll charges...fjt
*****Note: Author Copy*****

33

FJT 20-AUG-73 08:01 18503
again, file for july tickler
Location: (MJOURNAL, 18503, 1:w)
*****Note: Author Copy*****

34

FJT 20-AUG-73 07:41 18502
tickler for month of July
Location: (MJOURNAL, 18502, 1:w)
*****Note: Author Copy*****

35

author fjt to 13 dec 73

FJT 17-AUG-73 06:00 18485
tickler for week of 20 August
Location: (MJOURNAL, 18485, 1:w)
*****Note: Author Copy*****

36

FJT 9-AUG-73 10:25 18334
FY-75 TPO Summary (8 page version)
Location: (MJOURNAL, 18334, 1:w)
*****Note: Author Copy*****

37

FJT 9-AUG-73 10:21 18333
fy-75 tpo summary (six page version)
Location: (MJOURNAL, 18333, 1:w)
*****Note: Author Copy*****

38

FJT 1-AUG-73 07:51 18157
Proficiency Exercise
Location: (LJOURNAL, 18157, 1:w)
*****Note: Author Copy*****

39

FJT 24-JUL-73 11:44 17990
Three week Preview
Location: (LJOURNAL, 17990, 1:w)
*****Note: Author Copy*****

40

Comments: any ideas, comments, or suggestions,please let Bobbie know

40a

FJT 23-JUL-73 11:29 17975
Form 30a's prepared july 1973 for fy-74
Location: (LJOURNAL, 17975, 1:w)
*****Note: Author Copy*****

41

20883 Distribution

author fjt to 13 dec 73

(J20883) 13-DEC-73 14:28; Title: Author(s): Frank J. Tomaini/FJT; Distribution: /; Sub-collections: RADC; Clerk: FJT;

Some Suggested References on ARC work for NSW Paper

Steve, You asked me to send you a couple references to documents that I thought should have been referenced in your NSW paper. The main papers are: D.C. Engelbart, R.W. Watson, J.C. Norton, "The Augmented Knowledge Workshop", Proceedings National Computer Conference, Vol. 42, June 1973, pp 9-21. This paper discussed the concept of a "works" and explicitly discussed software workshop. Another paper discussing scope based editor etc. is: D C ENGELBART W K ENGLISH "A Research Center for Augmenting Human Intellect" AFIPS Proceedings-Fall Joint Computer Conference Vol 33 pp 395-410 1968 (SRI-ARC Catalog Item 3954). Other references to idea are in several ARC reports, proposals back as far as 1962; one is D C ENGELBART SRI-ARC STAFF Advanced Intellect-Augmentation Techniques - Final Report Stanford Research Institute Augmentation Research Center CR-1827 July 1970 (SRI-ARC Catalog Item 5140) 1

20885 Distribution
Steve D. Crocker, Charles H. Irby, Robert M. Balzer,

Some Suggested References on ARC work for NSW Paper

(J20885) 13-DEC-73 15:29; Title: Author(s): Richard W. Watson/RWW;
Distribution: /SDC2 CHI RMB; Sub-Collections: SRI-ARC; Clerk: RWW;

INMES mod, cf CHI's 20880 and DCE's 20814

Charle's proposal; in (20880,), is certainly an efficient way to do the job requested in my (20814,). One missing feature: I rather liked being able to go look at the original message text if I questioned what INMES did to it during input into my NLS file. I have seveal times had rather confusing glitches show up in the NLS INMES-inputted version of a message, and I needed to see the orignal. In fact, once I would have lost a message if I hadn't gone back to look. Therefore, until INMES matures further, I would like to have the temporary copy of the original form. So I'd still like my version of INMES to do what I spelled out in (20814,).

But Charles, thanks anyway. Regards, Doug

20886 Distribution
N. Dean Meyer, Charles H. Irby, James C. Norton,

DCE 13-DEC-73 17:33 20886

INMES mod, cf CHI's 20880 and DCE's 20814

(J20886) 13-DEC-73 17:33; Title: Author(s): Douglas C. Engelbart/DCE ; Distribution: /ndm chi jcn ; Sub-Collections: SRI-ARC; Clerk: DCE ;

Nancy - I am planning to come to the USING meeting. For more information on NETED's, please see the current issue of the newsletter [Dave Grothe has one for the UCSD B6700 that should be complete by the meeting]. The persons who have indicated they were comming [all confirmed except for one who is highly likely, are]: 1

Jim Calvin@case-10 1a

Rosy [Alan Rosenfeld]@Case-10 1b

Alan Hill@SDAC 1c

Clayton Greer@UCSB 1d

John Day@Illinois 1e

Dave Grothe@Illinois 1f

Mike Padlipsky@Multics 1g

Also, a few of us have been working on a Network Help facility to present at the USING meeting. We hope to have it polished and also to distribute it a few days prior to the meeting so everyone will have a chance to have read it.

Also, Jack Benoit and Erika Graf-webster here at MITRE are going to write some type of note on their REX system [at case-10 as: <jedir>rex in case you want to try it], soliciting USING assistance for its further development. I will ensure they send you a note.

Nancy, if you could add the above two items tentatively to your agenda, I would appreciate it. Also, if possible, could you reserve another Membership opening for a person with a government organization here in D. of C. , I don't know today who it will be but will know in a few days. They are currently using the net and shortly hope to either become a node and/or form their own net and/or subnet. I will have him write you a note as soon as I know. 2

I like your agenda especially because it focuses on areas where we have been expending effort as a group and if further progress could be materialized within the near term on those subjects, we would be much further along than to consider a more diverse agenda. May I suggest we also reserve, towards the end, an hour or so to formally wrap-up and possibly structure a few committments on work to be done for the next interveneing time period. 3

Mike Kudlick has recently asked if he could include the file <help>tutorial@nic into the nic query system. I said sure providing he support it and encourage further network participation in its development to ensure emergence of a nic available data base on assorted aspects of how to use other systems. If you think appropriate, you might add this to the agenda under the last item (or include it therein).

4

Finally, MITRE has published a version of the USERS HANDBOOK and I am trying to ensure that the public distribution copy is available for the meeting. If you think desireable, maybe we could consider it and review it for improvements for a next edition.

5

I would like to extend my best personal wishes for a nice holiday season, good health, and prosperous new year.....Jean

6

20887 Distribution
Nancy J. Neigus, David H. Crocker,

(J20887) 14-DEC-73 03:30; Title: Author(s): Jean Iseli/JI;
Distribution: /NJN DHC(in response to Nancy's note - Dave, I will have the new member indicated above send you a note in next few days);
Sub-Collections: MITRE-TIP USING I; Clerk: JI;
Origin: <MITRE-TIP>NANCY.NLS;1, 14-DEC-73 02:59 JI ;

JI 14-DEC-73 03:45 20888

News <help> linkage : updates

Mike, Could you please change the linkage for ARPANEWS to <help> please. I am unable to update the updates until that is done. Also, I have taken the liberty to indicate to Nancy Neigus that the tutorial file might be worth discussing at USING. If you would like to see the message to her, please read: (20887,). 1

20888 Distribution
Michael D. Kudlick, Mil E. Jernigan,

JI 14-DEC-73 03:45 20888

News <help> linkage : updates

(J20888) 14-DEC-73 03:45; Title: Author(s): Jean Iseli/JI;
Distribution: /MDK MEJ; Keywords: News-updates; Sub-Collections:
MITRE-TIP NIC SRI-ARC; Clerk: JI;

RBP 14-DEC-73 06:35 20889

FY74 PMP TASK01 ASSOCIATIVE PROCESSOR

This is the revised version of the FY74 write-up for the PMP.

1. ASSOCIATIVE PROCESSOR 1

1.1 Introduction 2

1.1.1 Purpose & Goals: The objective of this program is, as directed by Secretary of the Air Force/Research & Development, and Headquarters U.S. Air Force, to establish an associative processing test bed facility and to assess the capability of an associative processor (AP) to function efficiently with a modern sequential processor on non-synthesized, real time data. 3

The essential tasks of this advanced development are: 3a

(1) The purchase of a commercially available AP. 3b

(2) The development of an effective associative processor - Honeywell Information Systems (HIS)-645 interface. 3c

(3) An instrumentation system. 3d

(4) The development of associative solutions to air surveillance functions as depicted in Airborne Warning and Control System (AWACS). 3e

(5) Solution analysis to determine hardware utilization system efficiencies and cost effectiveness. 3f

(6) System optimization. 3g

(7) Development and test of a realiability maintainability concept for an AP. 3h

(8) Information exchange among several interested agencies. (Rome Air Development Center (RADC), in conjunction with Syracuse University, will host small one-or-two-day meetings at which representatives from interested agencies and from industry will meet and interact). 3i

(9) A Programming Language (APL) documentation of the associative processor computing system (APCS). 3j

(10) Dissemination of progress reports within the Department of Defense. 3k

(11) Documentation of real time AP algorithms, solution analysis, hardware utilization data, cost effectiveness curves, and the design specification and justification for the resulting APCS. 3l

1.1.2 Potential: There are several critical functions in a large number of military systems for which no good solutions exist due to the inadequacies of available computing mechanisms. In these cases, the approach has been to either adjust " the requirement" to meet the existing computing capability or to choose "smart" methods of sampling in an attempt to lower the incoming data rate. 4

Upon completion of this program, a computer technology will be demonstrated which, because of its parallel processing capability, can meet the real time data processing requirements of many advanced military systems where 10 Million input pulses per second are expected to be seen in a normal environment. 5

The associative processing techniques will allow two to three orders of magnitude increase in effective instruction rates over that of conventional serial machines, thereby allowing more direct coupling with the threat environment and permitting effective surveillance and management of the deployment of our resources as required. 6

1.1.3 Related programs: Preliminary investigation has already indicated that the AP will prove extremely effective in such areas as electronic warfare, sensor processing, collision avoidance, data management, display processing, pattern recognition and phased array radar resource management. In one such investigation, the Federal Aviation Agency (FAA) predicts that by 1980 an airspace with boundaries of 800 miles by 400 miles will contain up to 8000 aircraft on which air traffic control functions must be performed. A committee set up by the Department of Transportation estimates that these processing functions will require 14,300,000 computer instructions/second if a conventional computer is used and will need 1,750,000-32 bit words of storage. Evaluating this same requirement in terms of the associative processing capability, the committee determined that only 332,785 instructions need be processed/second and that only 110,000-32 bit words of storage will be required. 7

1.2 ANALYSIS AND TECHNICAL APPROACH 8

1.2.1 Technical Background: As far back as 1958, there existed literature which suggested the speed advantages inherent in a device which permitted all words in a computer memory to be compared simultaneously with an application dictated search criterion. This hypothesized device was given names such as content addressed memories, search memories, associative memories, and tag memories. Since this capability required at least "exclusive-or" logic at each and every bit of memory plus logic at each word of memory, it was not economically feasible to build such a device at that time. 9

In 1961, RADC began an extensive three pronged program to (1) advance hardware technology suitable for economically implementing the associative concept, (2) define new computer designs organized around the associative concept, and (3) perform application studies of the various associative organizations generated under (2) to demonstrate the system effectiveness resulting from the use of these new associative organizations. Later RADC also had fabricated a 2000 word associative memory which used conventional toroid magnetic cores for both storage and the exclusive-or function (not a desirable implementation but the best there was at that time) and which used integrated circuits (then an advance in the state-of-the-art) for the word logic. This device was developed to provide an experimental tool for developing associative software techniques and for application studies. 10

Since 1958, component technology has passed from the vacuum tube circuit technology (highly impractical for associative devices) to integrated circuits (good for associative devices). Technology for storage has gone from drums (impossible for associative devices) to cores (not well suited) to thin film (adequate) and is advancing to large scale integration (ideal) which permits storage, bit logic, word logic, drivers and decoders all to be implemented with a common technology. (See RADC technical report "Silicon on Sapphire for Associative Processor.") 11

Associative machine organization studies sponsored by RADC have already demonstrated that significant flexibility, efficiency and processing speed can be obtained by the use of associative processors for data management, communications, the executive control functions of multi-processor systems, electronic warfare, and for radar data processing functions. 12

Efforts, the results of which are available for key decisions, include: "Mission Effectiveness of Associative Processor in AWACS", "Mission Oriented Associative Processor", "Silicon on Sapphire for Associative Processor", a study report funded by FAA to determine the impact of associative processing on air traffic control, and RADC wide sponsored efforts on associative processing for a variety of applications. 13

1.2.2 Approach Selected: The approach selected is to create a fully instrumented associative/sequential testbed and to test the effect of this type of configuration on a typical air surveillance problem using nonsynthesized data. The AWACS data processing problem is the problem that has been selected. The testbed will consist of the Goodyear STARAN-1000 associative processor coupled with the HIS-645 under control of the MULTiplexed Information & Computing System (MULTICS) operating system. 14

Having this test bed, the applications activity could be and should be approached on as broad a front as posible. This is being accomplished to some extent by other projects within the several divisions of RADC for such functions as communications multiplexing, document retrieval, intelligence management , image processing and cartography. However, due to funding limitations a most important frontier, in terms of getting technology into the field, is being ignored. This frontier involves the several enhancement programs being conducted at Electronic Systems Division (ESD) which are desirous of exploratory AP applications studies (see page 2-(1-10) for 427M letter). It was planned that this task would fund MITRE to conduct these investigations and code for demonstration important elements of the associative processing solution on the RADC testbed. This activity has been deferred until FY-1976. 15

1.2.3 Technical Achievements Planned: During the subject advanced development program, several critical AWACS data processing functions will be reduced to associative solution. The approach and benefits of these solutions will be made available to AWACS and other systems in the Air Force where these functions are applicable. Under Project 6523 and Project 5581, associative processing as applied to communication multiplexing and data management ,respectively, are being studied. Algorithms generated as a result of these programs will be coded and tested on the AP test bed facility. The results of this task will provide the justification and rationale for a cost effective tactical associative processor design specification (hardware, software and interface). This specification will be the basis for the actual construction of an APCS suitable for airborne, tactical and possibly spaceborne applications. The APCS is planned to be funded under a separate engineering development program which will start approximately one year after the conclusion of the subject program. 16

PROGRESS: The STARAN associative processor has been installed, interfaced to the HIS-645 and accepted. A display interface to the associative processor has been designed and will be fabricated and installed during FY74. 17

The contractual effort with Boeing Computer Services Company which will provide surveillance consultants, live AWACS data in a format suitable for the RADC testbed, and associative solutions for weapon control and passive tracking is underway. RADC project personnel are deeply involved in developing solutions to the surveillance and display processor functions. Included in this activity is the development of systems library routines such as trigonometric function required by the AWACS function algorithms. The sin x and cos x functions have already been completed. 18

1.3 DEVELOPMENT AND TEST PLAN

The technical approach to this plan is the purchase of an instrumented associative processor with a suitable interface to the HIS-645 system. Included in this testbed facility will be a tactical display unit. RADC in conjunction with Syracuse University, will produce an APL description of the AP functional capability plus other capabilities essential to effective use of associative systems but which are not contained in the AP. RADC, with close AWACS coupling, will identify the appropiate solution algorithms, code them for the AP and run these programs using live non-synthesized data; and in conjunction with the University of Michigan, analyze by means of the instrumentation package the flow of the solution through the AP determining the various register utilizations, system inefficiencies and bottlenecks.

This analytical data will then be used to develop cost effective AP system improvements which will be incorporated in the APL description and, where possible, simulated by a micro-programmed routine on the AP system. The application programs will be coded to take advantage of the system improvements. The final code will be run on both the APL description of the associative processor and the AP machine. Boeing Computer Services Company in a like manner will have performed performance measurements on the AWACS 4PI system while running the sequential algorithms for these same functions. These two sets of measurements will provide the basis for a detailled comparative analysis. As a result of the above development, the RADC-Syracuse-Michigan team will be in ideal position to determine the requirements of a language suitable for exploiting the power inherent in the APCS.

In a similar manner, an operating system will evolve. On a continuing basis, system service packages will be constructed to accomodated the requirements of the applications development. These service packages will be integrated as they are developed, thus forming a firm, requirement generated, test bed operating system. This involvement will make the RADC-Syracuse-Michigan team uniquely qualified to write the specifications for the APCS operating system and language and compiler to accompany the design specification for any follow-on engineering development. The algorithms, flow analysis, utilization factors and all other useful data will be documented and published. The final AP configuration will be documented in terms of a debugged APL specification and as such will represent sequential computer interface characteristics. In addition to the above RADC will provide reliability-maintainability experts with detailed information on each functional unit. Based on these inputs, an integrated reliability-maintainability and logistics support approach for the associative processor will be developed. This approach will guarantee maximum availability at a minimum life cycle cost.

22

1.4 GENERAL PURPOSE ASSOCIATIVE PROCESSOR 23

1.4.1 A commercial associative processor has been purchased and integrated with the HIS-645 serial computer at RADC to form a test bed for evaluating the capabilities of the associative processor in solving Air Force problems. Non-synthesized real time data will be used in testing the test bed system. 24

1.4.2 Schedule within Master Schedule. 25

1.4.2.1 Documentation Schedule 26

D&F Submission	Sep 70	26a
D&F Approval	Nov 71	26b
Contract Award	Apr 72	26c
Contract Award (Reliability)	Jun 72	26d
Contract Award (AP Application)	Oct 73	26e

1.4.2.2 Key Decision Points 27

1. Submission of follow-on Engineering Development Program	Oct 74	27a

FY74 PMP TASK01 ASSOCIATIVE PROCESSOR

1.5 FINANCIAL FUNDS ($000)

	PRIOR	FY74	FY75	FY76	FY77	FY78
Associative Processor		56	20	-		
Reliability Study		71	-			
Syracuse U.		121	100	100	100	100
Applications Study I		93	5	-		
Display Interface		40	50	-		
Data Manipulator		45	130	-		
Library Routines		50	-			
Fast APL		50	-			
Applications Study II		-	80	125		
Applications Study MITRE			-	160	160	
Signal Proc Study			-	100		
Signal Proc Implement				-	90	100
Mass Memory Organization				-	90	
Totals	2,013	526	385	485	440	200

FY74 PMP TASK01 ASSOCIATIVE PROCESSOR

MANPOWER

FUNCTIONAL TITLE	GRADE	FY73	FY74	FY75	FY76
Task Engineer	GS-13	1.0	1.0	1.0	0.5
Senior Systems Analyst	GS-13	1.0	1.0	1.0	0.5
Computer Specialist	GS-13	1.0	1.0	1.0	-
Senior Lang Specialist	GS-13	2.0	2.0	2.0	1.0
Junior Lang Specialist	Airman	1.0	1.0	1.0	
Reliability Engineer	GS-12	0.5	0.5	0.5	0.5
Senior Programmer	GS-13	1.0	1.0	1.0	0.5
Senior Programmer	GS-12	1.0	1.0	1.0	0.5
Junior Programmer	Lt	1.0	1.0	1.0	0.2
Senior Application Engr	GS-13	1.0	1.0	1.0	0.5
Junior Application Engr	GS-12	3.0	3.0	3.0	1.5
Design Engineer	Capt	1.0	1.0	1.0	1.0
Instrumentation Engr.	Capt	1.0	1.0	1.0	0.2
Instrumentation Tech	GS-12	1.0	1.0	1.0	
Clerk Steno	GS-5	0.5	0.5	0.5	1.0
Required manpower		17.0	17.0	17.0	7.9
Available manpower		12.0	12.0	12.0	5.4
Additional required		5.0	5.0	5.0	2.5

FY74 PMP TASK01 ASSOCIATIVE PROCESSOR

427M SPO Letter

MCNS (Mr. Kent/4532) 6 Jul 1973
Associative Processing, MCI Project 5220 (Telecon MCNS/Mr. Kent and MCIT/LtCol Whitson, 5 Jul 73)
MCI

1. On 2 July 1973, the 427M SPO received an information briefing by the MITRE Corporation on planned FY 74 associative processing investigations being conducted under subject project. Of prime interest to 427M were the candidate applications for study. Included was the potential applicability of associative processing techniques to the Orbit Representation Function (AFGPIV) within the Space Computational Center Segment of 427M.

2. The 427M SPO has some interest in this study as a way of relieving prime computer workload in the new system; however, no hard evidence exists to allow a decision to pursue the technique. Since the referenced effort has potential impact upon 427M design activities, it is requested that increased emphasis be placed upon the AFGPIV aspects of the program proposed. Specifically, the following information would be useful if it could be obtained within the next five (5) months:

a. Potential gain predicted in throughput using an associative processor over serial processors (e.g. HIS 6070), using simplified AFGPIV as a model.

b. Machine size, complexity, and estimated software complexity to provide a complete AFGPIV capability, to include non-functional software requirements.

c. Measurements and estimates of equipment availability derived during "a" above (e.g. downtime, MTTR, etc.).

d. Estimated date of equipment availability for acquisition.

e. Estimate of equipment cost.

3. Your cooperation is appreciated. Any questions concerning the above should be directed to MCNS/Mr. Kent, extension 4532.

SIGNED
Anthony D. Salvucci
Director, 427M System Program Office
Deputy for Command and Management Systems

Cy to: MC
MITRE(F. Chess)

FY74 PMP TASK01 ASSOCIATIVE PROCESSOR

(J20889) 14-DEC-73 06:35; Title: Author(s): Roger B. Panara/RBP;
Sub-Collections: RADC; Clerk: RBP;
Origin: <PANARA>FY74PMPTASK01ASSOCPROC.NLS;1, 14-DEC-73 06:32 RBP ;

JI 14-DEC-73 07:33 20890

test for dave brown

Dave, I am now composing the message. sally, to get this far, you just need to type the first letters that are capitalized above, for example: ej will result in e[xecute] J[ournal] and sm will result in s[ubmit] m[essage]. now, I will type a ↑V<CR> to make then next text string a new paragraph, watch:

i typed two of them. sally, type a <CR> right now or you will be logged out, after you do that, I will continue, go..

;okay, i will now terminate the message by typing a <CR> the next sequence will be to send it.

1

20890 Distribution
S. J. Miller, David R. Brown,

JI 14-DEC-73 07:33 20890

test for dave brown

(J20890) 14-DEC-73 07:33; Title: Author(s): Jean Iseli/JI;
Distribution: /SJM(this is your parenthetical expression) DRB(this is
your dave - notice that i seperate idents with a comma ",);
Sub-Collections: NIC; Clerk: JI;

draft for review

this draft is for review and comment at menlo park. please distribute it to jack bialik, dick schmidt, and oliver whitty.

task 21 capabilities of existing energy data systems

the future deis system must be an outgrowth of the current system and provide for continuity of operations. consequently knowledknowledge of the technical capabilities and limitations of the current system is essential for the design of the future system. also, the future system will interact with or be tied into, other energy information systems. hence, kmowledge of other energt information systems is also required.

objective

a quantitative technical description of existing energy data systems plus projections for the next two years, or more if possible, identifying anticipated bottlenecks or problem areas in data flow andOr handling in particular.

scope

inclide all dod information systems that might be involved in the deis , plus other government systems such as that of the fea. include commercial, state and local government, and international only if they are especially effective and likely to be involved in the deis. include data collection systems worldwide, giving special attention to accuract, time delays, nymber of data collection points , amount of data, completeness of data and security. include the three services, the unified ans specified commands, and other organizations such as dod contractors if appropriate. include energy data bases and analysis facilities, models, etc., that could be tied into the deis. all types of energy resources should be consodered, incliding natural gas, hydroelectric, and nuclear. emphasis should be placed on automated systems and plans for automation. the description should include quantitative information concerning data rates, capacities, levels of security, response times, etc.

product

prepare a technical report that includes a summary containing the more significant findings. in addition to the technical report, a collection o

20891 Distribution
Douglas C. Engelbart,

draft for review

(J20891) 14-DEC-73 08:06; Title: Author(s): David R. Brown/DRB;
Distribution: /DCE; Sub-Collections: NIC; Clerk: DRB;

Draft Task 1[followon-to-first-segement]

product

prepare a technical report that includes a summary containing the more significant findings. in addition to the technical report, a collection of documents describing existing systems should be obtained and made available to the project. the technical report should be written as a guide to the collection. 1

relationship to other tasks

this task will interact with information-requirements tasks. the primary purpose of this task is to provide a basis and context for the design of the future deis system. 2

schedule and budget

start: already started
finish: may 31, 1974

one person will be assigned to work full-time on this task until a first pass is completed and the descriptive documents are collected. the full-time level should be attained by january 2 and contunued to february 15. at that tiae, the technical report should be outlined and partly written, with missing sections clearly identified. also, the document collection should be complete, except for documents identified but not yet entered into the collection.

the effort should be continued at a low-level until may 31. the draft technical report should be issued by april 1. the level of effort for the period february 15 to may 31 should be 0.25. the effort will be continued after the issuance of the technical report to keep the collection, knowledge of existing systems and plans up-to-date. 3

20892 Distribution
Douglas C. Engelbart,

DRB 14-DEC-73 09:23 20892

Draft Task 1[followon-to-first-segement]

(J20892) 14-DEC-73 09:23; Title: Author(s): David R. Brown/DRB; Distribution: /DCE; Keywords: energy-draft; Sub-Collections: NIC; Clerk: SJM;

DIA 14-DEC-73 09:17 20893

There is a new L10 compiler with minor changes

The new L10 compiler has the following changes: 1) The syntax SIGNAL(n) will result in a signal with value n and a signal message value (sysmsg) of zero -- previously, sysmsg was left unchanged. 2) SIGNAL [with no arguments] is no longer allowed. The old L10 is <SUBSYS>L10.OLD;27, the new one is <SUBSYS>L10.SAV;28. Direct problems/questions to DIA or CHI.

1

20893 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews, James H. Bair, A. Jim Blum, Meredith(Reddy) E. Dively, Jeanne M. Leavitt, 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, James E. (Jim) White, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lahtman, Jeanne B. North, James C. Norton, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

DIA 14-DEC-73 09:17 20893

There is a new L10 compiler with minor changes

(J20893) 14-DEC-73 09:17; Title: Author(s): Don I. Andrews/DIA;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: DIA;

JI 14-DEC-73 09:48 20894

News Incremental Step

Mike: To expedite getting the updates online and to eliminate unneeded disk consumption, I have taken the liberty of implementing a different stop-gap measure till you have the chance to get the linkage changed to help directory. Also, I am putting the rex article in since I have been assured that the case <jedir> directory will be alive until at least January. Hope you approve of this expediant, it seened a logical thing to do since changing the linkage appears to take longer than we has envisioned. Have a nice weekend Mike and look forward to seeing you soon.....Jean

1

20894 Distribution
Michael D. Kudlick, Mil E. Jernigan, David H. Crocker,

JI 14-DEC-73 09:43 20894

News Incremental Step

(J20894) 14-DEC-73 09:48; Title: Author(s): Jean Iseli/JI;
Distribution: /MDK MEJ DHC(progresws in small incremants);
Sub-Collections: MITRE-TIP NIC; Clerk: JI;

DVN 14-DEC-73 09:20 20895

For Holding Options to the Minimum

It is realley a grove to jump to item [content] .d.3s or whatever in DNLS. It would be much more of a groove if address were an alternative at that point instead of an option. Since text is not meaningful at that point, there seems no parsing reason for DAE to be an option. 1

In general I think we havve missed some chances to save people from typing the option character a lot and I strongly support, for example, (analysis,nnls,078). 2

20895 Distribution

Donald C. (Smokey) Wallace, New Nls, Donald C. (Smokey) Wallace, Kenneth E. (Ken) Victor, Susan R. Lee, Douglas C. Engelbart, James H. Bair, Elizabeth K. Michael, Richard W. Watson, Elizabeth J. (Jake) Feinler, Harvey G. Lehtman, Kirk E. Kelley, Laura E. Gould, N. Dean Meyer, Jeanne M. Beck, Dirk H. Van Nouhuys, Michael D. Kudlick, James C. Norton,

DVN 14-DEC-73 09:20 20895

For Holding Options to the Minimum

(J20895) 14-DEC-73 09:20; Title: Author(s): Dirk H. Van Nouhuys/DVN;
Distribution: /DCW NEWNLS DIRT; Sub-Collections: SRI-ARC NEWNLS DIRT;
Clerk: DVN;

YL 14-DEC-73 09:24 20896

Date: 14-DEC-73 0559-PST

From: NORSAR-TIP at SRI-ARC

Re: test5

cc: norsar-tip

- - - -

from a file

20896 Distribution
Yngvar Lundh,

(J20896) 14-DEC-73 09:24; Title: Author(s): Yngvar Lundh/YL ;
Distribution: /YL ; Sub-Collections: NIC; Clerk: YL;

YL 14-DEC-73 09:28 20897

Date: 14-DEC-73 0538-PST

From: NORSAR-TIP at SRI-ARC

Re: test2

cc: norsar-tip

- - - -

from file:

<norsar-tip>jourtest

20897 Distribution
Yngvar Lundh,

(J20897) 14-DEC-73 09:28; Title: Author(s): Yngvar Lundh/YL ;
Distribution: /YL ; Sub-Collections: NIC; Clerk: YL;

Date: 14-DEC-73 0527-PST

From: NORSAR-TIP at SRI-ARC

Re: test from yngvar

cc: norsar-tip

- - - -

the next from a file

.nls

20898 Distribution
Yngvar Lundh,

(J20898) 14-DEC-73 09:46; Title: Author(s): Yngvar Lundh/YL ;
Distribution: /YL ; Sub-Collections: NIC; Clerk: YL;

EAT3 14-DEC-73 10:47 20899

My RFC on GA
- - - -

The somewhat undiplomatic tone of my RFC was perhaps unwise in that it may detract from the technical arguments, which I believe are sound. However, the question now arises: what do we do next? I don't even know how you reach people like Braden, nor how you get working groups busy on drafting amendments to the protocol.
--Ed

1

2

20899 Distribution
Abhay K. Bhushan,

EAT3 14-DEC-73 10:47 20899

My RFC on GA
- - - -

(J20899) 14-DEC-73 10:47; Title: Author(s): Edward A. Taft/EAT3 ;
Distribution: /AKB ; Sub-Collections: NIC; Clerk: EAT3;

FJB 14-DEC-73 11:09 20900

Using Meeting

Nancy - Just a quick note to let you know that I intend to attend the Using Group meeting on 3- 4 January. Have a good holiday. Frank Brignoli NSRDC

1

20900 Distribution
Nancy J. Neigus,

FGB 14-DEC-73 11:09 20900

Using Meeting

(J20900) 14-DEC-73 11:09; Title: Author(s): Frank G. Brignoli/FGB;
Distribution: /NJN; Sub-Collections: NIC; Clerk: FGB;

KIRK 14-DEC-73 11:49 20901

Request for a new element in CML

This is one of a growing list of suggestions being compiled in <analysis,nnls,>.

KIRK 14-DEC-73 11:49 20901

Request for a new element in CML

KIRK Use of the equivalent of a DeFault SeLect (DFSL?) (Same as TNLS CONTENT = TYPEIN / [ADDRESS]. In DNLS = T:/[B:/A:].) would allow the user to CONFIRM a command without having to type anything for the default. This would save typing the special control characters <↑N> and <↑U> in order to change the default for the most frequent use in some commands including the following. 1

Append Statement (at) SOURCE (to) ADDRESS <NULL> / TYPEIN / BUG / [DAE] CONFIRM 1a

This forces the user to type a null character [<↑N> or <SP><BS>) whenever appending without inserting any text between the appended statements. 1a1

Because bugging text to go between appended statements is more infrequent than not inserting any text between statements (NULL), and in order to make the TNLS Append more closely parallel the DNLS Append, I suggest changing the syntax to be: 1a2

Append Statement (at) SOURCE (to) ADDRESS DFSL CONFIRM 1a3

COnnect (to) Directory USERNAME CA <CONFIRM / <↑u> PASSWORD CONFIRM> 1b

requires a CA followed by <↑u> in order to specify a password (instead of nothing or <SP> as in Tenex). No-password can be the default field and the password can be typed in without requireing <↑U>. The command would be: 1b1

COnnect (to) Directory USERNAME CA (Password) DFSL CONFIRM. 1b2

Ken Tells me that this is desirable in other Directory commands as well. 1b3

Output <Quickprint/Journal/Printer/COM> [File CONTENT / Copies TYPEIN] CONFIRM 1c

This requires <↑U> to specify another filename or number of copies other than 1. The following syntax would eliminate the need to type <↑u> and could also save accidental printings by following the double command accept convention. 1c1

Output <Quickprint/Journal/Printer/COM> DFSL CA (Copies = 1?) DFSL CONFIRM 1c2

Set Name delimiters should be considered. 1d

20901 Distribution

Donald C. (Smokey) Wallace, Kenneth E. (Ken) Victor, Susan R. Lee, Douglas C. Engelbart, James H. Bair, Elizabeth K. Michael, Richard W. Watson, Elizabeth J. (Jake) Feinler, Harvey G. Lentman, Kirk E. Kelley, Laura E. Gould, N. Dean Meyer, Jeanne M. Beck, Dirk H. Van Nouhuys, Michael D. Kudlick, James C. Norton, Donald C. (Smokey) Wallace, Kenneth E. (Ken) Victor,

KIRK 14-DEC-73 11:49 20901

Request for a new element in CML

(J20901) 14-DEC-73 11:49; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /DIRT DCW KEV; Sub-Collections: SRI-ARC DIRT; Clerk: KIRK;

HGL 14-DEC-73 11:57 20902

Videotape Presentation Monday: Tutorial on User Interfaces in Interactive Systems Given by Tom Martin of Stanford at the 1973 ASIS Convention

I have received a video tape from the USC Annenberg School which is a recording of a tutorial given at the LA ASIS convention in October by Tom Martin of Stanford which deals with a comparison of user interfaces in on line bibliographic retreival systems; it is based on a workshop held at Stanford last year. I felt it was the high point of the convention. The talk goes further and discusses general features desirable in interactive systems and should be of interest to many people here. There will be a showing Monday morning, though you may view it at any time. (I'm told the print is out of synch, but the content is not primarily visual so that shouldn't bother us.)

1

20902 Distribution

Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews, James H. Bair, A. Jim Blum, Meredith(Reddy) E. Dively, Jeanne M. Leavitt, 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, James E. (Jim) White, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Ferg R. Ferguson, 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, Jeffrey C. Peters, Jake Ratliff, Edwin K. Van De Riet, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor

HGL 14-DEC-73 11:57 20902

Videotape Presentation Monday: Tutorial on User Interfaces in Interactive Systems Given by Tom Martin of Stanford at the 1973 ASIS Convention

(J20902) 14-DEC-73 11:57; Title: Author(s): Harvey G. Lehtman/HGL; Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clark: HGL;

KIRK 14-DEC-73 12:03 20903

Two suggestions for handling statement names in NLS superdocuments that must live in TENEX file structure.

TENEX files are treated as very special branches in NLS. With respect to statement names this fuction is inconsistant or prevented by the way NLS handles some simple arbitrary conventions. One of these has to do with the origen statement. The other is in the DAE. 1

ORIGIN statement 2

Information inserted in front of the directory name in the origin statement should not dissappear when the file is updated. This is so the origin statement can be named something other than the directory name, and so the origin statement can contain information as the parent node of a database branch with the Filename, Date, Time Ident ; garbage at the end, hidden when line clipping is used. 2a

DAE: 3

. period in front of an element specifies a Structural Relation. 3a

* star in front of a name specifies a search for the NEXT name in the branch specified by the origin statement. 3b

no character in front of a name specifies a search for "any such name." 3c

Under this implementation, a name following other DAE elements would probably result in the preceeding elements being ignored. This feels inconsistent wi th structural relationships which are taken in relation to the preceeding elements. 3c1

I suggest that the search for content, word, character, marker, and names be in relation to the branch currently specified. 3c2

That is, the search would be limited to the branch specified by the elements preceding the name. The default would be the origin statement and thus would not change the way DAE's function when they contain only one element. However, it would become noticed (and useful) when a name followed other DAE elements. 3c3

This seems intuitively reasonable to me, but I have heard arguments that executing elements in this way would be inconsistent with the way other DAE elements are executed. I submit that each DAE element is executed differently depending on the characters that precede or surround the text of the element. 3c4

20903 Distribution

Donald C. (Smokey) Wallace, Kenneth E. (Ken) Victor, Susan R. Lee, Douglas C. Engelbart, James H. Bair, Elizabeth K. Michael, Richard W. Watson, Elizabeth J. (Jake) Feinler, Harvey G. Lentman, Kirk E. Kelley, Laura E. Gould, N. Dean Meyer, Jeanne M. Beck, Dirk H. Van Nouhuys, Michael D. Kudlick, James C. Norton, Donald C. (Smokey) Wallace, New Nls,

KIRK 14-DEC-73 12:03 20903

Two suggestions for handling statement names in NLS superdocuments that must live in TENEX file structure.

(J20903) 14-DEC-73 12:03; Title: Author(s): Kirk E. Kelley/KIRK ; Distribution: /DIRT DCW nnls ; Sub-Collections: SRI-ARC DIRT; Clerk: KIRK ;

Are you going to update the L10 user's guide (if it needs it) in regards to (20893,)? [SIGNAL changes] 1

20904 Distribution
N. Dean Meyer,

(J20904) 14-DEC-73 13:24; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /NDM; Sub-Collections: SRI-ARC; Clerk: KIRK;

information

test

20906 Distribution
Diane S. Kaye,

information

(J20906) 14-DEC-73 13:52; Title: Author(s): Diane S. Kaye/DSK;
Distribution: /DSK; Sub-Collections: SRI-ARC; Clerk: DSK;
Origin: <KAYE>FAKE.NLS;2, 14-DEC-73 13:51 DSK ;

DVN 14-DEC-73 15:12 20907

Mutual Intertest in COM

The other day I sent you some information on output from our system to COM. Gordon Smith was here recently and mentioned you were working in the field. "Would he want to use DDSI or compete with them," I asked. He was not sure, but he was inclined to think you would compete. DDSI has not been very satisfactory, they have been very slow to develope the software to interpret our files and minor administrative screwups have characterized our relationship. I would love to see competition. Bear in mind, however, that our files contain full formatting instructions. In any case we welcome your interest.

1

20907 Distribution

Prentiss H. Knowlton, Michael R. Plesset, Elizabeth K. Michael, N. Dean Meyer, Gordon A. Smith, Elizabeth K. Michael, Jeanne B. North, N. Dean Meyer, Douglas C. Engelbart, Richard W. Watson, Dirk H. Van Nouhuys, James C. Norton,

DVN 14-DEC-73 15:12 20907

Mutual Intertest in COM

(J20907) 14-DEC-73 15:12; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /PHK MRP(for your information) EKM NDM GAS(for your information) COM; Sub-Collections: NIC SRI-ARC COM DPCS; Clerk: DVN; Origin: <VANNOUHUYS>GAS.NLS;2, 12-DEC-73 11:36 JML ;

DVN 14-DEC-73 15:57 20908

Another Way to Cut Down on the Number of Times You have to Hit the Option Character

Following the reasoning of (20895), since I normally jump to statemens on the screen with "jump to" and use "jump to item" only to reach offscreen statements, I would like to see address an alternative rather than an option following item. 1

20908 Distribution

New Nls, Donald C. (Smokey) Wallace, Kenneth E. (Ken) Victor, Susan R. Lee, Douglas C. Engelbart, James H. Bair, Elizabeth K. Michael, Richard W. Watson, Elizabeth J. (Jake) Feinler, Harvey G. Lehtman, Kirk E. Kelley, Laura E. Gould, N. Dean Meyer, Jeanne M. Beck, Dirk H. Van Nouhuys, Michael D. Kudlick, James C. Norton,

DVN 14-DEC-73 15:57 20908

Another Way to Cut Down on the Number of Times You have to Hit the Option Character

(J20908) 14-DEC-73 15:57; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /NEWNLS DIRT; Sub-Collections: SRI-ARC NEWNLS DIRT; Clerk: DVN;

RWW 14-DEC-73 16:03 20909

Thanks for the Scenario

John, Thanks for sending your thoughts on what you would like to see in an office workshop. When you remove the AI Magic and look at your requests there are a surprising number either available in NLS now or on the way. When I have some time I'll reply to each. You asked for good things. Its these kinds of scenarios that we need to get, but I7m glad you are aware of the difficulties with the AI stuff. We are completing a major reorganization of NLS with the new Command Meta Language system and changes to the command language that will allow us to interface with the AI world if ARPA wanted to support such collaboration.

1

20909 Distribution
John S. Perry, James C. Norton,

RWW 14-DEC-73 16:03 20909

Thanks for the Scenario

(J20909) 14-DEC-73 16:03; Title: Author(s): Richard W. Watson/RWW;
Distribution: /JSP JCN; Sub-Collections: SRI-ARC; Clerk: RWW;

BAH 14-DEC-73 17:09 20910

DEC 2 - 8, 1973: A WEEK IN REVIEW

WEEKLY ANALYSIS REPORT: 1

2

WEEK: DEC 2 - 8, 1973 (24 HOURS/DAY) 3

4

TOTAL SYSTEM CPU: 63.978 5

6

(ARC)	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	6a
						6a1
(DOC)						6a2
(JMB)	1.958	25.922	.076	3.060	13.239	6a2a
(NDM)	.309	14.746	.021	.483	47.722	6a2b
CAT	2.404	10.676	.225	3.758	4.441	6a2c
DOCB	-	-	-	-	-	6a2d
DOCUM	.182	8.381	.022	.284	46.049	6a2e
	-----	-----		-----		6a2f
TOTAL	4.853	59.725	.081	7.585		6a2g
						6a2h
(FAC)						6a3
(RAB)	.002	.041	.049	.003	20.500	6a3a
(MEH)	.617	21.130	.029	.964	34.246	6a3b
(JCP)	1.893	52.199	.036	2.959	27.575	6a3c
(JR)	-	-	-	-	-	6a3d
HRDWRE	.529	19.166	.028	.827	35.714	6a3e
OPRATR	3.782	45.698	.083	5.911	12.083	6a3f
	-----	-----		-----		6a3g

TOTAL	6.823	138.234	.049	10.664		6a3h
						6a3i
(NIC)						6a4
(JDC)	.149	5.714	.026	.233	38.349	6a4a
(EJF)	1.088	31.706	.034	1.701	29.142	6a4b
(CBG)	.020	.511	.039	.031	25.550	6a4c
(MDK)	.295	8.153	.036	.461	27.637	6a4d
(MLK)	.316	14.325	.022	.494	45.332	6a4e
(JBN)	.784	20.513	.038	1.225	26.165	6a4f
NETINFO	.004	.094	.043	.006	23.500	6a4g
NIC-WORK	-	-	-	-	-	6a4h
	-----	-----		-----		6a4i
TOTAL	2.656	81.016	.033	4.151		6a4j
						6a4k
(PRO)						6a5
(DIA)	.591	12.946	.046	.924	21.905	6a5a
(CFD)	-	-	-	-	-	6a5b
(WRF)	.325	9.424	.034	.508	28.997	6a5c
(JDH)	.986	54.258	.018	1.541	55.028	6a5d
(CHI)	.612	18.780	.033	.957	30.686	6a5e
(DSK)	.806	25.258	.032	1.260	31.337	6a5f
(HGL)	1.526	28.924	.053	2.385	18.954	6a5g
(EKM)	.130	12.521	.010	.203	96.315	6a5h
(KEV)	3.714	60.262	.062	5.805	16.226	6a5i
(DCW)	1.502	33.157	.045	2.348	22.075	6a5j

(JEW)	.882	22.137	.040	1.379	25.099	6a5k
	-----	-----		-----		6a5l
TOTAL	11.074	277.667	.040	17.310		6a5m
						6a5n
(PSO)						6a6
(JML)	.186	8.883	.021	.291	47.758	6a6a
(BAH)	.703	15.868	.044	1.099	22.572	6a6b
(MEJ)	1.611	80.467	.020	2.518	49.948	6a6c
(KIR)	1.485	30.562	.049	2.321	20.580	6a6d
	-----	-----		-----		6a6e
TOTAL	3.985	135.780	.029	6.229		6a6f
						6a6g
(STA)						6a7
(JHB)	-	-	-	-	-	6a7a
(DCE)	.678	61.248	.011	1.060	90.336	6a7b
(SRL)	.272	7.189	.038	.425	26.430	6a7c
(JCN)	1.003	14.838	.068	1.568	14.794	6a7d
(DVN)	.843	24.818	.034	1.318	29.440	6a7e
(PR)	.130	5.242	.025	.203	40.323	6a7f
(RWW)	.115	2.968	.039	.180	25.809	6a7g
	-----	-----		-----		6a7h
TOTAL	3.041	116.303	.026	4.754		6a7i
						6a7j
(GROUP) TOTALS						6a8
GROUP	CPU HRS	CON HRS	CPU/CON	% SYS		6a8a

(DOC)	4.853	59.725	.081	7.585	
(FAC)	6.823	138.234	.049	10.664	
(NIC)	2.656	81.016	.033	4.151	
(PRO)	11.074	277.667	.040	17.310	
(PSO)	3.985	135.780	.029	6.229	
(STA)	3.041	116.303	.026	4.754	
	-----	-----		-----	
TOTAL	32.432	808.725	.040	50.693	

(STATS)

HIGHEST CPU: KEV 3.714 hrs LOWEST CPU: RAB .002 hrs

HIGHEST CON: MEJ 80.467 hrs LOWEST CON: RAB .041 hrs

HIGHEST CPU/CON: JMB .076 HIGHEST CON/CPU:1: EKM 96.315

	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1

(NET)

TOTAL	6.237	314.685	.020	9.749	
TOP FIVE					

GUEST	.826	25.392	.033	1.291	30.741

MITRE-TIP	.696	55.766	.012	1.088	80.124	6c7
UK-ICS	.675	32.777	.021	1.055	48.559	6c8
UCSB	.593	22.261	.027	.927	37.540	6c9
BELL	.583	34.908	.017	.911	59.877	6c10
	-----	-----		-----		6c11
TOTAL	3.373	171.104	.020	5.272		6c12
						6c13
(SYS)						6d
SYSTEM	9.812	412.213	.024	15.337	41.667	6d1
PRINTER	8.667	136.099	.064	13.547	15.703	6d2
BACKGROUND	2.539	136.096	.019	3.969	53.602	6d3
	-----	-----		-----		6d4
TOTAL	21.018	684.408	.031	32.353		6d5
(WOR)						6e
						6e1
ENERGY	.006	.321	.019	.009	53.500	6e2
GILBERT	-	-	-	-	-	6e3
JIMB	.013	.345	.038	.020	26.538	6e4
MARRAH	.015	.981	.015	.023	65.400	6e5
	-----	-----		-----		6e6
TOTAL	.034	1.647	.021	.052		6e7
						6e8
(XOX)						6f
						6f1
COWAN	.005	.498	.010	.008	99.600	6f2

DEUTSCH	.049	1.081	.045	.077	22.061	6f3
MITCHELL	.006	.093	.065	.009	15.500	6f4
PARC-MAXC	.214	1.924	.111	.334	8.991	6f5
SATTERTHWAITE	.005	.084	.060	.008	16.800	6f6
	-----	-----		-----		6f7
TOTAL	.279	3.680	.076	.436		6f8
						6f9

(RAD) 6g

6g1

NAME	CPU HRS	CON HRS	CPU/CON	% SYS	CON/CPU:1	DIR	
							6g3
BERGS	.343	17.814	.019	.536	51.936	69	6g4
CARRIER	.054	2.182	.025	.084	40.407	38	6g5
CAVAN	.308	20.616	.015	.481	66.935	99	6g6
DAUGHTRY	.085	3.638	.023	.133	42.800	54	6g7
IUORN	.018	.405	.044	.028	22.500	38	6g8
KENNE	.151	4.421	.034	.236	29.278	61	6g9
LAFORGE	.036	1.247	.029	.056	34.639	21	6g10
LAMONICA	-	-	-	-	-	89	6g11
LAWRE	1.074	33.269	.032	1.679	30.977	83	6g12
LIUZZI	.126	5.174	.024	.197	41.063	39	6g13
MCNAM	.043	3.247	.013	.067	75.512	114	6g14
PANAR	.379	19.764	.019	.592	52.148	107	6g15
RADC	-	-	-	-	-	82	6g16
RZEPK	.019	1.198	.016	.030	63.053	117	6g17

DEC 2 - 8, 1973: A WEEK IN REVIEW

STONE	.810	33.970	.024	1.266	41.938	224	6g18
TOMAI	.025	.572	.044	.039	22.880	34	6g19
WINGFIELD	.004	.102	.039	.006	25.500	10	6g20
	-----	-----		-----		-----	6g21
TOTAL	3.475	147.619	.024	5.430		1279.000	6g22
(PER CENT TOTAL DISK CAPACITY)						2.626%	6g23
							6g24
							7

20910 Distribution

Susan R. Lee, Beauregard A. Hardeman, Douglas C. Engelbart, Don I. Andrews, Charles F. Dornbush, Elizabeth J. (Jake) Feinler, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Diane S. Kaye, Kirk E. Kelley, Michael D. Kudlick, Elizabeth K. Michael, Jeanne B. North, James C. Norton, Jeffrey C. Peters, Paul Rech, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Donald C. (Smokey) Wallace, Richard W. Watson, James E. (Jim) White, Duane L. Stone, Thomas F. Lawrence, James H. Bair, L. Peter Deutsch, James G. Mitchell,

BAH 14-DEC-73 17:09 20910

DEC 2 - 8, 1973: A WEEK IN REVIEW

(J20910) 14-DEC-73 17:09; Title: Author(s): Beauregard A. Hardeman/BAH; Distribution: /WAR; Sub-Collections: SRI-ARC WAR; Clerk: BAH;

20911 Distribution
Dirk H. Van Nouhuys, Jeanne M. Beck,

KIRK 14-DEC-73 18:14 20911

DB builders name and link meeting.

Please print out and read at least all (but the last two branches) of <Documentation, Manual,> before you do any editing in Help as it has been extensively revised and contains a lot of information necessary to keep from fucking up the names in the database.

KIRK 14-DEC-73 18:14 20911

DB builders name and link meeting.

I have cleaned up names by logical DB mantenance standards, 1

We need to make sure each area of the database is covered by a specified person who will: 2

go through and make sure the names meet logical user-view standards (colon in right place, (don't forget to change the delimiters to NULL NULL) and to 2a

make sure links go to the right place <see--manual,4>. 2b

We also have duplicate names to contend with. <please print-out and examine--names,:tc> 3

1. between concepts and function 3a

2. within concepts 3b

I would like to have the meeting Tuesday at 10:00 if we don't find time to get together sooner. 4

KIRK 14-DEC-73 18:14 20911

DB builders name and link meeting.

(J20911) 14-DEC-73 18:14; Title: Author(s): Kirk E. Kelley/KIRK ;
Distribution: /DVN JMB ; Sub-Collections: SRI-ARC; Clerk: KIRK ;