tickler - month of August

(aw1) 1 1

For TB only - Financial Forecasting - FY-74 and Prior Years Balances is due today. 1a

Accomplishment Report is due today. 1b

Laboratory Activity Reports are due tomorrow. 1c

(ath1) 2 2

Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600. 2a

(af1) 3 3

For TB and Bobbie only - Travel figures due at 1200 hrs to ISM. 3a

Timecards are due today 3b

(am2) 6 4

ESD - Maj Cameron, Jack Catalano, Doug Campbell - Will be at RADC/IS - ADPE Selection - Col Thayer and Mr. Bethke 4a

For TB and Bobbie - MASTERS - Overview and Milestones Charts are due in FINAL FORM today. 4b

(at2) 7 August 5

1000 hrs. Civilian Policy Board Mtg C-102 - Mr. Bethke 5a

1400 hrs. 5550 Review - Panara 5b

Col Thayer - TDY 5c

(aw2) 8 August 6

0830 hrs. Branch Chief's Meeting 6a

Col Thayer - TDY 6b

F. Tomaini - 8 Annual 6c

Laboratory Activity Reports are due tomorrow. 6d

(ath2) 9 August 7

F. Tomaini 3(?) annual in am - 4 annual in PM. 7a

tickler - month of August

Col Thayer - TDY 7b

Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600. 7c

(af2) 10 August 8

0900 hrs. DCM 8a

Col Thayer - TDY 8b

For TB and Bobbie - Travel figures due in at 1200 hrs. 8c

(am3) 13 August 9

0830 hrs. Branch Chief's Meeting 9a

Directly following above, WWMCCS Progress Meeting with Division - Capt Daughtry 9b

1000 hrs. BERP - Col Thayer 9c

1500 hrs. ISF Confessions 9d

Confessions Tomorrow for ISI - Collect inputs for FJT 9e

1600 hrs. E. Kennedy Dry Run in FJT's office for Steering Group 9f

(at3) 14 August 10

0830 hrs. ISI Confessions Don't FORGET 10a

1000 hrs. D. Nelson Dry Run in FJT's Office for Steering Group 10b

(aw3) 15 August 11

0830 hrs. Proj 5550 Steering Group Meeting 11a

0830 hrs. Branch Chief's Meeting 11b

For TB - RADC/LMCA Subcostodian Training Questionnaire is due in today - 15 August 11c

TPO in final form, Plus Resources and Annex Submissions are due today 11d

Laboratory Activity Reports are due tomorrow. 11e

(ath3) 16 August 12

tickler - month of August

0830 hrs. Proj 5550 Steering Group Meeting 12a

Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600. 12b

(af3) 17 August 13

0900 hrs. DCM 13a

For TB and Bobbie - Travel figures due in at 1200 hrs. 13b

Timecards are due today 13c

(am4) 20 August 14

0830 hrs. Branch Chief's Meeting 14a

Col thayer - Leave 14b

1500 hrs. SADPR-85 Meeting - Bethke & ISF 14c

(at4) 21 August 15

Col Thayer - Leave 15a

Al Barnum - TDY - Wash 15b

(aw4) 22 August 16

Col Thayer - Leave 16a

After Branch Chief's Meeting, Discussion on Dr. Ware's SAB Letter 16b

Laboratory Activity Reports are due tomorrow. 16c

(ath4) 23 August 17

Col Thayer - Leave 17a

Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600. 17b

(af4) 24 August 18

Col Thayer - Leave 18a

0900 hrs. DCM - Al Barnum 18b

For TB and Bobbie - Travel figures due in at 1200 hrs. 18c

tickler - month of August

(am5) 27 August 19

0830 hrs. Branch Chief's Meeting 19a

(at5) 28 August 20

(aw5) 29 August 21

0830 hrs. Branch Chief's Meeting. 21a

Laboratory Activity Reports are due tomorrow. 21b

(ath5) 30 August 22

Timecards are due today as Monday is Labor Day. 22a

0900 Officer's Commander Call - All Officers must attend 22b

Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600. 22c

(af5) 31 August 23

Newsbrief Items due in today to Becky 23a

For TB and Bobbie - Travel figures due in at 1200 hrs. 23b

form 2's (aemployee time expenditures) are due today. 23c

form 6's (aprojected nampower) are due today. 23d

18988 Distribution
Joe P. Cavano,

tickler for week of 17 Sep 73

(sm4) 17 September - Monday 1

0830 hrs. Branch Chief's Meeting 1a

There will be an Inspection sometime this month - This info is for Supervisors only - Review and Update 971 Cards and all other personnel records. 1b

Demonstration on Holographic Binary Data Storage - 1030 hrs. Bldg. 240 - Conference Room A - For further info, contact Capt Mincieli, IRDE - X2035 1c

(st4) 18 September - Tuesday 2

Confessions are this Thursday. Topic write-ups must be collected tomorrow. 2a

(sw4) 19 September - Wednesday 3

0830 hrs. Branch Chief's Meeting 3a

Laboratory Activity Reports are due tomorrow. 3b

collect topic write-ups today by noon for confessions. 3c

(sth4) 20 September - Thursday 4

Note for Bobbie - Remind Nelson & Di Nitto they owe trip reports for their Omaha NB trip and Nelson owes trip report for Brooklyn Don't let them get away with it 4a

Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600. 4b

Confessions today 4c

ISIS & ISIM Due Date - Projected Training Requirements for Air Training Command and Air Force Institute of Technology Funded Courses for FY-75. 4d

(sf4) 21 September - Friday 5

18989 Distribution

Donna R. Robilotta, David L. Daughtry, Richard H. Thayer, Frank J. Tomaini, Mike A. Wingfield, Edmund J. Kennedy, Ray A. Liuczi, Richard Calicchia, John W. Johnson, Donald Van Alstine, Dean F. Bergstrom, William P. Bethke, Frank S. LaMonica, William E. Rzepka, Rocco F. Iuorno, Frank P. Sliwa, Thomas J. Bucciero, Robert E. Doane, David A. Luther, Roger B. Panara, John L. McNamara, Joe P. Cavano, Duane L. Stone, Marcelle D. Petell, Josephine R. Stellato, Robert K. Walker, Thomas F. Lawrence, James H. Bair,

RLL 12-SEP-73 07:23 18990

request for pdp-10 info

Hi, this is robert lieberman of NSRDC (Naval Ship Research and Development Center). Jim Norton of SRI-ARC said to contact you concerning a little project on which we are now working. 1

Simply stated, we are interested in finding out what are the capabilities of the PDP-10 hardware and software. Cold, hard facts as well as opinions are welcomed. 2

Specifically, the response time of the system under various loads is a major question. The load includes knowing how many users are "on", what kind of work they are doing (Fortran compiles, text editing, info retrieval, cpu bound jobs, etc.), how much core they are using, and how much cpu time they use per connect time. 3

Our concern , of course, is "how good is the PDP-10 for interactive scientific work." 4

Presently, we have CDC6700 and CDC6400 computer system. It is QUITE poor for interactive work. Our limited experience, via the ARPANET, on a few of the PDP-10's indicates that it is far better than the CDC equipment; hence our interest. 5

A second important purpose of this short term study is "how reliable is the "10?" 6

Other questions include: 7

what is the profile of your user community, 7a

what is your schedule down time, 7b

what opinions are locally held on the tenex vs. dec operating system (some say tenex is slower), 7c

any other information that might aid us . 7d

We appreciate any help you might give us. 8

thank you for your time, 9

robert n. lieberman 10

rll@sri-arc for journal mail 11

nsrdc@sri-arc for tenex mail 12

or nsrdc@usc-isi 13

18990 Distribution
John T. Melvin, James C. Norton,

EJK 12-SEP-73 07:26 18991

note to jlm - sadpr-85

Ref. JLM Note 11-sep-73 (jjournal, 18987,1:w) 1

I received a telecall from Bob Kenyon on 12 Sep 73. He informed me that he was going to have a visitor on this coming Thurs,Fri. The person, name forgotten by me, is from ESD, somewhere in XR (Plans) and they - ESD are continuing the study. The first thing they want to look at is the automated or wired foffice. 2

Esd apparently has funds and wish to continue. 3

I asked about the relation between this effort and sadpr-85. Kenyon didn't know but, he expressed an opinion that sadpr-85 is suposed to feed info into this continuing effort by the comm planning types. 4

More later. 5

18991 Distribution

John L. McNamara, Frank J. Tomaini, Duane L. Stone, Rocco F. Iuorno, Roger B. Panara, Richard H. Thayer,

tickler - Sorry but more Info

(sth3) 13 September Thursday 1

ISF Confessions - 0830 hrs. 1a

Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600. 1b

C. Marcoccia - 8 Annual 1c

WWMCCS/GCoS System Software Training Meeting - Conference Room 1a at 1400 hrs. - Purpose - To discuss training and Honeywell Course 630. Attn: J. McLean, D. Mark, M. Wingfield, R. Calicchia, J. Cavano, R. Liuzzi 1d

(sf3) 14 September Friday 2

Margaret Colasanti is to get some type of passes for ISI personnel (3) for Today in event anyone has to leave building 2a

Buckskin Rider 2b

Timecards are due today. 2c

C. Marcoccia - 8 Annual 2d

Remind tom B. to return RADC/LMCA Subcustodian Training Questionnaire 2e

(sm4) 17 September - Monday 3

ColThayer TDY to CA at 1330 hrs. 3a

0830 hrs. Branch Chief's Meeting 3b

There will be an Inspection sometime this month - This info is for Supervisors only - Review and Update 971 Cards and all other personnel records. 3c

Demonstration on Holographic Binary Data Storage - 1030 hrs. Bldg. 240 - Conference Room A - For further info, contact Capt Mincieli, IRDE - X2035 3d

Due Date for D. VanAlstine - Reply by 1st Ind - Contract F30602-73-C-0024 - Auerbach Corp. 3e

(st4) 18 September - Tuesday 4

Col Thayer TDY to CA 4a

tickler - Sorry but more info

Confessions are this Thursday. Topic write-ups must be collected tomorrow. 4b

(sw4) 19 September - Wednesday 5

0830 hrs. Branch Chief's Meeting 5a

Laboratory Activity Reports are due tomorrow. 5b

collect topic write-ups today by noon for confessions. 5c

(sth4) 20 September - Thursday 6

R&T Selection of the Month DUE 6a

Note for Bobbie - Remind Nelson & Di Nitto they owe trip reports for their Omaha NB trip and Nelson owes trip report for Brooklyn Don't let them get away with it 6b

Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600. 6c

Confessions today 6d

ISIS & ISIM Due Date - Projected Training Requirements for Air Training Command and Air Force Institute of Technology Funded Courses for FY-75. 6e

(sf4) 21 September - Friday 7

18992 Distribution

Donna R. Robilotta, David L. Daughtry, Richard H. Thayer, Frank J. Tomaini, Mike A. Wingfield, Edmund J. Kennedy, Ray A. Liuczi, Richard Calicchia, John W. Johnson, Donald Van Alstine, Dean F. Bergstrom, William P. Bethke, Frank S. LaMonica, William E. Rzepka, Rocco F. Iuorno, Frank P. Sliwa, Thomas J. Bucciero, Robert E. Doane, David A. Luther, Roger B. Panara, John L. McNamara, Joe P. Cavano, Duane L. Stone, Marcelle D. Petell, Josephine R. Stellato, Robert K. Walker, Thomas F. Lawrence, James H. Bair,

Comments on NLS Privacy

The suggested privacy features look very promising. Steve Crocker had some specific comments, however: (1) Password algorithm should be changed so that only a non-invertable transform of the password is kept online and the new password should be user settable. (2) Groups should be creatable by any user, but the system should keep track of when each group was created and who is in it. It should take some step to scheck that a group is not obsolete. (3) Implementation idea; Associate with each user an alphabetized list of groups he is in. Associate with each file two lists, each alphabetized; one for individuals authorized for access; the other for groups authorized for access. The checking algorithm could then be relatively fast. I hope these comments are helpful. ... John Perry 1

Comments on NLS Privacy

(J18993) 12-SEP-73 07:34; Title: Author(s): John S. Perry/JSP;
Distribution: /JEW JCN JSP SDC2; Sub-Collections: NIC; Clerk: JSP;

EJK 12-SEP-73 07:40 18994

RADC MIS Plan

Your views are urgently solicited. For the mezzaliterati -HELP

EJK 12-SEP-73 07:40 18994

RADC MIS Plan

Just rec'd a request from FJT. He wants a first -cut proposal from us for a Center MIS. The whole cluge: contracts, equipment,training, organiztion of info and data base, cost, schedule and what have you. He knows that the statement has already been made that there is no loot available but apparently they want to spell out specifically what they do't want to pay for. In any event I feel that jus tperhaps this might be used as the basis for really selling a MIS. At least we can give them the chance to put their money where their mouth(s) are. I must give Frank a date for when the plan can be pitched. Due Friday. HOHOHOHO

1

18994 Distribution

John L. McNamara, Frank J. Tomaini, Duane L. Stone, Roger B. Panara, Joe P. Cavano, Edward F. LaForge, Rocco F. Iuorno, Edmund J. Kennedy,

DVN 12-SEP-73 08:03 18995

I'd Like To Hear About How Your INLS Class Went

As I guess you learned, they changed the allocation of documentation unbeknownst to me just when your class began. Sorry. In general how did it go? I'd be glad if you sent us some time a little journal item to add to our fund of teaching lore. DCE is now teaching a clas of 30 people in England...the last time I heard they were getting about 2 characters per second acrross, but I think that's fixed for the class.

1

18995 Distribution
David H. Crocker, James H. Bair,

DVN 12-SEP-73 08:20 18996

Frost & Sullivan Reports, Missing Catalogues, User Programs

This is really just to let you know I am alive. 1

I was on vacation last week when your question about the Frost and Sullivan report came in. 2

I understand Jeanne North took care of it. 2a

The title word index was taken off line as part of the catalog making process; when that run broke down Beau forgot to put it back. I suppose you have heard from him that it is back. 3

You will be glad to know that Dean Meyer is making good progress on the program to provide your journal items as .txt; files each morning. He hopes to be done this week. 4

What ever happend to the plan to send some one here to learn user programming? 5

18996 Distribution
Duane L. Stone, N. Dean Meyer,

EJK 12-SEP-73 08:43 18997

TYCOM's

for jcn jbn dvn (info for two of you - but I don't know which two)

EJK 12-SEP-73 08:43 18997

TYCOM's

We have at RADC two TYCOM's that we have been trying set up to work properly with the net and with AKW. We seem to have licked most of the problems except for one. The basic unit on our tycom's is the IBM Selectric ii, which does not automatically return the carriage at the end of the line. If the carriage return is used to return, it also functions as the command accept which makes for awkward text entry by the two girls who will be operating these machines. I called Bernie Cosell at BBN and he indicated 1) he has had the same problem, but he forgot the solution. 2) that Jean North know hos to fix things so that the cr is just a cr and that the Control D functions as the command accept. Can you help with some instructions on setting up the thing so that it is useful. 1

18997 Distribution

James C. Norton, Jeanne B. North, Dirk H. Van Nouhuys, Duane L. Stone, John L. McNamara,

New L10 Users' Guide

A new SRI-ARC L10 Users' Guide is available. It is intended for beginning and intermediate L10 programmers. The on-line copy is (userguides,l10-guide,). Hard copy will be available next week from the NIC. A copy has been journalized as (jjournal,18969,). Direct questions and comments to Dean Meyer (NDM) at SRI-ARC. 1

18998 Distribution

L. Peter Deutsch, James G. Mitchell, Alan C. Kay, Martin E. Hardy, Charles H. Irby, Mil E. Jernigan, Jeanne B. North, James C. Norton, Richard W. Watson, Steve D. Crocker, Thomas F. Lawrence, John F. Heafner, Dan L. Murphy, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Abhay K. Bhushan, Peggy M. Karp, Mario C. Grignetti, Diana L. Jones, Susan R. Lee, James M. Madden, A. Wayne Hathaway, Barbara Barnett, Elizabeth K. Michael, Julie B. Moore, Marcelle D. Petell, Duane L. Stone, Joan E. Slottow, Jeffrey C. Peters, William P. Jones, Elizabeth J. (Jake) Feinler, Kirk E. Kelley, Ralph Prather, Kay F. Byrd, Gino Pucine, Thomas B. Gray, Raynor K. Rosich, Prentiss H. Knowlton, Marvin L. Graham, Jaacov Meir, Gary R. Grossman, W. Jack Bouknight, Michael S. Sher, Daniel L. Slotnick, Kathy Beaman, John D. Day, David H. Crocker, Beauregard A. Hardeman, Richard C. Roistacher, Ferg R. Ferguson, Ernest H. Forman, Douglas C. Engelbart, Jeanne B. North, John W. McConnell
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. Saroussi, Scott Bradner, Robert H. 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, Abhay K. Bhushan, B. Michael Wilber, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, John T. Melvin, David H. Crocker
Richard W. Watson, Don I. Andrews, Jeanne M. Beck, Paula Kazanjian, Gary L. Bockweg, Nancy J. Neigus, John F. Wakerly, Tom C. Rindfleisch, Leonard B. Fall, David L. Hyde, Gary Blunck, Tom P. Milke, Alan H. Wells, Chuck R. Pierson, Carl M. Ellison, Robert P. Blanc, Jay R. Walton, 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, Anthony C. Hearn
Joe P. Cavano, Duane L. Stone, David H. Crocker, 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, Donald C. (Smokey) Wallace

Some Directions at USC-ISI

Notes on a Conversation with John Melvin of ISI 1

John and I chatted about a number of subjects that are relevant to our plans and raise some questions for the future. ISI is getting additional funding to install and operate a KI-10 processor based system as a Network Tenex Utility. They will keep their present KA-10 for developmental use in their research program. Delivery of the KI is expected around Oct. John expects to be the distribution point for KI Tenex and will try to keep it up with BBN's KA versions. Since ISI uses student operators and supplies little user liaison they expect to charge very low rates say in neighborhood of $3.00 a minute CPU and no connect charge. He expects to tune it to run about twice as fast as the KA-10. The low rates have raised eyebrows at BBN and the question of competition on the net for different services by people with subsidy etc seems to be joined. 1a

If people can operate TECO for 3-5 dollars an hour how many will want to run TNLS at our much higher Utility costs? 1a1

Getting DNLS out to the world through low cost terminals keeps looking more and more important. 1a2

Once ISI started operating the sendmsg service they have gotten steady flack for any reliability or other problems as people grew to depend on it. Luksic for example gets so many sndmsgs in a 24 hour period that when he visited ISI he had to use the line printer to print them. Given these events what are ARPA'S plans relative to use of this system and our Utility? 1b

ISI has research program in office automation headed by Don Oestricher (SPELLING). Don has written while at Utah a one page text editer which is very popular around the net on Tenex'S. Melvin and one or two others at ARPA request did a study for some Military command in the pacific for how to adapt ARPANET technology to their message needs. ISI plans to offer a cut down more efficient version of Tenex a small fast editer nd a sendmessage type capabiltiy as a solution to this need and as the start of their office automation system. They want to concentrate on low cost and core capabilities and support about 300 simultaneous users on a single Tenex. He says their proposals read like ours in terms of justificcaion etc butmy interpretation is that they see the market for core low cost sytems. 1c

We should find out more about what they are planning and how we can work together where posssible. I personally believe we have got to plan our MPS system so that core frequently used capabilities are very much cheaper than present. 1c1

Some Directions at USC-ISI

ISI has just finished building a special 19 pound terminal so ARPA office people can easily carry a teminal with them as they travel. 1d

18999 Distribution

Douglas C. Engelbart, James C. Norton, Michael D. Kudlick, Paul Rech, Charles H. Irby,

On Initial Privacy Features [18976,)

Jim's message (18976,) seems to be a reasonable first step. After a first reading I have only one question: will people be able to connect to other directories and will they be able to log in as special users. This has been necessary in the case of people working on large system directories: because of the size of the files with which they work, some users must currently log in as DOCUMENTATION, NETINFO, etc. Otherwise, it seems OK. A possible extension, incidentally, which may prove useful (necessary) for the forms system, would be to permit branches of as well as entire files to have access set: some people would have access to parts of a file but not all of it. (If implemented as text in a node, it may be slow. Perhaps some sort of coded block associated with a ring element?)

1

19001 Distribution

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, Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews

Harvey ... I'd like to get together with you later this week (Friday) to discuss some fairly old stuff with respect to QUERY. Like, reduction of the initial "greeting" one gets upon typing "NIC<cr>", and other such things. Is Friday at 10:00 o.k.? ... Mike 1

19002 Distribution
Harvey G. Lehtman, Diane S. Kaye,

JCN 12-SEP-73 13:34 19003

Cross-Country Network Bandwidth: B. Lampson Ideas per L. P. Deutsch - transcribed from (18970,) Hardcopy

Doug: Here is a quick transcription of a Journal (hardcopy) document by L. Peter Deutsch, PARC-MAKC, dated 6 September 1973 (18970,) and which is also RFC 567. It comments on the subject of those bursts you are getting while you are using the London TIP: 1

CROSS-COUNTRY NETWORK BANDWIDTH 2

The following computation of cross-country network bandwidth was contributed by Butler Lampson of PARC. 2a

Consider what happens when a TIP user on the West Coast, connected to a full-duplex Host on the East Coast, strikes a key on his terminal. 2b

The TIP sends a one-character message (1 packet). 2c

The destination IMP sends a RFNM (1 packet). 2d

The destination Host sends an ALLocate - this seems to be the strategy used by TENEX Hosts, at least (1 packet). 2e

The TIP sends a RFNM for the ALLocate (1 packet) 2f

The same sequence repeats itself, with roles interchanged, for the echo character (4packets). 2g

This constitutes 4 packets or 4000 bits in each direction The current cross-country transmission capability of the ARPANET is 3 50Kb phone lines; ergo, it can only support 3*50000/4000=37.5 such characters per second 2h

It may be that RFNMs are transmitted between IMPs more efficiently; at best this can only double the network capacity. 2i

This computation may help explain why cross-country TIP users (e.g. the substantial West Coast community of BBN-TENEX users) experience such bad echo response, at least in bursts: the network itself may be experiencing momentary peak loads. 2j

If this argument is correct, the proposed remote echoing facilities of the new TELNET protocol could have a major effect on network operation. 2k

(received at NIC 10 September 1973) 3

Doug: If he's right, there's litle hope of changing your London demo and course conditions, I guess (unless we get the rest of the Net users to quit.....?) or unless you have most of the Net to yourself.

JCN 12-SEP-73 13:34 19003

Cross-Country Network Bandwidth: B. Lampson Ideas per L. P. Deutsch - transcribed from (18970,) Hardcopy

Would be interesting to see notice if whether, when you are on at 9:00 or so in the morning there, the problem goes away..Let me know what other ideas you have. Jim Norton 12-SEP-73 13:25 4

19003 Distribution

Douglas C. Engelbart, Richard W. Watson, James E. (Jim) White,
Charles H. Irby,

Command language meeting report: Sept. 12

Notes on command language meeting of Sept. 12 1

Participants: 1a

CFD RWW DVN CHI MDK NDM JMB KIRK DSK 1a1

Results: 1b

The following tentative decisions were reached concerning the known problems in the proposed command language. 1b1

1) On resolving the grammatical ambiguities of optional operand type and positioning specifications (see -- JJOURNAL, 18954, 1:w): 1b2

The initial release of the new command language will not include these capabilities. The features are desirable but the syntactic problems are not amenable to easy solutions at this time. 1b2a

2) On the use of SSEL: 1b3

The SSEL construction will be implemented as presently defined, but the system documentation for novice users should not include descriptions of this "advanced" feature. 1b3a

3) On the definition of a NULL literal string. 1b4

In DNLS there is a problem with entering an empty or NULL literal string when LIT and BUG selections are alternatives. We will implement ↑N CA as a NULL literal string. Note that the current kludgy char BC CA sequence will still produce a NULL literal. 1b4a

4) On the revamping of the display screen format for DNLS. 1b5

Because of the more wordy form for the new command language, it is necessary to find more room for the command feedback buffer. In considering the possible solutions to this problem, it appears that our purposes might be enhanced by: 1b5a

1) possible elimination of the permanent displays of viewspecs and data & time. 1b5a1

The displays of date and time and viewspecs should appear on the display only when they are actually requested or used. Control functions will allow the

interrogation of these displays at any point during command specification. 1b5a1a

Perhaps the viewspec display could replace the current time and date display, permitting the command feedback buffer to be left justified beginning on the third display line. 1b5a1b

2) integration of the name buffer into the command feedback line. 1b5a2

Instead of echoing certain types of selections in a separate buffer, it seems possible to append the new selection to the command feedback buffer , allowing the command feedback line to occupy the full screen width and permitting more informative command status to remain on the screen. 1b5a2a

It was agreed that there are no sacred cows with respect to the current layout of the DNLS screen, and some new utilization of the space on the display screen should be attempted. 1b5b

19004 Distribution

Richard W. Watson, Dirk H. Van Nouhuys, Charles H. Irby, Michael D. Kudlick, N. Dean Meyer, Jeanne M. Beck, Kirk E. Kelley, Diane S. Kaye, James C. Norton, Douglas C. Engelbart, Donald C. (Smokey) Wallace,

How to Change the Character for Command Accept.

I reply to (journal,18997,) 1

NLS will operate with ↑D and one or no other characters as command accept. By default carriage return is a second caracter for command accept. But you may change that default by writing into your intial file an NLSControlcharacters branch. (userguides,tnls-charcodes,6) explains more fully. Such a in an initial file automatically sets your command accept character to the new value(s) when you log in. Branch 3 replaces carraige return with astrisk as a command accept caracter. 2

(NLSControlCharacters) 3

CA=↑D,*;ECHO=*; 3a

19005 Distribution
Jeanne B. North, James C. Norton, Edmund J. Kennedy,

Resource Notebook Entry

Ron, Thanks a lot for your input to the Research Notebook. Have taken a quick look but have not gone over it thoroughly yet. If I need any more input I'll let you know. Send me a note when the USER-PROG part is ready and I'll incorporate that into the whole write-up. Thanks again - you guys must have had quite a job and I appreciate the work you have done. Regards, JAKE 1

19006 Distribution
Ronald M. Stoughton,

Cost of Printing: COM, Offset, and Xerox

COM may save you money Give it a try. The Output Processor Users' Guide is available on-line (see -- userguides,arclocator,2:ebt) and will be available in hard-copy next week.

Cost of Printing: COM, Offset, and Xerox

Output Processor Costs 1

Output to COM takes the same (in some cases less) computer time as Output to Printer.

Computer Output to Microfiln is now operational. Standard COM formats are being developed which should eliminate trial formatting. Formatting help is available from Dean Meyer (NDM).

Printing Cost per original line printer page from on-line print file, including collating:

2

copies	COM+Offset	LPT+Offset	LPT+Xerox (including time)
1	1.63	1.11	0.07 (no run time)
50	2.00	1.72	2.56
75	2.14	1.95	3.78
100	2.20	2.06	5.00
150	2.64	2.79	7.56
200	2.41*	2.41*	10.00
250	2.60*	2.73*	12.56
300	2.79*	3.04*	15.00
400	3.17*	3.67*	20.00

* back-to-back printing

Example: 3

300 copies of a 100 lpt pages would cost -

COM and Offset: $279

LPT and Offset: 304

Conclusions 4

Xerox is not recommended for more than 40 copies.

COM is recommended for 200 or more copies. For less than 200 copies, the improved quality may warrant the nominal difference in cost.

Offset printing adds one week to turnaround time. COM adds an additional week and a half for format proofing and master production.

Cost of Printing: COM, Offset, and Xerox

Supplementary Data 5

COM 5a

Master:	film	$1.16
	proof	0.10
	Subtotal	1.26
	Camera ready master	0.35
	Total for COM master	$1.61

Compaction:

By allowing smaller type and proportional spacing, COM can fit more on each page than the line printer.

8 point type = 80% of 10 pt line printer type

proportional spacing = 75% (approx.) of monospacing

Total compaction: 60% as many pages as on printer

[0.80 * 0.75 = 0.60]

(Less on short documents with a significant widow page. Better on documents over 30 lpt pages.)

Printing done SRI in-house from DDSI masters.

TOTAL COST/original lpt page = [(offset cost) + 1.61] * 60%

Offset printing (SRI print shop) 5b

Printing cost of each original page

copies		
1 - 10	$1.11	(i.e. 10 copies same price as one)
41 - 50	1.72	
71 - 80	1.95	

Cost of Printing: COM, Offset, and Xerox

90 - 100	2.06	
101 - 150	2.79	both sides
151 - 200	3.32	4.82
201 - 250	3.85	5.45
251 - 300	4.38	6.08
301 - 350	4.91	6.71
351 - 400	5.44	7.34

Xerox 5c

0.04 per page for Xerox

0.004 per page for master from line printer ($4.35/M)

20 copies per collated run: 40 sec/run @ $10/hr = 0.12/run

[30 sec run time, 10 sec set up time]

TOTAL COST = [INT((copies/20)+0.95)]*0.12 + 0.044*(copies)

19007 Distribution

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, Donald C. (Smokey) Wallace, Richard W. Watson, Don I. Andrews

Entering '?

Entering '? to list alternatives, in TNLS often ((always?) pops you out of the command, and up to the next higher command level. 1

19008 Distribution
Diane S. Kaye, Harvey G. Lehtman, Charles H. Irby,

JAKE 12-SEP-73 18:48 19009

UCLA-NMC Status

Lou, I wonder if you could tell me the status of your site at this time. I have 'Limited Server' in my data but Peter Deutsch/Nancy Neigus have you listed as becoming 'User only'. If you are now a Server and will become User only, when will this happen? Would appreciate clarification. Thanks. Jake Feinler@SRI-ARC (ident JAKE)

1

19009 Distribution
Lou C. Nelson,

NJN 13-SEP-73 06:06 19012

L-10 Users Guide

Judy--
Please send me a copy of the new l-10 users guide when the hardcopy is available next week. Address =
Nancy J. Neigus
Bolt Beranek and Newman
50 Moulton St.
Cambridge Mass. 02138
Thanks, Nancy

1

Results of Questionnaire on NIC Directories

Altogether, 31 replies have been received to the questionnaire on the usefulness of the NIC Directory of Network Participants. The tally of replies is given, then specific comments, then conclusions.

TALLY OF REPLIES

Question 2. Check level of use you make of each section of the Directory

Directory of Participants	indis-pensable	very useful	useful	not useful	no opinion
Individuals, Brief (Name, phone)	5	11	11	2	2
Individuals, Full entry	8	5	12	3	3
Groups (name, address etc., of all members)	1	7	14	4	5
Index of Idents	5	6	11	3	6
Organizations (name, address of org, with names of people)	9	7	12	1	2

Would you miss the listings of people in each organization if they were discontinued?

Yes = 23 No = 7

Note "not useful" votes were received from Deutsch who finds the whole Directory useless because he uses everything online, and from two others who found other sections "indispensable". Two Sites with negative or no opinion on answers were SU-HP and LL-67.

Results of Questionnaire on NIC Directories

COMMENTS VOLUNTEERED BY RESPONDENTS, in order received 14

Cerf (SU-ERL) If you did away with Brief Individuals and Index to Idents I could survive. Individuals Full Entry and Organizations are essential. Groups is very useful, and I find it easy to keep track of INWG this way, but I could do it myself if it's too much for NIC. 14a

Iwamoto (ALOHA) Perhaps the Individuals Brief could be eliminated - if the full entry were the only thing available in terms of listings of individuals, people would use only that. The full entry could also incorporate some other information now listed in separate listings...then the index could become even more compact. 14b

Deutsch (XEROX-PARC) A complete waste of space and time. 14c

Schelonka (RML) Useful 14d

Devine (Rutgers) Since all of the information in the Brief Directory of Individuals is in the full directory and since it's not all that much easier to look up a name in th Brief Listing, I find the Brief Listing redundant. 14e

Padlipsky (Multics) (re Organization Listing) Sometimes need to know who else to try when making contact with a strange site where you have 1 or fewer names. Could be semi-annual, on microfiche, with no loss. 14f

Barden (CASE-10) Keep it all. Nice to know it's there, nobody reads all books in a library, but one likes to have it there. 14g

Golding (AMES) (re Organizational Listing) AMES is in the process of getting more involved in the ARPA Network and I would prefer to not have any more cutbacks until we have more experience in this field. I keep it up to date monthly for the troops as it is the only directory kept up at Ames as far as I know. 14h

Fink (LBL) The new Organization section format is difficult to read and to find the organization you want. Don't allow an organization to flow over a page boundary unless it really is over 1 full page long. 14i

Mostrom (LL-67) No one here ever uses it. 14j

Reid (UQSS) (re Organization Listing) Yes, but there is no need to devote one full page to each organization. 14k

Lundh (UDRE) Very useful. 14l

D. Crocker/L. Nelson (UCLA-NMC) Would very much like "phone book" level publication kept VERY up to date and distributed to MANY people. The full directory, less often and less distributed (similar to current level). NIC documents need to be more up to date. 14m

Gloria J. Martin (UCLA-CCN) Please supply larger notebooks. Update instructions made clearer as to what sections or individual documents should be discarded and where new pages should be placed. 14n

14o

CONCLUSIONS 15

The following are my own conclusions about the desirability of various Directory features. 15a

1. The Directory has features which are generally satisfactory to users who took the trouble to respond. 15b

2. The two most appreciated listings were the Full Entry for Individuals and the list of people by Organization. Presumably these points of entry are ones which should be retained. 15c

3. The strong vote for Brief Individuals section is important to consider. Presumably the extra information in the Full Entry is not objected to, and the undesirable bulk could be taken care of by design which would make the Full Entry more readable and take less space than at present. 15d

4. While not judged essential, the Index of Idents was given a vote of usefulness, and should be retained because it is a unique entry point and takes very few pages. 15e

JBN 17-OCT-73 11:00 19035
NIC 19035
JBN 19 OCT 73

Results of Questionnaire on NIC Directories

(J19035) 17-OCT-73 11:00; Title: Author(s): Jeanne B. North/JBN;
Distribution: /MDK RW MEJ JEW DCE JCN JAKE MLK; Sub-Collections: NIC;
Clerk: JBN;
Origin: <NIC-WORK>QUESTRESULTS3.NLS;5, 15-OCT-73 12:03 JBN ;

ARPANET News, Issue 8, October 1973

(n1) ARPANET NEWS October 1973 Issue 8 NIC 19050

Choose one by typing:
(for example) s[how] n5 CR (to display FEATURED SITE)
(or) s[how] u1 CR (to display first update)
To print statement numbers, type v[:type View specs:]mG CR

1

n2 ARPANET NEWS Information About the Publication 1a

n3 CALENDAR Events of Network Interest 1b

n4 ARTICLES Online Interview with Dag Rieber-Mohn
Online Interview with Ira Cotton
Network Journal Submission and Delivery 1c

n5 FEATURED SITE University College, London 1d

n6 PROTOCOLS 1e

n7 RESOURCE NEWS New Programs and Publications 1f

n8 PLANS 1g

n9 OTHER NEWS 1h

n10 FORUM TIP Development Group Wants Terminal Info 1i

u1 Update 16 October 1j

u2 Update 19 October 1k

(n2) ARPANET NEWS Information About the Publication

2

Issue 8 October 1973 2a

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Stanford Research Institute
Menlo Park, California 94025 2b

Editors: Jeanne B. North (NIC)
Jean Iseli (MITRE)

ARPANET News, Issue 8, October 1973

Contributing Editor: Susan S. Poh (MITRE)
Mil E. Jernigan (NIC)

2c

The online version is available to all Network members who receive online delivery from NIC. It can also be accessed by anyone who logs into SRI-ARC and uses the query language named nic.

2d

The online version contains the month's basic issue. Each week a branch is added, containing items received during the week. This update material is added to the new feature articles to produce the next month's issue.

2e

For scanning:

2f

```
control c
nic  CR
a[rpanet news]  CR
s[how]  (whatever you choose from the contents)  CR
(to stop printing) control o
(to exit) q[uit]  CR
(to show statement numbers) v[:Type Viewspecs:]mG  CR
```

2g

For printing NEWS:

2h

```
nls  CR

l[oad] f[ile] <nic>arpanews  CR CR  (current)
o[utput] d[evice] t[eletype]  CR
```

2i

```
      or
l[oad] f[ile] <nic>arpanewsseptember  CR CR
o[utput] d[evice] t[eletype]  CR  (for earlier issue)
```

2j

```
      or
l[oad] f[ile] <nic>arpanewsup  CR CR (for UPDATES only)
o[utput d[evice t[eletype]  CR
```

2k

One hardcopy of the monthly issue will be sent to each Liaison, Principal Investigator, and Station Agent at Network Sites, and to Network Associates. Local reproduction of multiple copies is

encouraged.

2l

Contributions to the NEWS may be forwarded to JI at NIC through the Journal, to ISELI@USC-ISI, or to Jean Iseli, The MITRE Corporation, National Systems Design Dept., Westgate Research Park, McLean, Va. 22101. News may also be forwarded to JBN through the NIC Journal, or mailed to Jeanne North at SRI.

2m

To return to contents outline type s[how]n1 CR

2n

(n3) CALENDAR Events of Network Interest

3

Type s[how] (parenthetical name)

3a

(condensed)

3b

Type s[how] (parenthetical name)
Items listed here without parenthesis were listed in earlier NEWS, and their text has been moved to the file <NIC>CALENDAR, which can be seen by the command b[ring]<NIC>CALENDAR

3b1

10/1-3	ACM-PROGLANG ACM Sym on Programming Languages
10/9-11	EDUCOM 9th Annual Conf., Princeton
10/15-17	IEEE Ann Sym on Switching and Automata Theory
10/21-25	ASIS ASIS-73 Annual Meeting
10/22-27	(venice) Semin Europ sur Reseaux D'Ordinateurs
10/30-11/1	(patrec) 1st Intl Jt Conf on Pattern Recognition
11/5-7	IEEE-SYS Conf on Systems, Man & Cybernetics
11/7-8	ARCH Sym on High Level Language Computer Arch
11/12-13	TEXAS 2nd Texas Conf on Computing Systems
11/12-16	(image) Image Processing
11/13-15	DATA-SYMP
1/8-10 74	HAWAII-CON
2/12-14 74	(comsci) 2nd Ann Computer Science Conference
4/22-23 74	(graph) Workshop on Machine-Independent Graphics
5/6-10 74	NCC 1974 National Computer Conference
6/17-19 74	(icc74) IEEE Intl Conf on Communications ICC74

3b2

A meeting listed here is sponsored by the Group named. Many

meetings are open to other interested people. NIC document references are given where available.

3b3

Meetings sponsored by Groups in the Network are indicated by *.

3b4

(patrec) 1st Intl. Jt. Conf. on Pattern Recognition Oct.30-Nov.1, Washington. D.C.

3c

65 papers will report on such aspects as: mathematical methods, character recognition, biomedical applications, picture processing, speech, syntactic methods, adaptive pattern recognition, scenes and structures, and remote sensing. Members of ACM, IEEE, IFIPS, OSA, PRS, and SPIE: $55. Non-members: $65. Sessions to be held at Mayflower Hotel. Contact: Louis S. Rotolo, Pattern Recognition Society, P.O. Box 629, Silver Spring, Md. 20901.

3c1

(venice) Seminaire Europeen Sur les Reseaux D'Ordinateurs, 22-27 Octobre 1973, Venice.

3d

Organized to meet the need for a successor to a workshop held at Arles 24 April-4 May this year. Sponsored by AFCET, AICA, BCS, DARA, IRIA, and Centro CNR per l'Ingegneria dei Sistemi per l'Elaborazione dell'Informazione. Seminar will be in English. Those desiring to participate should contact Pr. G. Le Moli c/o Institute de Elettrotecnica ed Elettronica, del Politecnico di Milano, Piazza Leonardo de Vinci 32, 20 133 Milano, Italy. Phone: 23.67.241. NIC has an announcement and registration form, but no further program information.

3d1

(graph) Workshop on Machine-Independent Graphics, ACM SIGGRAPH and NBS, April 22-23, 1974, at Gaithersburg, Md.

3e

Sessions on: interaction device independence, picture description languages, portability - how to get it, standards proposals, are we ready for standards?, configurable/portable software for satellites, meta systems, operational machine-independent systems, emulation as a means to machine independence. Purpose is to promote close interaction and cooperation between those who are concerned with machine-independent graphics, with strong emphasis on interactive graphics. Attendence will be limited to 75, with preference given those already active in the field. No

proceedings will be published, presentation of work in progress is encouraged.

3e1

Those wishing to participate should write general chairman, describing activities and/or interest in the topics, indicating whether willing to present current work, serve as session chairman or act as presentation discusser. Invitations will be mailed by 1 February 1974. Registration fee of $20 to $40 will be charged.

3e2

General Chairman: James D.Foley, Computer Science Department, University of North Carolina, Chapel Hill, N. C. 27514. Arrangements Chairman: Ira Cotton, NBS, Washington, D. C. 20234.

3e3

(image) Image Processing, November 12-16, 1973, at Purdue University.

3f

5-dsy short course for scientists and engineers, to be held at Campus Inn, West Lafayette, Indiana. Fee:$375. Contact: Paul A. Wintz at (317) 742-5650. For room reservations write to Campus Inn, 1920 Northwestern Ave., West Lafayette, In. 47906.

3f1

(comsci) 2nd Annual Computer Science Conference, February 12-14, 1974, Detroit Hilton, Detroit, Michigan.

3g

To be devoted primarily to short current research reports (15 minutes including discussion. Reports of research are invited from any area of the computer and information sciences. Abstracts only will be required. The original and two duplicates must be received by December 1, 1973. Send to: Seymour J. Wolfson, Computer Science Conference, 643 Mackenzie Hall, Wayne State University, Detroit, Mich. 48202.

3g1

(icc74) IEEE International Conference on Communications (ICC74), June 17-19, 1974, Leamington Hotel, Minneapolis, Minn.

3h

Original papers, not submitted elsewhere, are invited on: computer and data communications systems, communication switching, satellite communications, communication electronics and signal processing. Authors are requested to send 5 copies

of their paper and one-page summary by December 17, 1973 to: Dr. M. S. Ulstad, ICC74, P.O.Box 35366, Minneapolis, Minn. 55435.

3h1

To return to contents outline type s[how]n1 CR

3i

(n4) ARTICLE

4

(dag) Online Interview with Dag Rieber-Mohn

4a

Following is a transcript of an online interview on 26 September 1973 with Mr. Dag Rieber-Mohn, NORSAR, Norway, during his visit to a site in the United States. The interview was conducted by Jean Iseli and Mil Jernigan of the ARPANET Newsletter staff.

4a1

(dr-m) Hi, this is Dag Rieber-Mohn from NORSAR, Norway.

4a2

(Mil) Dag, would like you to meet Jean Iseli, of MITRE-TIP, who is also online with us. Jean welcomes new users to the ARPANET and helps them to get established in the ARPANET Community.

4a3

(dr-m) Yes, I heard about Jean Iseli in London already.

4a4

(ji) Hello, would like to welcome you to the ARPANET. Dag, would you consider giving us a brief interview for the ARPANET Newsletter, to sort of formally welcome you to the Net and give you the opportunity to make a few statements to the larger Network community?

4a5

(dr-m) Yes, would be glad to, but we don't have very much of interest yet. Has Doug Engelbart come back from London yet? Say "Hello" to him for me when he returns. I spent a nice time with him in London. He taught us something about NLS - very impressive.

4a6

(Mil) I'm glad you got to know him. He is taking a few days of long-delayed rest, although he is back from London. Dag, could you tell us something of your plans for the NORWAY-TIP?

4a7

(dr-m) OK, I'll try. NORSAR is a seismic research institution like SDAC. Our plans for TIP use are very vague at the moment. That is why we are visiting sites here in the United States. At NORSAR we are attached to the TIP with a TTY-like device, but plan to connect as a user host. Also we might obtain a CRT terminal of some kind, but so far nothing has been decided. We plan to use network resources for two things: (1) large compute bound or core bound jobs; (2) transmitting data and bulletins.

4a8

(Mil) Do you have even a close projected date to be up, or are you up through the UK-ICS TIP now? That is, using their TIP?

4a9

(dr-m) No, we have our own TIP and we are up now. However, it is not listed in the NIC directory. It is the NORSAR TIP at our institution. We do not have accounts at any hosts yet and therefore do not use the Net for any serious work, except for PARRY, The Psychotic Patient.

4a10

(Mil) There are a number of interesting things on the Network. As soon as you start coming into some of the hosts you will naturally find some of these. If you start coming into NIC to do work, link when you see me online. I will be glad to help you in any way I can.

4a11

(ji) Dag, if we can be of any service to you in the future, I can be reached through SNDMSG and it would be a pleasure to be of assistance if the need arises.

4a12

(dr-m) Have to go now. Have enjoyed talking to you both. Thank you for your time.

4a13

(ji) We both enjoyed meeting you and wish you the best of luck with your TIP and your work.

4a14

(cotton) Online Interview with Ira Cotton of NBS

4b

The following is a typescript of an online interview with Ira Cotton of the National Bureau of Standards (NBS-TIP) by Mil Jernigan of the NIC and Jean Iseli of MITRE-TIP on 19 September 1973. The interview was abruptly ended by the message "HOST

DEAD," so Ira agreed to continue it for a future issue of the ARPANET Newsletter.

4b1

JI: Ira Cotton of NBS has agreed to tell us what is happening at NBS-TIP, what their current interests are, and assorted other topics of possible network community interest. Ira, what area would you like to start off with?

4b2

IWC: Perhaps I should begin with a brief overview of our interest in the ARPANET. We are interested from many points of view. It is helpful to remember that the Institute for Computer Science and Technology at NBS was established under the Brooks Bill which assigned to the Department of Commerce the authority and responsibility to be the Federal governmental authority in data processing. In other words, we have the responsibility to assist other Federal agencies in making efficient and effective use of data processing. Under this mandate, we are naturally interested in possible uses of the ARPANET by Federal agencies, and indeed, a number of agencies in the Washington area do access network facilities through our TIP. In addition we give a large number of briefings annually on the general subject of the network. Next, we have both sponsored and unsponsored research projects which relate to the network. An example of sponsored research is our contract with the National Science Foundation under which we are investigating different network technologies in support of their "Networking for Science" program. An example of unsponsored research is our own development project for a "Network Measurement Machine", a combination of hardware and software to aid in the performance measurement of interactive (and hence network) systems. After all, NBS is the nation's measurement laboratory.

4b3

JI: Thank you, Ira, I think this preamble is very good. Are you involved with the current GSA effort towards a non-DoD common user network?

4b4

IWC: We have met with them several times, briefed them on various topics, and generally tried to be helpful, but we are not currently participating in the design of any systems for them.

4b5

JI: I think with your accrued experience and expertise that NBS could provide them measurable assistance in the effort. My understanding is that they are currently developing

specifications for such a network; Department of Agriculture appears to have the most extensive requirements right now.

4b6

IWC: Many (perhaps too many) Federal agencies are currently investigating or setting up computer networks. Another one that comes to mind is the Customs Bureau. As I said, we have a responsibility to assist them, but we cannot force ourselves on them. We do maintain a Federal Agency Network Information Center here at the Bureau to respond to documentation requests, we talk often on the phone to casual requests for information/assistance, give briefings on request, and develop deeper consulting relationships as user needs warrant. I should emphasize that the ARPANET is only one of the networks on which we disseminate information.

4b7

JI: It sounds like NBS is providing very valuable assistance throughout the Federal Government. Ira, is there a mechanism for state governments to benefit from NBS's capabilities?

4b8

IWC: It is my understanding that there is an association of state governments which has established liaison with NBS at some level. I don't know any of the details, but I can also say that we are happy to respond to inquiries from such people. We also provide what information we can to private individuals and companies, but here we have to be a little careful.

4b9

JI: That is understandable...Ira, is NBS active in exploring the potential economic incentives and other attributes of interconnecting all these networks?

4b10

IWC: Perhaps not as active as we should be. We will be investigating network economics under our NSF project, and are scheduled to publish a report this fall on "Cost Analyses for Computer Communications." I myself am becoming what I would call a "semi-economist" through pursuit of a DBA, and I have written and submitted to <Computing Surveys> an article surveying "Microeconomics and the Market for Computer Services." But we have not yet attempted to perform the precise study which you suggested.

4b11

JI: What you are doing is very timely and will be of real benefit to the community. Ira, before I forget, is NBS active in the multi-national network efforts, like in Canada, France,

Italy, etc.?

4b12

IWC: First of all, NBS is the governmental representative on most standards bodies such as ANSI, ISO, CCITT, etc. Activities are being started in many of these groups which have a bearing on computer networks. For example, ANSI task group X3S37 was just established to consider topics relating to "public data networks" and to develop the American position. Other standards, such as interfaces, character sets, etc., have always affected computer networks. We are representatives on virtually all these work groups related to computers or data communications. I myself am a member of X3S37, and will chair the subgroup concerned with packet switching. I am also a member of the International Network Working Group, and hope to promote closer cooperation between these two groups. So you can see that we are active in areas which go beyond national boundaries. We also receive many foreign visitors here every year, and occasionally have the opportunity to visit them.

4b13

JI: Ira, in your prior comment regarding promoting better cooperation and collaboration, I would invite you to consider the ARPANET Newsletter as a possible platform for that worthwhile objective and also offer whatever assistance you might like that we could provide.

4b14

IWC: Thank you. I'm sure we will.

4b15

JI: Ira, the NBS work has such broad interest to so many members of the ARPANET community, I wonder if you might consider keeping us aware of your efforts, plans, accomplishments, and publications from time to time?

4b16

IWC: Jean, you know I've been doing that for you personally. Just feel free to put on your editorial hat anytime. Seriously, we are just on the verge of a publications deluge. Our Annotated Bibliography on Resource Sharing Computer Networks is the first of several reports to be published this fall for the NSF. Other reports will cover various aspects of network technology and management. All of these reports will be in the public domain, freely available (or at worst for a modest fee from the Government Printing Office), and all will be entered into the NIC system.

4b17

JI: Will look at them with a great deal of interest. Maybe we could alert the community with a brief abstract through Mil's column at the same time as they become available; that way, many people can benefit, right, Mil?

4b18

MEJ: Right. We publish each month some abstracts either of interest on the subjects of the interviews and articles in the Newsletter, or some of the new material just received at the NIC that would be of general Network community interest. Ira, I see every time I am online that NBS-TIP is a very busy facility. Are there any plans for putting in another TIP? Or for becoming a server host, someday? And what effects will the NIC server coming up on the computer utility about the first of the year have on any plans you might have? Do you anticipate more business as a result?

4b19

IWC: Several of us here at NBS and some of the people from other agencies we have worked with have become extensive users of the NIC facilities. Personally, I wouldn't consider writing another professional paper without a computer to help me. We are users of several such systems, among them the NIC and ATS from a local supplier, and we are hoping to be able to compare and evaluate them for our needs. Currently our needs don't go much beyond simple text editing, storage and printout. I have become very used to using the NIC, and have been assured that I can continue after the end of the year. I would very much like to try to go all the way from text entry to photocomposer for final production when Doug gets all the bugs out. I don't see that the change in NIC status will affect us very much. To try to answer your first question about our TIP, we have a lot of modems available now, but are nowhere near saturation. We hope to have our own research computer someday (when impounding of funds ends) but for the near future the only host which will be connected to our TIP will be the PDP-11 in our Network Measurement Machine.

4b20

(netjour) Network Journal Submission and Delivery

..... Mike Kudlick

4c

INTRODUCTION

4c1

As many of you may know by now, a Network Journal Submission and Delivery system is now running at the NIC. (The Submission

portion of the system was written by Jim White, the Delivery portion by Dave Hopper.) The purpose of this note is to bring this system to your attention, in case you haven't heard of it, or don't know how to use it yet.

4c2

The system allows you to use the NIC's Journal without using NLS.

4c3

Network users may submit text files (with appropriate header info) for Journal delivery, via their mail subsystems. These text files can be created in any way you want. All that's required is that they be transmitted to the NIC via FTP Mail Protocol. The text files are converted at the NIC into NLS files, and then are journalized and distributed.

4c4

Network users may also receive citations to their Journal mail at the host of their choice, via FTP Mail Protocol. This delivery is automatic; i.e., no action is required to receive it other than to inform the NIC that you want "Network" Journal Delivery.

4c5

What follows is a brief description of how to use the system. For a more complete discussion, please see RFC 543 (NIC 17777) dated 16-July-73.

4c6

YOUR NETWORK MAIL ADDRESS

4c7

Your Network Mail Address has, of course, two components: USER and HOST.

4c8

"HOST" is the official hostname for the computer to which the mail is delivered via FTP.

4c9

"USER" is the text string the HOST uses to identify your mailbox.

4c10

These two components must be in the NIC's identification system, together with your NIC ident, in order for the Journal to do the appropriate things. Contact Marcia Keeney at the NIC

to get this information into our system.

4c11

RECEIVING JOURNAL MAIL AT A HOST OF YOUR CHOOSING

4c12

To receive Journal mail via FTP, tell the NIC that you want your Journal Delivery option to be "Network". Once we know this, all subsequent Journal items addressed to you, or to a Group that you belong to, will be delivered to the Network Mail Address you specify.

4c13

Note: If you don't want to receive Journal mail via FTP (the "Network" option for delivery), two other options are available: via US Mail ("hardcopy" option), or online at an NLS host ("online" option).

4c14

You can choose either the "hardcopy" or the "online" option instead of the "Network" option for delivery. Or you can choose any combination of the three options and get your Journal mail delivered in more than one way.

4c15

The Network Journal mail is in the form of a citation, which is usually three lines of text as follows:

4c16

author-ident date and time-submitted NIC#
title-of-document
pathname-to-document

4c17

The pathname is of the form:

HOST <DIRECTORY>NIC#.NLS;XNLS

4c18

Using this pathname with your FTP process, you can retrieve the text of the Journal document.

4c19

An alternate citation format is used when the text of the document is the equivalent of one NLS "statement" (2000 characters or less). In this case, there is no pathname given; instead, the message itself is given.

4c20

SENDING JOURNAL MAIL FROM YOUR SYSTEM, VIA FTP

4c21

To use the system for submission of Journal documents, the "username" field required by FTP Mail Protocol must be of the form:

4c22

author-field <slash> recipient-field

4c23

where

4c24

"author-field" is one or more NIC idents (individuals or groups) separated by spaces,

the <slash> character "/" is REQUIRED, and

"recipient-field" is one or more NIC idents (individuals or groups) separated by spaces.

4c25

(Each individual in the recipient list will receive either the document or a citation to it, depending on the Delivery option he chooses, as described above under "Receiving Journal Mail".)

4c26

You may OPTIONALLY assign a title (or subject) to your document by making the FIRST LINE of your text be as follows:

4c27

TITLE: ... <cr><lf>

4c28

where

4c29

the string "TITLE:" is required (if you prefer, you may use
"SUBJECT:" or "RE:" instead of "TITLE:"), and
the title itself (indicated above by "...") can be any text.

4c30

The text of your document follows this optional title line. Each line of text in your document will become one NLS "statement", unless other options are specified in the

"username" field of the FTP Mail Protocol. A description of these options may be found in RFC 543, under the heading "Specifying an NLS Conversion Algorithm".

4c31

To return to contents outline type s[how]n1 CR

4c32

(n5) FEATURED SITE The University College, London, ARPANET Node

----- by Adrian V. Stokes for Peter Kirstein

5

Since early September 1973, the London TIP has been operational on ARPANET. Although at the TIP site we have only two PDP-9 computers, modems and terminals, we expect to be both a substantial server and a user node. One PDP-9 is linked by a slow (currently only 2.4Kbs) telephone line to an IBM 360/195 at the Rutherford High Energy Laboratory (RHEL), and is also a Host (42) on ARPANET. In this Host, we have developed our first version of the NCP, TELNET and ICP so that the 360/195 can be used over ARPANET with no special software in the 360. The system is now available for limited experimental use; it has limited interactive facilities and the usual range of IBM languages. Persons interested in accessing the system should contact Peter Kirstein (SNDMSG address KIRSTEIN@ISI). At the moment, permission to use ARPANET is only temporary. When some negotiations with the Norwegian NTA have been completed, we expect to be linked for at least two years.

5a

Besides the local Host interface, through which the PDP-9 and the RHEL 360 are connected, the London TIP has a very distant Host interface. A number of projects will use that interface at different times. The first use will be to connect in another network, that of the Computer Aided Design (CAD) Centre at Cambridge. This system has good interactive facilities and some interesting CAD applications packages, but is heavily booked. It is hoped to be able to provide experimental access to that system through the second PDP-9 in early 1974. A second use of the remote Host interface will be to interconnect experimentally the National Physical Laboratory packet-switched network. This should occur in mid-1974. Interconnection experiments with other networks, both in the UK and France are being planned. We hope also to be involved with a broadcast satellite link.

5b

Our principal activities will be as a user site. There are currently some 15 research groups in the UK who wish to access

resources in the U.S.A. These include groups interested in seismic research, algebraic manipulation, information retrieval, high energy physics data bases, LOGOS, facsimile transmission and programming languages. These groups will access our TIP either through the Network or through leased lines. We will attempt therefore to support the Network use of the groups and will therefore have to act as the utility of ARPANET in our environment.

5c

We would be delighted to hear from researchers who wish to co-operate with people they know of in the UK on particular research projects.

5d

(n6) PROTOCOLS

6

No insert this month

6a

To return to contents outline type s[how]n1 CR

6b

(n7) RESOURCE NEWS New Programs and Publications

7

Type s[how] (parenthetical name)

7a

(mailucsb) Mail Facility at UCSB

7b

There now exists a server program at UCSB, resident under socket 3, that supports that subset of the File Transfer Protocol necessary for mail delivery. Only the MAIL and BYE commands are implemented at this time.

7b1

Mail may be sent to an individual at UCSB by specifying his local user name in the MAIL command. Individuals currently defined as valid recipients, with respective user names: Ed Faeh (FAEH), Jim Guyton (GUYTON), Mark Krilanovich (KRILANOV), Curtis Mosso (MOSSO), John Pickens (PICKENS), and Ron Stoughton (STOUGHTN). In addition, any general comments or complaints about UCSB services may be sent to user name GRIPE.

7b2

... from RFC 574, NIC 19144 by Krilanovich, extract by JBN

7b3

(traffic) Traffic Statistics (August 1973)

7c

Network Liaisons have received RFC 566 by Alex McKenzie, NIC 18801, which gives Host throughput statistics for August, showing the traffic for each Host. Internode traffic totalled 99,009,940 packets, intranode traffic was 37,732,470, giving daily averages of 3,193,869 and 1,217,177 respectively. Packets/messages (internode) was 1.07.

7c1

(abstracts) Abstracts of Recent Network Documents

7d

Franz L. Alt, Judith Yuni Kirk (American Institute of Physics). Computer Photocomposition of Technical Text. In: Communications of the ACM, Vol. 16, No. 6, p.386-391. June 1973. NIC 18539.

In computer assisted typesetting by means of photocomposition, special problems arise in highly technical material such as mathematical formulas. New solutions to several of these problems have been devised in the information system of the American Institute of Physics. They include: the representation of special characters [foreign alphabets, mathematical symbols, etc.) not available on input keyboards or on the photocomposer; the generation of such symbols, e.g., by overprinting; the precise positioning of accent marks (floating diacritics); line breaks, i.e., words or formulas placed partly at the end of one line and partly at the beginning of the next; and certain aspects of error correction.

7d1

Davis B. McCarn, Joseph Leiter (National Library of Medicine, Bethesda, Maryland). On-Line Services in Medicine and Beyond. In: Science, Vol. 181, No. 4097, p.318-324. 27 July 1973. NIC 18540.

NLM's MEDLINE allows interactive searching of over 400,000 citations of biomedical literature; 25 simultaneous users, 43 hours per week, through a data communications network. Access is through local dataphone call in any of 40 major metropolitan areas in U.S., France, and Canada. The MEDLINE data

base is also accessible from a computer in Sweden. MEDLINE is the first generally accessible, online, interactive information service, and is the first national and international telecommunications-based science information network.

7d2

Richard L. Meier (University of California at Berkeley). Communications Stress - Threats and Remedies. In: Organizational Dynamics, Vol. 1, No. 3, p.69-80. Winter 1973. NIC 16592.

Discusses stress caused by increase in communications in today's society, possible ways to automate some subset of communications, results of a "wired city", and certain attributes of a cybernetic society. Communications flow through such means as computer networks can increase psychological pressure to the danger point. Suggests areas for possible automation to make such an environment tolerable to humans.

7d3

Richard R. Muntz, Forest Baskett (Stanford University, Stanford Electronics Laboratory). Open, Closed, and Mixed Networks of Queues With Different Classes of Customers. 39p. August 1972. STAN-CS-73-360; SU-SEL-73-016; TR 33. NIC 18587.

The equilibrium distribution of states of a model containing four different types of service centers and R different classes of customers is derived. From this steady state distribution one can compute the moments of the queue sizes for different classes of customers at different service centers, the utilization of the service centers, the "cycle time" or response time for different classes of customers, and other measures of system performance. Results unify and extend a number of separate results on networks of queues. Order of job processing in a network of servers such as a computer network is considered.

7d4

Don Cantor (Computer Corporation of America). NWG/RFC 565 - Storing Network Survey Data at the Datacomputer. 6p. 28 August 1973. NIC 18777.

Every 20 minutes DMS's program SURVEY wakes up and performs the initial connection protocol from the PDP-10 at DMS to the logger socket (socket 1)

of each of 28 ARPANET hosts. SURVEY records a date time, host status, and response time in tenths of seconds for each host. When data of all 28 hosts has been assembled, SURVEY transmits it to CCA's datacomputer, where several files and indices to records are maintained. SURRET allows a user to retrieve material from the SURVEY data base through a simple query system.

7d5

R. G. Casey (IBM Research Laboratory, San Jose, California). Design of Tree Structures for Efficient Querying. In: Communications of the ACM, Vol. 16, No. 9, p.549-556. September 1973. NIC 18597.

A standard information retrieval operation is to determine which records in a data collection satisfy search parameters; the process can be represented by a tree search model. This paper poses an optimization problem in the design of such trees. The technique is potentially useful for analysis of observed performance. A novel tree search scheme based on a bit vector representation of data shows essentially the same algorithm can be used to design either an ideal search tree or a bit vector tree. An experimental study of a small formatted file illustrates the concepts.

7d6

Alfonso F. Cardenas (University of California at Los Angeles, Computer Science Department). Evaluation and Selection of File Organization - A Model and System. In: Communications of the ACM, Vol. 16, No. 9, p.540-548. September 1973. NIC 18610.

First discussed are some elusive factors which affect file organization performance (data base management), then presented are a methodology, a model and a programmed system to estimate primarily total storage costs and average access time of several file organizations, given a specific data base, query characterization and device-related specifications. Based on these estimates, an appropriate file structure may be selected for the specific situation. The system is a convenient tool to study file structures and to facilitate as much as possible the process of data base structure design and evaluation. This study is relevant to today's tendency toward the study of computer-based management information systems, MIS, and the importance of this area to much

of the emerging large data base handling and distributed character of information usage.

7d7

Eric W. Wolf (Bolt Beranek and Newman Inc., Arlington, Virginia). An Advanced Computer Communication Network. In: AIAA Computer Network Systems Conference - A Collection of Technical Papers, Huntsville, Alabama, 16-18, 1973, paper 73-414, 8p. 1973. NIC 18599.

The Advanced Research Projects Agency Network (ARPANET) enables computers to share their computing and storage capacities, making their combined data processing power available to a large number of users. Utilizing 50-kilobit phone lines and packet switching, it has become the largest inter-computer network by linking over 40 computers of many different kinds. The ARPANET has achieved high reliability, coast to coast transit times under one half second per message, and its incremental communication costs are about 30 cents per megabit. Further advances including satellite extensions, megabaud data rates, communications security, and remote job entry devices, are under development. 72 references.

7d8

To return to contents outline type s[how]n1 CR

7e

(n8) PLANS

8

No insert this month

8a

To return to contents outline type s[how]n1 CR

8b

(n9) OTHER NEWS

9

(multics) Multics Network Attachment to Honeywell 6180

9a

The big news from Multics is that the Network attachment is now to the Honeywell 6180 Follow-on Multics machine rather than to the 645 (which is no more). Network users of Multics might be interested in a few facts and figures on the 6180: The cpu is about twice as fast as the 645, and prices are lower, making

work more than twice as cheap as before. Most popular question is, What's the new ready message mean? As I understand it, the cpu time (which comes after the time of day) is now "virtual" cpu time -- not including page fault processing, which was included on the 645; the next field is "memory usage", which is an estimate of the number of "page-seconds" you would have used if you had a "normalized" machine; and the final field is actual page faults. Service is scheduled 22 hours per day, but nagging hardware problems stemming from the machine's being serial number 1 and the Network special interface box's being a home brew might lead to unscheduled unavailabilities.

9a1

WARNING: Sometime in October we'll be switching over to a new IMP; our address will become 44 decimal (54 octal). The exact date will be announced in the Multics message of the day, an RFC, and -- in all probability -- the next issue of the ARPANET NEWS.

9a2

.....Mike Padlipsky

9a3

To return to contents outline type s[how]n1 CR

9a4

(n10) FORUM TIP Development Group Wants Terminal Info

10

1. We in the TIP Development Group find ourselves unable to make correct decisions about how to improve the TIP without knowing what terminals are in use with the TIP. We further find ourselves unable to help users with problems with terminals of which we have never before heard. Therefore, we ask every user of a terminal which is presently in use with the TIP but which is not "officially" supported by the TIP to immediately send us the exact name and model of the terminal and a specifications sheet on that terminal. The importance you place on the TIP supporting the terminal would also be useful information as would be the mode in which the terminal is presently used with the TIP (e.g., device code 37, or the "hunt" character typed to use the terminal, etc.). We should also be told about all those computers used via TIP MLC ports.

10a

The address to send this information to is:
Network Control Center
Bolt Beranek and Newman Inc.

50 Moulton Street
Cambridge, Mass. 02139
Attn. Joel Malman

10b

The terminals presently supported by the TIP are:
KSR-33 Teletype
KSR-37 Teletype
IBM 2741 (correspondence)
IBM 2741 (P.T.T.C)
Data 100 (at 110, 150, 300, 600, 1200 bps)
Execuport (at 110, 150, 300, 600, 1200, 1800, 2400 bps)
IMLAC PDS-1 (at 1800 bps)
Odec 132 lineprinter
Teletype Inktronics lineprinter

10c

2. When the above information is complete, we will expand somewhat the list of terminals that the TIP supports making as explicit as possible to what extent and in what manner the TIP supports the terminal; there is no possibility that we will add a terminal to the supported list for which we do not have the above requested information.

10d

3. Of those terminals which the TIP supports, we will not support individual terminals which are out of adjustment or otherwise do not meet the specs we have on file. Thus, if you know the manufacturer's specs lie (e.g., claiming compatibility with some supported terminals but not actually being compatible), tell us how they lie.

10e

4. We will remain open to suggestions of additional terminals that users feel should be added to the supported list and will continue to gradually expand the list as resources permit. However, we advise users not to obtain terminals for use with the TIP which are not on the supported list without first receiving a commitment from us to add the terminal to the supported list; this should be done far enough in advance to allow us to implement the necessary terminal handler if we do agree to support the terminal.

10f

5. We will continue to try to be helpful to users trying to use terminals not on the supported list and are certainly not out to hurt these users; however, it is easy to imagine that fixing a bug in the handler for a supported terminal might render useless an unsupported terminal which previously only worked with the TIP

because of the bug.

10g

.....issued as TIPUG 18 NIC 18446 by Dave Walden

10h

To return to contents outline type s[how]n1 CR

10i

(u1) Update 16 October

11

(telenet) Telenet Applies to Establish Network

11a

Telenet Communications Corp., a subsidiary of BBN, has filed an application wth the FCC to establish and operate a "value-added" network based on the packet switching technology now being used in the ARPANET.

11a1

The system will use land-based and satellite communications channels leased from other carriers. Customers will connect their computers and terminals to Telenet switching centers.

11a2

Usage charges to customers will be based on the volume of data. The proposed rate charge favors high-volume users, with rates ranging from $4 to $0.48 per 1000 packets, depending on total monthly traffic for each subscriber computer. Night usage prices will be halved.

11a3

Computer connection links to Telenet will range from $500 to $4500 per month for leased lines of from 4800 to 50,000 bit/sec capacity.

11a4

Terminal connections will be priced on transmission speed, but customers may use either dial-in or dedicated lines. Dial-in use will cost from $0.50 to $2 per hour.

11a5

Dedicated terminal charges will range from $50 to $220 per month, depending on transmission speed, in addition to leased line cost.

11a6

Initially, there are to be IMPS and TIPS in 18 cities, to begin

operation with in 18 to 21 months after an FCC permit.

11a7

....abstracted by JBN from Computerworld, 17 Oct, p.17. 11a8

(decus)

11b

DECUS 1973 Fall Symposium will be held at Hyatt Regency, San Francisco, 27 - 30th November. Attendees will register for Mini/midi computer sessions, or for Decsystem-10 sessions. Advance registrations are to be made with DECUS, 146 Main St., Maynard, Mass. 01754. Fee: $45 or $60 member, $50 or $65 nonmember. Daily registration $17 and $20. 11b1

(u2) Update 19 October

12

(using) CHARTER FOR ARPANET USERS INTEREST GROUP

12a

USING Note #6
NIC 19025

J. Iseli (MITRE-TIP)
D. Crocker (UCLA-NMC)
N. Neigus (BBN-NET)

12a1

BACKGROUND

12a2

The ARPANET Users Interest Group (NIC Ident = USING) was formed at a meeting of 15 Network people on May 23, 1973 in an attempt to improve the Network user's working environment. USING will attempt to represent the interests and needs of users in the Network community, so as to increase awareness of user requirements and encourage better provision of the needed services. The group believes that the Network is moving beyond a concentration of resources in self-perpetuating research and development; the Network is becoming a service and its viability as such is dependent on user satisfaction.

12a3

A second group, the ARPANET Users Group (NIC Ident = USERS) is organized as a forum for users to express their desires and complaints. Acting as a steering committee and lobby for this group, USING will forward their ideas to the appropriate centers.

12a4

MEMBERSHIP

12a5

Group membership, in USING, is open to individuals interested in working to improve Network user support and able and willing to make meaningful contributions to USING's activities.

12a6

Membership, in USERS, is open to any interested person.

12a7

SCOPE

12a8

USING has set as its scope those facets of Network activity that affect the provision of services to users. This includes the availability of resources, their reliability and ease of use.

12a9

GOALS

12a10

USING's overall goal is to ensure that the ARPANET becomes a coherent system in which users can regulate their own working environment according to their level of experience and the degree of transparency (of specific system idiosyncracies) they desire. System resources should be self-documenting, and all levels of assistance (on- and off-line) should be available, again, to be regulated by the user.

12a11

Short Term Objectives, for the initial 6-12 months

12a12

1. Specification of a user-level Common Command Language (CCL);

12a13

2. Specification of a Network Editor for CCL;

12a14

3. Further definition and focusing of User Issues;

12a15

4. Encouraging establishment of a User's consulting service;

12a16

5. Publication of a New-Users Handbook.

12a17

Long Term Activities

12a18

1. Monitor and/or provide impetus for user-oriented Network development efforts, including resource directories, tutorials [static and dynamic], training courses and referral services;

12a19

2. Provide mechanisms to encourage, analyze, and respond to user feedback;

12a20

3. Develop profile information relative to users' requirements,
types, usage attributes, and affiliations;

12a21

4. Stimulate mechanisms to facilitate entry of new users to the ARPANET;

12a22

5. Sponsor user seminars and encourage formation of viable user working groups where appropriate.

12a23

[aloha) THE ALOHA SYSTEM

12b

THE ALOHA SYSTEM

12b1

By

Franklin F. Kuo
W. Wayne Lichtenberger

12b2

The ALOHA System is composed of a related series of contracts and grants from a variety of funding agencies with principal support from ARPA, which deal with two main themes: computer communications (TASK 1), and computer structures (TASK 2).

12b3

Under computer-communications there is work in (a) studies on computer-communications using radio and satellites; (b) the development of a prototype radio-linked timesharing network; (c) system studies and planning for a Pacific area computer communications network linking major universities in the U.S., Japan, Australia and other Pacific countries.

12b4

Under computer structures, we are engaged in research/development in multiprocessor computing structures, computer networks, and geographically distributed computing systems. This work is being undertaken in two phases: (1) the establishment of a research facility, and (2) the research work itself. The research facility is centered around the BCC 500 computing system.

12b5

TASK 1: Radio Communications

12b6

Developments in remote access computing during the latter part of the 1960's have resulted in increasing importance of remote timesharing, remote job entry and networking for large information processing systems. The present generation of computer-communication systems is based on the use of leased or dial-up common carrier facilities, primarily wire connections. Under many conditions such communication facilities offer the best possible communications option to the overall system designer of a large computer-communication facility. In other circumstances, however, the organization of common carrier data communication systems seriously limits the possibilities of a large information processing system.

12b7

Since September 1968, the ALOHA System Project at the University of Hawaii has investigated alternatives to the use of conventional wire communications in a geographically diffuse computer system. When the constraint of data communications by wire is eliminated a number of options for different methods of organizing data communications within a computer-communications net are made available to the system designer. The ALOHA System Project has investigated the use of a new and simple form of random access communications for a statewide university computing system; the first links in this UHF radio-linked computer system, were set up in mid-1971.

12b8

Since that time the ALOHA System has been in continuous

operation. The ALOHA network uses two 24,000 baud channels at 407.350 MHz and at 413.475 MHz in the upper UHF band. ALOHA uses packet switching techniques similar to that employed by the ARPANET, in conjunction with a novel form of random-access radio-channel multiplexing.

12b9

We are now developing a Phase II ALOHA network with mini- and micro-computers as programmable terminals and repeaters. This effort is part of the work undertaken by the Packet Radio Group under the direction of Robert E. Kahn of ARPA. In conjunction with the hardware development we are also conducting system studies on the effects of different channel protocols upon system performance and also on the properties of the random-access channel (known now as the ALOHA Channel) used in different modes.

12b10

TASK 1: Satellite Communications

12b11

We are now conducting experiments on the effective uses of high capacity satellite channels for packet switched communications. The experiments are centered around the geosynchronous satellites ATS-1 of NASA and INTELSAT IV of COMSAT.

12b12

With the development of new digital communications systems by COMSAT in which data at the rate of 50 Kbaud can be transmitted through a single voice channel, data transmission by satellite has become both technologically and economically realizable. During the past year we have initiated two specific research projects for satellite extension of the ALOHA System and several theoretical studies involving the unique properties of satellite cheannels. The first of the projects involves the use of large commercial ground stations and the establishment of an ARPANET SATELLITE SYSTEM; the second involves the use of small inexpensive ground stations in a joint research effort with NASA Ames Research Center. In regard to the ARPANET SATELLITE SYSTEM we have been involved in a joint study with ARPA, BBN, UCLA, and Xerox PARC to design a suitable protocol for packet communications via satellite.

12b13

In December 1972, a 50 kilobaud data channel using a single PCM voice channel was installed between the COMSAT ground stations at Paumalu, Hawaii, and Jamesburg, California. The first subscriber of this service was ARPA for the inclusion of the

ALOHA System into the ARPANET. The BCC 500 computer is planned to be the main HOST of the Hawaii TIP. We are also planning to connect the MENEHUNE (the communications computer for the ALOHA Net) as the second HOST.

12b14

The second satellite project involves the use of the NASA satellite ATS-1 using small inexpensive ground stations which cost less than $5,000 each. Thus far we have progressed to the point where an ALOHA random access burst mode channel is in operation between the University of Hawaii, NASA/AMES Research Center and the University of Alaska. During the following year we plan to interface this channel into computer near each of these ground stations, extend the number of ground stations to other sites, including possibly universities in Japan (Tohoku), Australia (Sydney), and other Pacific countries and establish a small ground station satellite network on an experimental basis.

12b15

We are also studying the possibility of using a complete transponder on a U.S. domestic satellite for ARPA Network operation. Such a transponder might provide megabit or higher rates using a transponder dedicated to packet switched operation and terminating in a large number of moderately priced ground stations at a cost of only a fraction of the expected land line costs by the end of 1974. In addition to the lower costs and higher speeds, a packet switched transponder on a domestic satellite would provide for higher network connectivity and enhanced possibilities for new forms of resource sharing.

12b16

TASK 2: Background

12b17

Task II of the ALOHA System is concerned with multiprocessor computing structures and systems. Its primary research facility is the large BCC 500 system which was brought from Berkeley, California when the Berkeley Computer Corporation ceased activities.

12b18

The main ideas involved in the 500's design were formulated by Project GENIE at UC, Berkeley during 1967 and 1968. At that time it was planned that a private company would participate with UC in a joint design effort for a multi-user computing system designed expressly for online activities. This

arrangement did not work well, however, and in early 1969 a number of persons from the project left UC and formed BCC with the specific goal of building a working prototype of a similar system.

12b19

This effort came to an end two years later when, with the nation's economy in a severe recession and the entire computing industry in an accompanying "adjustment", the company ran out of available development capital a few months short of its goal of producing income on its prototype. The system itself, however, was almost complete and had been running an operating system for six months.

12b20

The equipment was acquired by the University of Hawaii upon the formation of Task II and was brought to Honolulu in early 1972. Since that time much of the Task's efforts have been directed to setting up the system once again and reconstructing some of the hardware after careful analysis of its state. Software development has also been done since the system has been locally usable beginning in March, 1973. By December, 1973, the system will achieve full host status on the ARPANET and will be operated regularly. By virtue of the time difference between Hawaii and the mainland -- especially the East Coast -- the system might be especially attractive for browsers.

12b21

TASK 2: BCC 500 System

12b22

The system hardware includes two central processors and five special purpose processors, 128K 24-bit words of central memory (i.e., visible to all processors), 32K words of additional memory connected to some of the special purpose processors, 4 million words of drum storage (transferring at 2 megawords/sec, or 6 megabytes/sec) and 380 megabytes of disk storage. The central processors are provided each with memory maps giving them the ability to address 256K words of paged, virtual memory of which half is available for user programs.

12b23

The special purpose processors implement those portions of the operating system which are concerned with global system tasks. These include memory management -- central memory allocation, dynamic drum allocation, disk allocation and all page traffic between these devices; character input/output -- to and from terminals including the handling of break and/or wakeup

characters and remote echo strategies; central processor scheduling; and the NCP process for network protocol handling. Those operating system functions which are oriented toward the individual user rpocess, i.e., which can be done by calls from the user process not requiring its blocking, are performed on the CPU's in a conventional manner. The systems code for these functions resides in one of two hardware-implemented system rings (a third ring permits the user to process to run while permitting the system full protection from it).

12b24

All the system software is written in SPL, a systems-programming language developed by BCC for operating systems and utility subsystems (like compilers). There is no assembly language. All compiled code is reentrant and sharable between tasks.

12b25

The CPU's have a special mode selectable in their state word which permits them to execute XDS 940 machine language directly. A utility program, called the 940 Emulator, is available to all users and operates in conjunction with 940 programs, serving to translate 940 system calls which are otherwise trapped into equivalent sequences of 500 system calls. In this fashion all available 940 software will run on the 500 system.

12b26

We will welcome your online exploration of our system as it assumes host status and direct your attention particularly to the SPL language. Please address your questions and comments to: Wayne Lichtenberger, 486 Holmes Hall, University of Hawaii, 2540 Dole Street, Honolulu, Hawaii 96822.

12b27

JI 19-DEC-73 11:07 19050

ARPANET News, Issue 8, October 1973

(J19050) 19-DEC-73 11:07; Title: Author(s): Jean Iseli/JI; Keywords:
ARPANET News; Sub-Collections: NIC; Clerk: MEJ;
Origin: <NIC-WORK>ARPANEWSOCTOBER.NLS;10, 19-OCT-73 10:10 JBN ;

A Comment on Journal Privacy

Jim, my only question after reading your memo on journal privacy (18976,) is whether there will be some means for handling the hardcopy file copies. That is, it doesn't seem very private if a copy of everything is placed in one of the binders of journal items. 1

Status of Host UCLA-NMC

Hi, UCLA-NMC will be a 'LIMITED SERVER' until December 31,1973.
At that time it will become a 'USER ONLY' site. We are losing
our Sigma 7 and acquiring an ANTS at that time. You're welcome.
Lou.

1

On Proposed Initial Privacy Features

Jim ...
I hope these comments are useful.
P.S. I really like your (p5). 1

1. It might be useful to modify the "Output File" command so that it provides the user an opportunity to declare the Access List at that time (with default being <owner>). 2

2. It would be nice if the Access List could be used in conjunction with the TENEX two-byte protection field that is currently reserved for the TENEX "directory group". Then the user would have something he doesn't have now: ability to control what users are in the Tenex directory group for his files. Any chance of this happening? (I think the Tenex "directory group" is a virtually useless concept for users.) 3

3. Instead of automatically refusing to load the file for a user who is not on the Access List, would it be possible to obey the Protection Bytes in Tenex? They will be settable, presumably, by the proposed "PROTECT FILE" command in the new NLS command language, and confusion could result if the Access List and the Protect File command bear no relationship to one another. 4

4. For the record, I note here my previous comment to you that the Access List for a Journal ought to be identical with the Distribution list for that file. Secondary Distribution idents would (at least temporarily) have to be handled by Tenex access checks. 5

DLS 13-SEP-73 09:30 19057

Access to On-Line Userguides

For Mac..and anyone else who might be interested..There are a lot of goodies in the system you might want to read about/try.

Access to On-Line Userguides

Sorry to take so long to get back to you..With golfing etc., I haven't been on the system for a day or so. 1

There are two principle ways of getting access to userguides etc from the terminal. 2

1..There is a directory callled <userguides>. If you do a dir (esc) <userguides>, you will get a listing of all the userguides files which are on-line. You can load these files like any others by saying Load File <userguides>filename. You will notice in the listing of userguide files that the first one is called arclocator. This leads to the second way of finding out about on-line user documentation-- 2a

2..say Load File <userguides>arclocator. Then Print Branch .0 with the xb viewspecs on. This will give you an over view of the arclocator file. It includes scenerios and demos as well as userguides. If you see a branch of interest, then print it out with the w viespec on. It will give you links and by saying <sp>↑ you will get the file loaded. This way is probably better, since it is somewhat self instructing and contains links to all the userguides available on-line. 2b

DCE 13-SEP-73 09:36 19058

Checkout arrangements at London for IMLAC, Line Processor, and Delta Data Display

Charles, and interested colleages: I printed out the file <Irby>line-processor-inst and we will have it on handfor the checkout -- see below. 1

Current Plan, as of Thurs, 1700 Brighton time, 13 Sep --: 2

Physical arrivals, etc: 2a

The IMLAC will be moved tonight, to arrive at ICS (Institute for Computer Science, U. of London, where the TIP is) on Friday (tomorrow) morning. A "chief engineer" for IMPLAC rep here will arrive also to make field mods: They goofed on core size, only had 4k, he will add 4k more; he will also help athem fix things for maximum transfer rate from the TIP. 2a1

Line Processor: It just today passed Customs, and has been shipped to ICS; due to be delivered tomorrow (morningdd?). 2a2

Delta Data Display: now to be sent directly to ICS from the Brighton Computer-equipment Trade Show (COMPECT or something??); it will arrive at ICS tomorrow morning. 2a3

The tired old baggage, DCE will be shipped from Brighton to ICS after lunch tomorrow; will be esconced in University dormitory, and will be there for the next week. 2a4

Checkout plans: 2b

The engineering guys will get at fitting together all of the equipment as soon as it gets there tomorrow. I'd like to carry through with remote-use checkout from ARC before you guys quit on Friday, if possible. 2b1

I should arrive there about the time some of you get to ARC; as soon thereafter as we can predict anything about equipment readiness, I'll get in touch over the Net. Whichever equipment is ready first, would like to begin checkout. 2b1a

I realize that I told Ken earlier that we wouldn't be trying the IMLAC until Monday; here is the reason for my wanting to try earlier (if someone at ARC onf Fri can help): 3

The people at this end who can help with hardware bloobs will be very distracted Monday morning (for the week in fact) with supporting the course. They have had a hard time, being as the Net came up so late. They would have a hard time getting in on the weekend, also, as it turns out. It would be late Monday

afternoon, London time, before we could start trying checkout otherwise -- at least up to the point where we need both you and their engineers, to being sure the equipment is working as it should. 3a

I will also be quite distracted from Monday morning on, with teaching sorts of stuff; we do have an arrangement where I begin then with a small core of people who later will be my Teaching Assistants. So having the se two systems checked out before then would be much easier on my week. 3b

Once the equipment is checked out on Fri, and when the rest of the checkout could be between me and you, then I can arrange almost any time during the rest of the weekend -- until you people quit on Fri, any time sat, but not on Sunday -- except lat evening here (e.g. after 11 or 12 p.m.) 3c

I can get some hardware-guy help on Sat morning here, in case that some bugs are unearthed twixt you and me puttering with it after they leave on Friday evening. 3d

I won't be arouund a terminal for some hours now -- there is a formal dinner for this group tonight; the Mayor of Brighton will give a small after-dinner welcoming speech, and then will follow that noted philosophical wise man, D.C. Engelbart, from California. So, to put together something philosophical and wise for a talk, I'd best get off the terminal. I'll try to get in after the dinner to check my mail. Hope this doesn't disconcert you all. Best regards fram afar. Doug 3e

Column manipulation

In trying to format columns of data in NLS and produce tables (especially without the use of tabs), it has become apparent that a very powerful feature would be a command to allow one to manipulate columns - for example: transpose columns, move columns, copy columns (from other files) etc. This would not be a trivial undertaking but could possibly be done by a method of looking for visible text between invisibles, or if tabs were truly working, could be based on identification of tabstops. This feature would be of particular use in data collection and simple office accounting procedures. 1

Date: 13-SEP-73 1149-PDT

From: IRBY at SRI-ARC

Re: Privacy

- - - -

Jim, some thoughts that might be useful with respect to your privacy proposal:

in (p1), all that can be done in the EXEC with no changes to the monitor. There is already a pair of jsies to set and read the users IDENT. The EXEC sets it at login and NLS reads it at NLS startup. We should probable modify the jsys that sets it to only set it if it is currently zero (it is cleared at logout) -- This would mean that it would only be set once per login-logout. There is some question about protecting the file which contains ident,directory,password for each user, however.

in (p6), I see no reason to provide special commands to set the access fields, why not just let him edit it. If he blows it, his friends will beat on him and he will fix the problem. I agree that it should be checked an Journal submission time, however, since it is thereafter frozen.

In general, I think the proposal is quite good and could be implemented quite easily. Lets do it

-- Charles.

EJK 13-SEP-73 12:56 19061

SADPR-85

Do you know Walt pritchard at ESD/XRE?. He is visiting us today and discussing the follow-on to the Mission Analysis fr Base Comm. You can get in touch with him at 75-3075 Mitre or 271-3075. 1

DVN 13-SEP-73 13:30 19062

An Introduction to the Current Status of the Help Data Base

Dean, Jeanne, Kirk and I have been writing the data base fo the Help System. With the exception of a few work files in writer's directories, the whole data base as it now stands resides in <userguides,help,> and <userguides,commands,> 1

Dick Watson suggested that more people should look at it and that some introductory guidance would help their browsing since the file is work in progreess.. 2

<useerguides,commands,> contains the syntax of most commands. Dean Meyer created and maintains it. Mising are the journal commands and the old viewchange system, whose comands have not been specified. Certian changes in syntax agreed upon in the meeting of 9/12/73 (joournal,19004,) have already been made in <userguides,comands,> but the sytax has not yet been devided into brief and verbose forms. 3

<userguides,help,> has four top level branches, concepts, access, glossary, and commands. We intend the reader who calls for help from the NLS herald or TENEX to see those four items as a menu. 4

Under concepts <userguides,help,concepts> we defined a large number of conncepts. Each definition begins with the name of the conecpt as a statment name, a carriage return, and an explanation less that 8 lines and hopefully shorter. Below the named statment maybe substatments containg links to other concepts or the explanations of commands. The substatements will form the menu in the query language. 4a

Statement names are now usually in parentheses, in the final form we intend to use null as aoleft delimiter and colon as a right. 4a1

The concepts are now arranged in a user-oreinted structure which will not be the final organization of the file. The final organizatin of the file will follow deductive logic for easey maintenance. 4a2

A given concept may be named in many places but is normally defined in one. 4a3

The commands branch <userguides,help,037:xb> provides for each command a menu including at a minimum its function, its syntax, an example, and the meaning of confirmation. In genral the menu items are fully writen out as they occur under each command. 4b

For syntax, the commands branch <userguides,help,037> calls an appropriate spot in <userguides,commands,> 4b1

The access <userguides,help,01297:xb> branch is laid out like the

concepts branch. Simple matters related to login are defined under access. 4c

The glossary <userguides,help,01682:xb> branch now contains nothing. We intend all concepts and commands to be accesible as glosary items, plus certain terms borrowed from the present glossary. <nic,locator,2d> 4d

This file needs both to be finished and updated. 5

We need to fill in holes, mostly in the concepts, but also in commands, in the journal commands and in the user-option commands for example. 5a

We need to make changes in format. We accepted the syntax format and the query language format in force when we began writing. Both have changed. We have kept on writing to our original specs, intending to finish and then make changes uniformly We also hope a few things will be settled while we work. 5b

For this pass we are aiming at the novice TNLS user; the data base omits commands peculiar to DNLS, and omits certain subsystems, for example the calculator and the ident system. 6

We welcome reading and comments on both files. 7

major vargosko, project officer for the WWMCCS ADP users Group conference, has arranged for twin cc accomodations at the ARVA motel 26 thru no, 24 thru 26 sept Wash DC for d. daughtry and one other (d. Robinson). Conference agenda has been sent to all on WWMCCS mailing list. 1

Seminar on the use of CML

A seminar on the use of the new command lanugage parser will be held Tues. Sept 18 at 10:00 AM. Topics discussed will include :
1) definition and use of the command meta language
2) interfacing the parser to execution functions
3) a demonstration of the command parser in actual use
This seminar will be of interest principally to programmers who will want/have to interface with the meta-language parser.

1

DIRT Minutes for Meeting to discuss changes in proposed command language.

DIRT Meeting to discuss consequences of command language meeting <19004,>. Thursday 13 Sept. 9:15. Attending: MDK DvN NDM KIRK JMB 1

Discussion of 19004 2

1) Syntax changes from NDM's revision of <userguides,commands,>: 2a

TEXT-ENTITY	to STRING
STRUCTURE-ENTITY	to STRUCTURE
LEVADJ	to LEVEL-ADJUST
LIT	to TYPEIN
DSEL	to ADDRESS
TO-WHERE	eliminated
Structural entity options	eliminated
Filters	eliminated. 2a1

2) Division into Simple and Full Syntax. 2b

SEL NAME	Simple Name	Full Name 2b1
SSEL	ADDRESS	SOURCE
LSEL	TYPEIN	CONTENT
DSEL	ADDRESS	ADDRESS 2b2

3) NULL character. 2c

<conrol-N> will be included in the syntax to represent a null character. 2c1

Meta comment by MDK 3

Cut down on the number of commands necessary to execute in order to get information by cutting down on the number of levels between the top level and the data. 3a

Next meeting to resolve other syntax problems at 1:00 today. 4

Seminar about present group allocations

Next Thursday, September 20, at 3 P. M. we shall discuss in our conference room some facts about the overall performance of our system and our present group allocations. Please attend this meeting if you are interested in these topics, if you have any question to ask, or any suggestion to make. We shall be as specific as possible in our answers and if you want to know some particular facts let us knkow beforehand so that we can dig them out for you before the meeting. You can send a message to either Susan or myself to that effect.

1

DCE 13-SEP-73 16:51 19067

Request to Martin Hardy re Prof. Aspinall's Questions

JCN ran this thru dex for DCE and entered into the Journal for him.

DCE 13-SEP-73 16:51 19067

Request to Martin Hardy re Prof. Aspinall's Questions

Martin: Here at the Seminar (at the Univ. of Newcastle upon Tyne) I became acquainted with: 1

Professor D. Aspinall
Chairman, Computer Technology Board,
University College,
Swansea, SA2 8PP,Glamorgan, U.K. 1a

He is very much interested in micro-computer chips, and had questions that I couldn't possibly answer. They are listed below: 2

1) What is the present status of the Intel 8080 processor chip? 2a

2) What is the "100 up" price of a) the 8008, and b) the 8080? 2b

3) What new products do AMI have in production? 2c

4) Which is the most promising rival to INTEL? 2d

To me, this seems a fun test of international collaborative dialogue; so I volunteered a bit of your time. If you have to call Intel, please take the trouble. If Questions 3 and 4 aren't relatively easy (like no more than say checking with a few local SRI experts), then please don't spend too much time. 3

Please reply as a letter in the Journal, addressed to him as above, with title such as: Letter to Prof. Aspinall re. micro-computer chips" with you as author. Cite this memo's Journal number in the start of your letter, with a link; but don't send the letter from there. List me on its distribution, and I will print it out here in London and mail it to him (together with a copy of this Journal memo, to show him some real-live Journal dialogue. If there are any relevant memos that you guys have already put into the Journal, why don't you cite them in the letter (for instance, any of the planning on the Line Processor, or comparative discussion of different chips or manufacturers)? 4

Best regards, Doug. 4a

DCE 13-SEP-73 16:59 19068

Visitor Expected at ARC: Dr. Peter Henderson, Univ. of Newcastle upon Tyne

JCN ran this thru dex and entered into the Journal for DCE 9/13

DCE 13-SEP-73 16:59 19068

Visitor Expected at ARC: Dr. Peter Henderson, Univ. of Newcastle upon Tyne

Dick (and SEAS people): Dr. Peter Henderson is a Lecturer in Computer Science here at University of Newcastle upon Tyne (roughly equivalent to an Assistant Professor). He heads a 5-person group working in Software Methodology. Part of their approach involves "software validation" (such as Bernie Elspas, SRI, and his colleagues are doing), and part involves tools and conventions for doing the structured-programming bit. In this latter part, I gather that they intend (or have done already some initial development) to develop computer aids for the manipulation of the structured text files. He asked me a number of questions about our system, and attended my three lectures. Also, he kept our ASIS 69 movie for a few days to run a showing for his group and others at the University. I really don't know what he might end up doing about or with NLS and/or our SEAS-Community hopes. 1

Peter will be visiting in the Palo Alto area for the whole week of 24 Sep 73. He will visit Bernie on Monday; I suggested that he contact ARC (RWW, with CHI as alternate) that day to set up an ARC visit later in the week. He plans also on a visiting for a day each at PARC (Jim Mitchell) and at Stanford. 2

JCN 13-SEP-73 17:03 19069

DCE Request for UK-ICS Directory and Idents

JCN ran this thru dex and entered here. JCN and MDK have discussed and Mike is proceeding quickly. This is entered to get a clean copy into the record and to let DCE know that we are working on it. Jim

DCE Request for UK-ICS Directory and Idents

Memo requesting directory and idents for London TIP and local staff: 1

The TIP here seems to have already acquired, via usage, the initials "UKICS", for United Kingdom Institute of Computer Science. To follow what seem to be established conventions, where "UK" is an area, and "ICS" is a particular organization managing the TIP, it might seem that "UK-ICS" would be appropriate for such as NIC directory, for SNDMSG address. etc. Or, would it be better to follow convention such as for "MITRE-TIP" or "NBS-TIP", and use "ICS-TIP" for this one? 1a

Note that the TIP and its staff will soon be moved nearby to be housed organizationally under a different organizational location within the huge University of London organization -- there won't any longer be an "Institute for Computer Science" as an explicit entity. 1a1

Also note that (according to Adrian Stokes) there may well be a second TIP installed in England in the forseeable future. 1a2

All of which makes me wonder who it is, or what the procedure is, for assigning identifying initials to the sites and TIPs? I would like to see what Ed Shallonka might want to do here. Or, can Mike, or Dick (from past precedents cited), or Jeanne North (from precedents) tell me how it is done, and what seem to be the procedures, or attitudes of the Network managers? I would appreciate an explicit answer on this one. 1a3

We will supply you with the IDENT information on the students that will be here on the third week, but not until their arrangements become more firm. Surely toward the end of the second week in September. 1b

Meanwhile, suppose you consider setting up a directory at ARC, for NIC-like use from here, named "UK-ICS"? We can use this during the days ahead. Then set up some IDENTS for local people that have initial files in this directory; here is a list of current staff that seem to warrant such IDENTs: 1c

Full address data on ICS is: 1c1

University of London Institute of Computer Science,
44 Gordon Square, W.C.1
London, U.K.
Telephone 01 387-3421 1c1a

Dr. Adrian Victor Stokes, Research Assistant in ICS, ext. 259, assigned as local liaison man. 1c2

Professor Peter T. Kierstein, ext. 214, responsible for the installation (Adrian suspects that Peter already has an IDENT "PK" set up, somewhere?? -- needs checking). 1c3

Mrs M.P. McCluskey, ext 215, Station Agent 1c4

Mr. A. R. Duncan, ext. 209, engineer responsible for local hardware, and to help users with hardware questions. 1c5

Mr. Peter L. Higginson, Research Assistant, ext 274 1c6

Mr. Hugh R.G.H. Gamble, Research Assistant, ext 209, 277 1c7

Using Charter comments , with an aside

Greetings and salubrious salutations. This is a response to your request for comments about the charter for USING.

1. The content seems fine and I very much like the changes you made. Things come off much more smoothly and clearly. I want to think about the Long Term section for a while.

2. There were some changes I would like to see that are either typos or minor stylistic changes. I offer them:

a blank after "May 23,".
Capitalize the "N" in Network or Net.
... USING would represent... changed to ...USING will attempt to...
(under Membership) ...interested in improving Network...
...interested in working to improve Network...
inserting the directive "" in the Short term Objectives statement
(the output will be a little prettier)
remove the semi-colon at the end of the last statement in Lon Term activities.

As I said, the suggested changes are minor.

By the way, do you see the planned "UULP" meeting as specifying a Common User Command language or a protocol for Executive commands, that one host can use to communicate to another? The difference, I guess, would mainly be the verbosity. I also gather, from our hone conversation, that you have the latter in mind.

bye. --dave

LPD 13-SEP-73 17:47 19071

A bit less paper please

This is for the NIC Station Agent.

LPD 13-SEP-73 17:47 19071

A bit less paper please

This is an expansion of, and addition to, a message I sent you via SNDMSG a week or two ago. I wish to cease receiving hard-copy updates to the Directory of Network Participants, the Directory of the NIC Collection, and the NIC User Guide. I do wish to continue receiving updates for the Current network Protocols and the Network Resource Notebook. In addition, our Station Agent, Diana L. Jones (DLJ), has requested that she not receive any further hard-copy updates whatever. We will return my 3, and her 5, white notebooks to the NIC soon (sans updates -- they just were too overwhelming to keep up). We almost never use this information; it is kept on-line at the NIC; it is a drag to do all the updates. Thank you.

1

DAY 13-SEP-73 19:53 19072

Request for L10

Dean, 1

I would appreciate it if you could see that a copy of the new L10 manual could be sent to me, or you could tell me who to see about getting one. I may be reached as DAY@ISI or here at NIC where my ident is also DAY, or via the US Mail at

John Day
210 ACB
University of Illinois
Urbana,Illinois 61801 2

Thank you for your help, 3

John Day 4

WWMCCS Training

The Honeywell course 620 (6000 system software) along with other pre-requuisites is a "must" before anyone is accepted to the 630 course (6000 GCOS analysis). 620 is a five day course. At least, 630 should be taken by members of the WWMCCS study group. Therefore, I propose that a 620 course be set up here at RADC for the following personnel and any other interested party in RADC. Attendance must be "required". The people are: Rzepka, Daughtry, Robinson, Vanalstine, Lamonica, Dinitto, Vito, Mott Otherwise, we must arrange for individual attendance at some WWMCCS sponsored course where TDY is necessary.....Dave Daughtry. 1

WWMCCS Training/630 course

Of ten qualified people notified to attend meeting to discuss volunteers to attend 630 course (6000 GCOS analysis) at Mclean on November 5th only three (3) showed. They were Calicchia, Mark, and Mclean. I will submit the names of two people most likely to be heavily involved with WWMCCS for the course at a later date.. by Monday at the latest....Capt Daughtry. 1

NJN 14-SEP-73 06:46 19075

using and uulp

Dave--
Thanks for your comments. I havemade all the changes you recommended. I am a little dubious about the reading of the first paragraph now, but it will do.
I want the uulp meeting to worry about protocol definitions, including how current protocols must be redefined to handle single access and interact with each other, and how new protocols should be defined to profit from current ones as well as fit into the protocol hierarchy. This is closest to the second theme you mentioned (protocol for Exec commands), but is not really that one either. I suppose we will have to talk about that a little, but i certinly want to avoid discussions of a Common User Command language. That is for the USING group. More later, and soon. Nancy

1

Directions for r&t selection of the month

at monthly meetings called by the Chief Scientist, each mission division is asked to report at least one recent and significant scientific , engineering, or technical achievement resulting from either in-house or contractor effort within the division. 1

a monthly submission, in narrative form, could bring recognition of our achievements as a new Division. Your help in timely submission would be appreciated. 2

The following is a guide on proper format and due date: 3

type on plain bond, title in caps and underline, double space. 3a

Five (5) copies are required in ISM. 3b

ISM due date: 20th each month. 3c