

more messages on network performance

16-FEB-75 1559-EST WALDEN at BBN-TENEX: NETWORK PERFORMANCE

Distribution: WATSON AT SRI-ARC, carlson at isi, walden, mckenzie

Received at: 16-FEB-75 13:00:43

712a

DICK,

712a1

WHILE I DON'T CLAIM THE NETWORK SOFTWARE ISN'T INSERTING SOME UNNECESSARY DELAY, WHICH WE ARE WORKING VERY HARD TO CHECK OUT AND FIX IF NECESSARY, THE POINT YOU MENTION ABOUT SPLICING IN NEW IMPS IN SERIES CERTAINLY IS A VALID ONE. AS I NOTED TO BILL IN A PREVIOUS MESSAGE, NAC INITIALLY (ACCORDING TO THEIR SJCC 70 PAPER) CONSIDERED A NETWORK DESIGN INFEASIBLE

(I.E., THEY WOULDN'T CONSIDER USING IT) IF THE NUMBER OF INTERMEDIATE NODES BETWEEN ANY SOURCE AND DESTINATION NODE WAS GREATER THAN 5. TODAY, IN A SIGNIFICANT NUMBER OF CASES, THE NUMBER OF INTERMEDIATE NODES BETWEEN PARTICULAR SOURCE AND DESTINATION NODES IS GREATER THAN 10!

712a2

IN FACT, WE HAVE DONE A LITTLE CALCULATION ABOUT THE CURRENT NETWORK AND HAVE LEARNED THE FOLLOWING:

712a3

OVER ALL SOURCES AND ALL DESTINATIONS, THE AVERAGE NUMBER OF NODE TO NODE HOPS A PACKET MUST TRAVERSE IS 6.47 ON THE PATH OF MINIMUM LENGTH BETWEEN THE SOURCE AND DESTINATION

(I.E., THROUGH 5.47 INTERMEDIATE NODES AND 7.47 NODES ALL TOGETHER). IN PARTICULAR, 60 NODE PAIRS ARE SEPARATED BY A MINIMUM OF 1 HOP, 81 PAIRS BY 2 HOPS, 104 BY 3, 124 BY 4, 142 BY 5, 171 BY 6, 170 BY 7, 169 BY 8,

139 BY 9, 104 BY 10, 65 BY 11, 32 BY 12, 16 BY 13, AND 1 NODE PAIR BY 14 HOPS. AS AN INTERESTING PARTICULAR CASE,

ARPA IS 13 HOPS AWAY FROM OFFICE-1. NOTE THE ABOVE FIGURES

INDICATE, FOR INSTANCE, A MINIMUM PATH IS AS LIKELY TO BE 10 HOPS AS TO BE 3 HOPS.

712a4

AGAIN, I DON'T CLAIM THE SOFTWARE TO BE PERFECT AT THIS INSTANT, ALTHOUGH I DO CLAIM WE CAN MAKE IT WORK WELL, HOWEVER, THE LONG PATH LENGTHS IN THE NETWORK CERTAINLY AREN'T HELPING THINGS.

712a5

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16-FEB-75 1617-EST MCKENZIE at BBN=TENEX: A Postscript to
 Dave's last Message
 Distribution: WATSON AT SRI=ARC, carlson at isi, walden,
 mckenzie
 Received at: 16-FEB-75 13:19:09

712b

Dick,
 Incidentally, the number of hops from Tymshare (IMP #43)
 to BBN=TENEX
 system B or C (IMP #49) is 11 (!) hops and from Tymshare
 to System A
 (IMP #5) is 10 hops (assuming everything is working).
 Regards,
 Alex

712b1

16-FEB-75 1902-PST WATSON: network configuration
 Distribution: WALDEN AT BBN, MCKENZIE AT BBN, carlson at
 isi, watson
 Received at: 16-FEB-75 19:02:51

712c

Dave, Alex
 the statistics you sent on node hops are quite
 interesting and somewhat discouraging. If delay per IMP
 is running between 100-200 ms than that would account for
 a lot of the delay we experienced. I would further guess
 that the East coast nodes tend to be close to each other
 and that the West coast nodes are close to each other hop
 wise, but that the East and West coast sites have grown
 over time to be almost partitioned from each other as new
 nodes have been spliced in.
 I would further guess from the brief looks I have had
 with network maps that a small number of line
 reconfigurations could correct the imbalance that has
 been growing.
 Where does responsibility lie for approving
 reconfigurations and who watches over such things? We
 seem to have an east coast and a west coast net with a
 narrow pipe between them if I guess right rather than a
 national network. Do your routing algorithms tend to
 find the minimum path or on average is the path larger?
 What are recent measurements during peak loads of average
 delays through nodes.
 I should find out from Clements what the average time for
 directly connected terminals is for echoing characters,
 and the similar statistic for chars coming in from the
 net. Anyway thanks again for the numbers and I really
 appreciate the ongoing dialog, Dick

712c1

17-FEB-75 0737-EST WALDEN at BBN=TENEX: NLS OVER THE NET

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Distribution: WATSON AT SRI-ARC, walden, mckenzie, carlson
at isi

Received at: 17-FEB-75 04:39:24

713

DICK,

713a

1. IF THE DELAY PER NODE WERE 100-200 MSEC, THAT WOULD EXPLAIN A LOT, BUT IT SHOULDN'T BE THAT HIGH; WE ARE AND WILL CONTINUE TO BE LOOKING INTO ALL THIS.
2. REGARDING GEOGRAPHIC CLOSENESS, SOME NORTHERN SITES ARE PRETTY FAR FROM SOME SOUTHERN SITES, AND SOME EASTERN SITES ARE ACTUALLY PRETTY CLOSE TO SOME WESTERN SITES (E.G., ARPA IS NOT ALL THAT FAR FROM ISI). IN OTHER WORDS, IT IS NOT SO SIMPLE AS YOU SUGGEST. WHAT IS TRUE IS THAT OVER TIME THE AVERAGE MINIMUM DISTANCE BETWEEN NODES HAS GROWN AND FOR SOME PARTICULAR NODES THE MINIMUM DISTANCE BETWEEN THEM HAS GROWN IN THE EXTREME.
3. I BELIEVE IN CARLSON'S LAST MESSAGE TO US ALL ON THIS SUBJECT HE NOTED THAT RUSSELL IS HAVING NAC TAKE A LOOK AT THE NET'S TOPOLOGY AGAIN.
4. THE ROUTING ALGORITHM CERTAINLY ATTEMPTS TO FIND THE MINIMUM PATH. WE ARE STUDYING IT NOW (I MEAN AT THIS MINUTE PEOPLE ARE IN AT THE NCC LOOKING AT IT) TO ASCERTAIN WHETHER THE ROUTING ALGORITHM COULD BE FAILING AT SOME TIMES AND INSERTING UNNECESSARY DELAY.

713b

EXPERIENCE HAS SHOWN OVER AND OVER THAT IT IS VERY UNLIKELY THAT ANY ONE THING BEING FIXED IS GOING TO MAKE EVERYTHING ALL BETTER. MORE LIKELY, IN MY EXPERIENCE WITH THE NETWORK, THERE ARE GOING TO BE 10 THINGS EACH CONTRIBUTING 10% TO THE TROUBLE WHICH ARE GOING TO HAVE TO BE FIXED; FOR EXAMPLE!!!, THE NETWORK PATHS WILL HAVE TO BE MADE SHORTER, A BUG IN THE IMP SYSTEM WILL BE FOUND, TENEX WILL BE FOUND TO BE NOT RESPONSIVE ENOUGH TO THE NETWORK, SWAPPING OFF A DISK WILL BE FOUND TO BE SLOWER THAN ONE WOULD LIKE, AT THE OTHER END THE ELF'S VDH CODE WILL BE FOUND TO BE NOT TOO RESPONSIVE, ETC, ETC, ETC. TO UNDERSTAND WHAT IS HAPPENING, WE MUST HAVE EVERYBODY LOOKING AT HIS SYSTEM SIMULTANEOUSLY, OR AT LEAST, YOU MUST HAVE US LOOKING AT OUR SYSTEM AND LOOKING AT THE OUTSIDE EDGE OF THE END USER SYSTEMS.

713c

REGARDS,
DAVE

713d

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P.S., YOU WOULD HELP ME A LOT IF YOU WOULD PUT MORE
CARRIAGE RETURNS AND LINEFEEDS IN YOUR MESSAGES,

713e

RWW 19-FEB-75 09:47 25423

New Charge Number for NSW Project

Message: We apparently finally have an NSW contract. The charge number 9229 should no longer be used. The charge number 4051 should be used for NSW work. It is important for Development people to only charge NSW for actual NSW work. Time spent on work for ISI should be charged to 4042, work on proposal formulation etc should be charged to the appropriate overhead number as given (24992,). If you have any question about which account to use please see me. Since auditors are busy checking things these days it is a good idea to make a brief note on your calendar when you attend a meeting for proposal etc that is not something in your mainstream of work. Thanks Dick

*****Note: [ACTION] *****

714

3-FEB-75 1408-EST MALMAN at BBN-TENEX: MITRE-TIP AND THE
TWO (2) 208A MODEMS

Distribution: BRIGNOLI AT OFFICE-1, iseli at isi, hardy at
sri-arc, avrunin at office-1

Received at: 3-FEB-75 11:10:10

715

FRANK,
ACCORDING TO MY LISTING OF HOW THE MITRE-TIP LOOKS, I SEE
ONE PORT
ALREADY FIXED UP FOR A 208A MODEM, THIS IS #34 OCTAL, THE
DEVICE RATE
IS EXTERNAL CLOCK IN BOTH DIRECTIONS.

715a

I DON'T UNDERSTAND, ARE YOU ADDING ANOTHER ONE OR TWO
LINEPROCESSERS??

715b

THE RIGHT PERSON TO ASK AT MITRE IS SUSAN POH (POH@ISI), AS
THE
TIP LOOKS NOW IT WILL BE VERY HARD TO GET ALL THE BUFFERING
YOU REQUEST, THERE IS JUST NOT KIND OF BUFFERING TO SPARE,

715c

SUSAN WILL HAVE TO DECIDE WHAT TERMINAL WILL SUFFER, THE
BUFFERING
WILL HAVE TO COME FROM SOMEWHERE,

715d

REGARDS,
JOEL MALMAN

715e

1-FEB-75 0959-PST HARDY: TYMSHARE TIP BUFFER PORT 15

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INCREASE

Distribution: MALMAN AT BBN-TENEX, hardy
Received at: 1-FEB-75 09:59:26

716

JOEL:

GREAT TO HEAR THA YOU HAVE FOUND THE PROBLEM WITH SYNC CHANNELS AND LARGE BUFFERS, IF THE PATCH IS SO THAT WE CAN USE LARGE BUFFERS AT TYMSHARE I WOULD LIKE YOU TO INCREASE PORT 15 TO 600 OR SO SO I CAN CONT MY TESTING, THANKS, OH PLEASE LET ME KNOW ACTUAL SIZE AFTER CHANGE., BYE FOR NOW., MARTIN.,

716a

31-JAN-75 1325-EST MALMAN at BBN-TENEX: SYCH BUG IN TIP.
Distribution: HARDY AT SRI-ARC
Received at: 31-JAN-75 10:26:33

717

MARTIN,

WE HAVE THE PATCH SO THE SYNC, TERMINALS WILL NOT HAVE ERRORS WHEN THE BUFFERS ARE LARGE, LET ME KNOW WHAT YOU WANT FOR BUFFERS AGAIN,

717a

JOEL

717b

31-JAN-75 1023-PST PETERS: THE CURRENT PLAGUE OF NETWORK PROBLEMS
Distribution: NORTON, BAIR, FEEDBACK AT OFFICE-1, HARDY, ROETTER, peters
Received at: 31-JAN-75 10:23:45

718

The network situation seems to continue unabated every day. Time outs, connection failures, etc, etc, etc. I know very little about the guts of the network, but I can tell big trouble when I see it. Users are not going to put up with data channels that have a reliability of close to zero, not paying users at least, perhaps the best example of the user frustration I see in all this happened this morning. Dave Potter linked to me to inquire about the state of the net, and to say that his TIP was giving grief, not just O-1. In the middle of our link, the network disconnected him and I have not heard from him since. I don't see the

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problem as an operational one that is to be solved by more scrupulous checking by the Office-1 operators etc. The problem is orders of magnitude over their heads. They can recycle the Office-1 NCP and restart netser all day, but their efforts will be futile if the basic reliability of the network continues to be as poor as it has been recently. Since I have no way of doing anything about all this directly, I have elected to send this message to people in order to make clear that I think that there a big and important problem here. Some kind of pressure has got to be applied to the NCC or something has to be done to get the kind of high-level expertise applied to this problem that is needed. To the remote user, network failure between him and Office-1 is identical to the situation of a system crash. I should think that we would be very upset indeed if O-1 suffered from monitor crashes every few minutes or so all day. I have had many exchanges with the NCC people about all this, and though they are friendly, I only seldom get any concrete satisfaction that something has been done, changed, or fixed. Well, anyway, so much for my two cents worth on the net. = Jeff

718a

29-JAN-75 0850=EST MALMAN at BBN=TENEXA; TYMSH PORT 15
BUFFERS

Distribution: HARDY AT SRI=ARC
Received at: 29-JAN-75 05:49:25

719

MARTIN,
I HAVE MANUALLY REDUCED THE BUFFERS ON PORT 15 TO ABOUT 350 WORDS OF OUTPUT BUFFERING. IN OUR TESTS WE HAVE FOUND THAT THE TIP DID MAKE ERRORS AT THAT RATE.

719a

I HAVE PUT TOGETHER A PARAMETER FILE TO REFLECT THAT CHANGE, AND IT WILL BE LOADED IN TONIGHT. EXACT BUFFERING WILL BE

719b

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PORT 15 INBUF=132 OUTBUF=342
 PORT 17 INBUF=132 OUTBUF=132 719c

REGARDS,
 JOEL 719d

28-JAN-75 1459-PST HARDY: Tymshare TIP port 15 buff size
 Distribution: MALMAN AT BBN-TENEX, hardy
 Received at: 28-JAN-75 14:59:36 7110

Joel:
 I need to know what size you changed port 15 too,
 martin., 7110a

28-JAN-75 0955-EST MALMAN at BBN-TENEX: WILD PORT
 Distribution: HARDY AT SRI-ARC
 Received at: 28-JAN-75 06:57:47 7111

MARTIN,
 I TRIED TO GET YOU YESTERDAY, BUT WITH NO SUCCESS, THE
 REASON I 7111a

CALLED WAS TO TELL YOU THAT WE WILL HAVE TO REMOVE THE WILD
 BIT
 FROM YOUR VARIOUS PPORTS AROUND THE NETWORK, THE BOYS
 UPSTAIRS
 HAVE DECIDED TO NOT ALLOW PORTS THAT HAVE INPUT BUFFERING
 TO ALSO BE WILD BECAUSE THIS WOULD ALLOW "FREE" USAGE
 OF THE NETWORK, 7111b

WHEN A SITUATION ARRISES THAT YOU NEED A PORT SET WILD FOR
 TESTING PURPOSES, I WILL SET THAT PORT WILD FOR YOU, 7111c

IF YOU HAVE MAJOR OBJECTION TO THIS POLICY, I RECOMMEND YOU
 SNDMSG
 TO MCKENZIE OR WALDEN @BBN AND LET THEM KNOW ABOUT IT !! 7111d

FAILING TO HEAR FROM THEM (OR YOU) I WILL GO AHEAD AND
 REMOVE THE
 WILD BIT AT ARPA PORTS 3,6,7
 MITRE PORT 34
 RUTGER PORT 71
 TYMSH PORTS 15,17 7111e

I BELIEVE THAT IS ALL OF YOUR PORTS, PLEASE CORRECT ME IF I
 AM WRONG, 7111f

REGARDS,
 JOEL 7111g

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24-JAN-75 1527-EST MALMAN at BBN-TENEX: TYMSH BUFFERS
 Distribution: HARDY AT SRI-ARC
 Received at: 24-JAN-75 12:27:04 7112

MARTIN
 YOU SHALL HAVE WHAT YOU REQUEST !! 7112a

THEY WILL BE THERE BY TOMORROW MORN. 7112b

JOEL 7112c

24-JAN-75 1123-PDT HARDY(MEH) at SRI-ARC: TIP buffers, and a
 Request to Increase Tymshare TIP Port 15.
 Distribution: , malman at BBN-TENEX, malman at BBN-TENEX,
 HARDY at
 Received at: 24-JAN-75 11:24:47 7113

Joel: Hi, me again, apparently the Lineprocessor will not
 work with very large TIP buffers, >600, IT is either the
 TIP going fruit or the Lineprocessor screwing up because
 data comes to it in to large of chuncks causing it to send
 out funny protocal commands. We have snap shoot the data
 coming from the TIP; the first part of the string looks fine
 but then from about the middle on it is all garbage.... We
 will worry about this later. would like first to finish
 through=put testing. 7113a

On that subject: We have found a major bottle neck in the
 network stuff in the Tenex monitor. The routine that takes
 the 7 bit chars from the Tenex tty buffers and converts them
 to 8 bit chars and passes them to the NCP. This program
 uses monitor stack space to do the conversion, and because
 of this (my guess) only space for 32 characters was
 allotted. 7113b

The effect to a Lineprocessor Workstation was that
 characters would only come to it in bursts of 32 characters
 no matter what Tenex tty or TIP buffer sizes were, 7113c

We have made a patch in our monitor and now through=put to
 the a Lineprocessor more closly follows line baud rate, 7113d

So, if at your earliest convenients you could increase the
 Tymshare TIP port 15 outbuff to say 500 we could continue
 our testing to try to find the balance between buffer size
 dependent on distant from host and acceptable user responce,
 Thanks,, martin,, HARDY@SRI-ARC 7113e

24-JAN-75 0935-PDT HARDY: ARC Network user List.

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Distribution: MALMAN AT BBN-TENEX, hardy
Received at: 24-JAN-75 09:35:39 7114

Joel:
Yes I mean the list the has Norton, me, watson, etc., I was
just trying to find out if all was going well - so that when
the day comes that we have to be in the system we are.,
martin., HARDY@SRI=ARC 7114a

23-JAN-75 1404-EST MALMAN at BBN-TENEX: TIP ACCOUTING DATA
BASE,
Distribution: HARDY AT SRI=ARC, norton at sri-arc, watson
at sri-arc
Received at: 23-JAN-75 11:05:43 7115

MARTIN,
IF YOU GIVE ME NAMES I CAN TELL YOU IF THEY ARE ENTERED,
HARDY, NORTON, AND WATSON ARE NOT ENTERED YET,
JOEL MALMAN 7115a

23-JAN-75 0907-PDT HARDY: Network Login Authorization
Distribution: MALMAN AT BBN-TENEX, hardy, norton, watson
Received at: 23-JAN-75 09:07:08 7116

Joel:
Can you tell me if the list of names for Net login for
SRI=ARC which we sent you and Fields in Nov 74 has been
entered,
martin., HARDY@SRI=ARC 7116a

17-JAN-75 1235-PST CARLSON at USC-ISI: IMP SIDE INTERFACE FOR
SRI
Distribution: MCKENZIE AT BBN, carlson, fields, watson at
sri-arc, hardy at sri-arc,, lynch at sri-ai
Received at: 17-JAN-75 12:42:33 7117

ALEX:
CRAIG HAS AGREED VERBALLY TO ME THAT WE CAN REMOVE THE LOCAL
INTERFACE
FROM THE HAWAII TIP, MATE IT WITH THE REMAINING DISTANT
DRIVER
IN INVENTORY, AND GET IT TO SRI AS SOON AS POSSIBLE, 7117a

DAN LYNCH AND DICK WATSON HAVE AGREED TO HAVE IT INSTALLED
ON THE 316
IMP, AS YOU REQUESTED, 7117b

THANKS,
BILL 7117c

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16-JAN-75 0813-PST WATSON: IMP Side Interface
 Distribution: MCKENZIE AT BBN, CARLSON AT ISI, hardy, lynch
 at sri-ai, watson
 Received at: 16-JAN-75 08:13:10 7118

Dan Lynch and I have agreed that the second interface can be
 installed in the 316 IMP. Speed is important. Thanks Dick 7118a

10-JAN-75 0909-EST MALMAN at BBN-TENEX: BUFFERS CHANGE
 Distribution: HARDY AT SRI-ARC
 Received at: 10-JAN-75 06:10:37 7119

MARTIN,
 THE DEED IS DONE, LET ME KNOW IF YOU NEED THE ACTUAL SIZES, 7119a

JOEL 7119b

9-JAN-75 1017-EST MALMAN at BBN-TENEXA: BUFFER CHANGES
 Distribution: HARDY AT SRI-ARC
 Received at: 9-JAN-75 07:21:50 7120

MARTIN, 7120a

I WILL MAKE THE CHANGES AS SOON AS I CAN,....OUR PDP-1 IS
 HAVING
 FASTRAN PROBLEMS....IT MIGHT BE ANOTHER DAY OR SO... 7120b

JOEL 7120c

8-JAN-75 1821-PST HARDY: THE REST OF THE TIP PORT
 CONFIGURATION FOR TYMSHARE AND ARPA MESSAGE,
 Distribution: MALMAN AT BBN-TENEX, hardy
 Received at: 8-JAN-75 18:21:49 7121

Joel:
 I forgot to give you message about ARPA TIP port 6 change,
 we recently installed another Lineprocessor at ARPA. Would
 you please configure the device rate and status similar to
 the other ARPA Lineprocessor TIP ports. I don't recall
 their port numbers off hand, if you need send me a message.
 bye for now
 martin., HARDY@SRI-ARC 7121a

8-JAN-75 1631-PST HARDY: TIP port configuratios for Tymshare
 and ARPA
 Distribution: MALMAN AT BBN, hardy
 Received at: 8-JAN-75 16:31:51 7122

Joel:

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I would like to take the next step in test port buffer sizes needed for Lineprocessors. Would you please bump Tymshare TIP port 16 up to 600. If need be (I'm sure you will) you may configure the other ports as follows. By the way I am talking of OUT buffers only, INs are ok.

1-3: 20
4-6: 20
7-14: 2
15: 100
17-77: 2

7122a

thanks .,martin HARDY@SRI-ARC

7122b

8-JAN-75 1625-PST HARDY: The Real IMP Ports For SRI-ARC
Message

Distribution: CARLSON AT ISI, hardy, norton, watson,
engelbart

Received at: 8-JAN-75 16:25:07

7123

Sorry for the blank message about IMP Ports For SRI-ARC. I intended to send the following file and thought I did but something went wrong.< HARDY, IMPCONN,NLS;4, >, 8-JAN-75 12:13 MEH ;;;;

7123a

We have ordered two PDP-11s to support our ARPA funded projects. One will be used as an experimental machine for the National Software Works (NSW) project and the other to provide terminal access to the ARPA Network on a reliable basis. The NSW experimental machine has already arrived and the terminal access machine was shipped by DEC this week.

7123b

It is necessary that we connect both of these machines to the Network via separate ports to minimize interference between their uses.

7123c

However, I have noticed that in the communique from Mc Kenzie (26 DEC 74, 1621 EST) we are scheduled for only one port.

7123d

It is important that we have two as soon as possible. How do I proceed to make the proper arrangements?

7123e

martin., Hardy@sri-arc

7123f

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17-DEC-74 1042-PST WHITE: IMP (#2) PM
 Distribution: HARDY, CERF AT ISI, LYNCH AT SRI-AI
 Received at: 17-DEC-74 10:42:18 7124

BBN has recheduled it for 2-JAN (instead of 1-JAN), at the regular time. The IMP will be down at least one hour.
 ==Jim 7124a

17-OCT-74 1432-PDT HARDY: TIP buffer allocations
 Distribution: MALMAN AT BBN-TENEX, hardy
 Received at: 17-OCT-74 14:32:01 7125

I was not aware that each tip had double buffering on output. How have you been allocating output buffers for me? Also could you explain to me how the double buffering works? Another question: we want to experiment with the NBS and tymshare tip to determine buffer size effects on our Lineprocessor Workstations. Is it possible to change sizes for experimenting purposes with out taking the tip down or waiting overnight? (like from NCC or tip console tty?).
 ...martin@sri-arc.. 7125a

18-OCT-74 0822-PDT HARDY: tip buffer changes
 Distribution: MALMAN AT BBN-TENEX, hardy
 Received at: 18-OCT-74 08:22:40 7126

Joel:
 Thanks for replying and clearing up my questions. We did not intend to use the console tty withiut coordinating with NCC and tip manager.
 Another subject:
 Have you been able to get to the buffer changes zz requested for Tymshare tip yet? please let me know as soon as you do, we have another Lineprocessor connection waiting for installation and check-out.
 thanks
 ...martin.. 7126a

18-OCT-74 0832-EDT MALMAN at BBN-TENEX: BUFFERS
 Distribution: HARDY AT SRI-ARC
 Received at: 18-OCT-74 05:33:02 7127

MARTIN, 7127a

DOUBLE BUFFERING IS: OF THE TOTAL BUFFER YOU HAVE ALLOCATED THE TIP FILLS UP HALF AND SENDS IT TO YOU, WHILE SENDING THAT HALF IT FILLS UP THE OTHER HALF. 7127b

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WHEN I ALLOCATE BUFFERING I TELL YOU THE TOTAL BUFFER SIZE
IN WORDS,
AT TWO CHARACTERS PER WORD.

7127c

IT IS NOT POSSIBLE TO CHANGE THE BUFFERING OF A RUNNING TIP.
DO NOT
PLAY WITH THE TIP CONSOLE TTY UNLESS TOLD TO BY THE NCC
OPERATORS.
A TIP MUST!!! BE RELOADED TO PICK UP A NEW PARAMETER FILE
WHICH
I MUST GENERATE ON THE PDP-1 HERE. WE WILL NOT RELOAD A
RUNNING TIP
DURING THE DAY (UNLESS THE TIP HAS CHASHED!!).

7127d

REGARDS,
JOEL

7127e

17-OCT-74 0911-PDT HARDY: TIP buffer sizes
Distribution: IRBY, ANDREWS, hardy, watson
Received at: 17-OCT-74 09:11:16

7128

Charles:

No I do not have all the current buffers sizes. They seem
not relevant now since they will change again soon. I have
talked with people at NBS TIP and they say that the chart in
the TIP manual for determining output buffer size is not
accurate and should not be used. What they do is change
buffer sizes and watch response. Their test has concluded
that the trough put of the Net is around 3000 baud--I
guessed 2400--and that to run a 2400 baud terminal at full
speed requires about 100B of out
t buffer(using various hosts around the Net they would not
tell me what hosts specifically). Again this tells me that
our best bet is to experiment ourselves, I would think that
we do not have to test each site but only need to test one
far away and one close because the differences will not be
that great and we can guess the in between.
...martin..

7128a

16-OCT-74 0851-PDT HARDY: tymshare tip allocations
Distribution: MALMAN AT BBN=TELEX, hardy
Received at: 16-OCT-74 08:51:52

7129

< HARDY, MALMAN,NLS;3, >, 16-OCT-74 08:48 MEH ;;;;

7129a

I have been trying to get you by phone for the past couple
of days but
have not been able to. I have determined the allocations I
need at the

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Tymshare TIP and where it can come from if it must be taken from other slots,

1) reconfigure port 15 B to 100 in and 200 out

2) reconfigure port 16 B to 100 in and 200 out

If space must be robbed from another port use any above 17 B or 6 B through 14 B.

We need to get 16 B operational as soon as possible, so if you could implement changes first night possible before thur I would greatly appreciate. If you have any questions you can call me at

(415) 326-6200

X3921

thanks

...martin..

7129b

5-OCT-74 1005-PDT HARDY: Low cost IBM 370 Network Interface Distribution: WOODARD AT BBN-TENEX, hardy
Received at: 5-OCT-74 10:05:58

7130

No I do not have a low cost solution on how to connect a IBM 370 to the network. I am becoming involved with this sort of thing because of some client needs related to our Office-1 facility. I have some ideas and fundamental understanding of what is needed. I would like to talk to some one knowledgable of existing 360/70 interfaces. Our immediate needs seem to be a TIP connection for transferring files and handling thee synchronous/asynchronous conversion problem.

...martin..

7130a

3-OCT-74 1512-EDT WOODARD at BBN-TENEX: 370 INTERFACE TO NET Distribution: HARDY AT SRI-ARC
Received at: 3-OCT-74 12:13:24

7131

I UNDERSTAND THAT YOU HAVE A "LOW COST" SOLUTION TO THE PROBLEM OF INTERFACING AN IBM 370 TO THE ARPA NETWORK. I WOULD APPRECIATE ANY NFO RMATION THAT YUO COULD SEND TO ME REGARDIN THIS INTERFACE;

7131a

R. WOODARD
COMPUTER SCIENCE CENTER(4950/DD0)
WRIGHT-PATTERSON AFB, OHIO 45433

7131b

TELEPHONE: 513-255-6407

7131c

THANKS, RICH WOODARD

7131d

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NSRDC

7j

12=FEB-75 1301=PST BRIGNOLI at OFFICE-1: TIP to Modem
connector cable
Distribution: ISELI AT ISI, HARDY AT SRI-ARC, brignoli
Received at: 12=FEB-75 13:00:28

7j1

Jean,
Martin Hardy says that you may use the connector cable from
SRI's 208A modem to connect our 208 modem to the TIP. He is
sending another cable to you.
Regards,
Frank

7j1a

3=FEB-75 1036=PST BRIGNOLI at OFFICE-1: Software
configuration of TIP Ports
Distribution: MALMAN AT BBN, iseli at isi, hardy at
sri-arc, brignoli, avrunin
Received at: 3=FEB-75 10:39:45

7j2

Joel,
As you may be aware, we have had two 208A synchronous
modems
installed at Mitre TIP to be used with SRI
lineprocessors.
Once the hardware is installed, it will be necessary to
configure
the ports suitably softwarewise, I have been talking to
Jean Iseli
of Mitre and he is unsure as to the procedure to be
followed.
The configuration recommended to us by SRI-ARC is as
follows: input
buffer 150 (octal) TIP words, output buffer 300 (octal)
TIP words.
This buffering should be similar to that used by other
ports
assigned to SRI lineprocessors.
would you be so kind as to drop us a line informing us of
the
correct procedure to be followed. Please let us know as
soon as
possible. Thanks.
Regards,
Frank (BRIGNOLI@OFFICE-1)

7j2a

11=FEB-75 1753=PST HARDY: TIP Input/Output Buffer Sizes for
LPS,

more messages on network performance

Distribution: BRIGNOLI AT OFFICE-1, hardy, bair, norton
Received at: 11-FEB-75 17:53:49

7j3

Frank:

To operate the LP at a normal input typing rate requires about 30 or so TIP character inbuff. To get reasonable display refresh (about 1200 baud rate) you need at least 200 for TIP outbuff.

If you expect to use DEX via LP you will need 125 inbuff.

...martin..

7j3a

10-FEB-75 0816-PST BRIGNOLI at OFFICE-1: TIP buffers for use with Vadic modem

Distribution: HARDY AT SRI-ARC, avrunin
Received at: 10-FEB-75 09:48:07

7j4

Martin,

We need to know what the MINIMUM input and output buffers can be for use with our lineprocessor. We currently have (in octal TIP words) a TIP Input buffer of 6 words and a TIP Output buffer of 25 words. We have been told we can juggle this allocation around if need be or possibly get a few more words emphasis on few and on possibly). Right now, the lineprocessor appears to function correctly with the VADIC modem except when depressing two or more of the mouse buttons (i.e., BBW, RPT, ESC). Let us know as soon as possible.

Thanks

Frank & Larry

7j4a

7-FEB-75 1444-PST HARDY: Replacement Keyboards for NSRDC
Distribution: HARDWARE, hardy, brignoli at office-1, bair
Received at: 7-FEB-75 14:44:42

7j5

Rod:

Frank is experiencing keyboard trouble with one of his Data Medias. I think it would be best if we -after we get mods from DM- we exchange them with him.

...martin..

7j5a

7-FEB-75 1437-PST HARDY: Another 208A modem cable for NSRDC
Distribution: HARDWARE, hardy
Received at: 7-FEB-75 14:37:09

7j6

Rod:

The way Frank Brignoli intends to hook up to the NET is through two 208A modems with a Vadic for back up. We could send Iseli at MITRE another 208A to TIP modem cable. Frank says the two LP and Displays work -hmm one is using

more messages on network performance

the Vadic
 ..martin.. 7j6a

7-FEB-75 0721-PST BRIGNOLI at OFFICE-1: TI(TIP Modem Cable
 Distribution: HARDY AT SRI-ARC, brignoli
 Received at: 7-FEB-75 10:05:53 7j7

Martin,
 whyfore you send only one cable to Jean Iseli?
 Frank
 p.s.-we now have one display :hat worked oth with Vadics &
 208A's 7j7a

6-FEB-75 1806-PST BRIGNOLI at OFFICE-1: NLS Workstations
 Distribution: HARDY AT SRI-ARC, norton at sri-arc, johnson
 at sri-arc, brignoli
 Received at: 6-FEB-75 18:46:02 7j8

Martin,
 The NLS Workstations arrived today & the one we assembled
 seems to work quite well. We are using it with VADIC modem
 at 1200 baud and response is satisfactory. For future
 reference, what is the maintainance situation on the things?
 Frank 7j8a

3-FEB-75 1814-PST BRIGNOLI at OFFICE-1;
 Displays, lineprocessors, mice, and keysets for NSRDC
 Distribution: HARDY AT SRI-ARC, bair, brignoli
 Received at: 3-FEB-75 18:14:35 7j9

I'll be damned. We get green stamps? 7j9a

3-FEB-75 1425-PST HARDY: Displays, Lineprocessors, Mice, and
 Keysets for NSRDC
 Distribution: JOHNSON, hardy, bair, brignoli at office-1
 Received at: 3-FEB-75 14:25:02 7j10

Sandy:
 In front of your office are two each
 Displays, Lineprocessors, mice, keysets, and some cables,
 would you please send to Frank Brignoli at NSRDC today. See
 Rod he has a list of the serial numbers..
 Thanks ..
 ..martin.. 7j10a

31-JAN-75 0923-PST HARDY: Displays, Lineprocessors, and Modem
 cable.
 Distribution: BRIGNOLI AT OFFICE-1, hardy, norton
 Received at: 31-JAN-75 09:23:28 7j11

more messages on network performance

Frank:

First, we sent the modem cable to John at MITRE Wed with instructions to call Rod when he receives, this way Rod can help him hook-up and configure the modem and TIP properly-it's a little messy for that particular TIP. Second; We will ship you Displays and Lineprocessors today. We uncovered some Lineprocessor code and NLS code bugs, also a keyboard noise problem. The Lineprocessor bugs were fixed yesterday and I have tested, the NLS bug is minor but will be fixed by the time you are set-up, the keyboards are being fixed today (we are putting a stiff back on the inside of the case to deaden the typing noise).

Oh, also the Lineprocessor mods for DEX input are completed in the units we are sending you and the code has been tested, however the Ten side code is not at Office=1 yet but should be by the time you need it.

Best, ...martin..

P.S.

Please give me a call when you receive the LPs. There is some code built in for testing lines and measuring through-put that I can show you how to run...

7j11a

31-JAN-75 0804-PST BRIGNOLI at OFFICE=1: displays
Distribution: HARDY AT SRI=ARC, brignoli
Received at: 31-JAN-75 08:04:48

7j12

Martin,

Have our displays been shipped yet and have cables gone to Mitre TIP?

Frank

7j12a

28-JAN-75 1724-PST HARDY: 208a modem stuff you are putting on-line for NSRDC

Distribution: JOHNSON, hardy
Received at: 28-JAN-75 17:24:27

7j13

Sandy:

How is the file for NSRDC coming? (the 3 pages of stuff I gave you the other day).

It is very important to complete soon, like tomorrow, I must send it off so NSRDC can hook-up their Lineprocessor workstations the end of this week.

martin

7j13a

22-JAN-75 1614-PST HARDY: Displays, Mice, and Keysets.
Distribution: BRIGNOLI AT OFFICE=1, hardy, norton
Received at: 22-JAN-75 16:14:20

7j14

Frank:

more messages on network performance

Recieved our Data Media displays today. We will have some checked out by tomorrow, and if all goes well we will send you two Lineprocessor Workstations Thur. If you will tell me the speeds you expect to run at (vadic, 208?) we will st up before shipping.

..martin.. HARDY@SRI-ARC

7j14a

21-JAN-75 1544-PDT BRIGNOLI at OFFICE-1: DISPLAYS?

Distribution: HARDY AT SRI-ARC, brignoli

Received at: 21-JAN-75 15:41:54

7j15

DISPLAYS???

7j15a

14-JAN-75 1438-PST HARDY: displays

Distribution: BRIGNOLI AT OFFICE-1, hardy

Received at: 14-JAN-75 14:38:23

7j16

Frank:

As we discussed earlier I can send you one display as soon as we get our ADM-2 displays repaired. The repair people tell me that they may be able to bring by a loaner tomorrow if it is configured similar to the ones we have here. If so, we will send you a display Lineprocessor Mouse and Keyset tomorrow. Will talk to you tomorrow..

..martin.. HARDY@SRI-ARC

7j16a

8-JAN-75 1826-PST HARDY: retransmission of lost mail:
Display Terminals and Lineprocessors.

Distribution: BRIGNOLI AT OFFICE-1, hardy

Received at: 8-JAN-75 18:26:35

7j17

Frank:

I think the following message did not get sent to you due to Net trouble. It's an oldy..

< HARDY, NSRDC,NLS;2, >, 30-DEC-74 11:19 MEH ;;;;

27-DEC-74 0831-PST HARDY: Display terminals and

Lineprocessors

Distribution: BRIGNOLI AT OFFICE-1, hardy

Received at: 27-DEC-74 08:31:34

Frank:

Ive been sick with the Flu the past couple days so don't know

current status, and won't know until this Monday when I return.

However I sure we have a Lineprocessor available and should have

another no later than end of week. Displays are something else; we

recieved 3 for another project and intended to loan out

more messages on network performance

but 2 busted
 and the local repair station doesn't have parts ADM-2's).
 We should
 have recieved our Hazeltines by now as you know, in any
 case I
 think we will have displays available
 ith in 2 weeks, so If I where you I would have the Lines
 installed.
 Our experience has been that it takes Bell several weeks
 to get the
 lines up. There are several test we can run on the lines
 with out
 Lineprocessors or displays. Talk to you later.,
 P.S.
 I located a TI with cassette, hope to test it next week,
 so keep
 ypur toes crossed and I am sorry for the delay with all
 this.

..martin., HARDY@SRI=ARC

7j17a

..martin., HARDY@SRI=ARC

7j17b

30-DEC-74 1132-PST HARDY: Your Equipment
 Distribution: BRIGNOLI AT OFFICE-1, hardy
 Received at: 30-DEC-74 11:32:07

7j18

Frank:
 The following is the message I sent you the other day in
 response to your that bombed out.

< HARDY, NSRDC,NLS;2, >, 30-DEC-74 11:19 MEH ;;;
 27-DEC-74 0831-PST HARDY: Display terminals and
 Lineprocessors

Distribution: BRIGNOLI AT OFFICE-1, hardy
 Received at: 27-DEC-74 08:31:34

Frank:

Ive been sick with the Flu the past couple days so don't
 know

current status, and won't know until this Monday when I
 return.

However I sure we have a Lineprocessor available and
 should have

another no later than end of week. Displays are
 something else; we

recieved 3 for another project and intended to loan out
 but 2 busted

and the local repair station doesn't have parts ADM-2's).
 We should

have recieved our Hazeltines by now as you know, in any
 case I

more messages on network performance

think we will have displays available
ith in 2 weeks, so If I where you I would have the Lines
installed.
Our experience has been that it takes Bell several weeks
to get the
lines up. There are several test we can run on the lines
with out
Lineprocessors or displays. Talk to you later.,

P.S.
I located a TI with cassette, hope to test it next week,
so keep
ypur toes crossed and I am sorry for the delay with all
this,

...martin,, HARDY@SRI=ARC

7j18a

I am back at work now and it looks like we will have stuff
to send you sometime next week.,

...martin... HARDY@SRI=ARC

7j18b

27-DEC-74 0831-PST HARDY: Display terminals and
Lineprocessors

Distribution: BRIGNOLI AT OFFICE-1, hardy

Received at: 27-DEC-74 08:31:34

7j19

Frank:

Ive been sick with the Flu the past couple days so don't
know current status, and won't know until this Monday when I
return. However I sure we have a Lineprocessor available
and should have another no later than end of week. Displays
are something else; we recieved 3 for another project and
intended to loan out but 2 busted and the local repair
station doesn't have parts ADM-2's), We should have recieved
our Hazeltines by now as you know, in any case I think we
will have displays available
ith in 2 weeks, so If I where you I would have the Lines
installed. Our experience has been that it takes Bell
several weeks to get the lines up. There are several test
we can run on the lines with out Lineprocessors or displays.
Talk to you later.,

P.S.

I located a TI with cassette, hope to test it next week, so
keep ypur toes crossed and I am sorry for the delay with all
this,

...martin,, HARDY@SRI=ARC

7j19a

27-DEC-74 0757-PDI BRIGNOLI at OFFICE-1: Display Terminals

Distribution: HARDY AT SRI=ARC, brignoli

Received at: 27-DEC-74 07:55:32

7j20

more messages on network performance

Martin,

Can you give me a firm date as to when we might expect the DNLS terminals. If you cannot, we might delay installation of the leased lines for a month. Let me know as quickly as possible,

Frank

7j20a

23-DEC-74 0813-PDT BRIGNOLI at OFFICE-1: terminals
Distribution: JOHNSON AT SRI-ARC, hardy at sri-arc,
brignoli

Received at: 23-DEC-74 08:13:42

7j21

Hi Sandy (& Martin),

Any news of TI 735's? Also, any chance of sending along lineprocessors, displays, etc. together with documentation? Happy Holidays!

Frank

7j21a

JCN 23-DEC-74 21:34 24729

Proposal ISU 74-259 Continued NLS Workshop Support for NSRDC

Location: (GJOURNAL, 24729, 1:w)

*****Note: [INFO-ONLY] *****

7j22

Comments: Signed hardcopy printed today, to be mailed tomorrow 12/24

7j22a

5-DEC-74 1205-PDT BRIGNOLI at OFFICE-1: terminals

Distribution: HARDY AT SRI-ARC, brignoli

Received at: 5-DEC-74 12:07:09

7j23

Martin,

If the TI with cassette is compatible with NLS, DEX, and the ARPANET I would like you to order one for us.

Since our leased lines are coming in (not to mention the Vadic modems) I would appreciate two of any

lineprocessor/display combination you can get to us.

Let me know about 735's when you can. Also, are they to be delivered directly to us or to you and then forwarded?

Thanks, Frank

7j23a

5-DEC-74 0839-PST HARDY: your equipment

Distribution: BRIGNOLI AT OFFICE-1, hardy

Received at: 5-DEC-74 08:39:34

7j24

Frank:

I have finally located a TI with cassette that we can use to test out it's compatibility with NLS and DEX. The problem is that things are very busy here right now and

more messages on network performance

don't see that we can get to it before late next week.. At that time if it works I would expect deliveries would be 30 to 90 days (I will ask sandy to check with suppliers today and get a more exact reading on deliveries). Hmm, I am at home this morning and don't have my books with me.. I can't recall if once we found them compatible with NLS and DEX if you were going to get, or us? Lineprocessor and DNLS displays. We have received several Lineprocessors this week and we are testing them now. As of yet we have not received any of the several (11) displays we ordered several months ago. We ordered most of them from Hazeltine and they have been giving us fibs about delivery for the past month.. supposedly 5 or 6 are on their way and we should receive them next week.. On the other hand we have ordered a few for our NSW project and 7 from Day 7 Data Media and they will arrive next week, when they do and if the Hazeltines haven't I think we can break one or two loose for a loan.. (excuse the 7's they were meant to be backspace words...)

735's
These will also suppose to arrive this week. I will ask Sandy to check..
Sorry for the delays ..
...martin...

7j24a

4-DEC-74 1306-PDI BRIGNOLI at OFFICE-1; terminals
Distribution: HARDY AT SRI-ARC, brignoli
Received at: 4-DEC-74 16:17:23

7j25

Hi Martin, Just as a quick check, could you tell me:
- when can we expect the DNLS terminals
- when can we expect the TI 735's
- what is the status of TI with cassettes
Regards, Frank

7j25a

31-OCT-74 0812-PDI BRIGNOLI at OFFICE-1; terminal maintenance
Distribution: HARDY AT SRI-ARC, brignoli
Received at: 31-OCT-74 08:13:11

7j26

Hi Martin, Any word on how we can handle the terminal maintenance for the TI's. Let me know when you can, Frank

7j26a

24-OCT-74 1852-PDI BRIGNOLI at OFFICE-1; terminals
Distribution: HARDY AT SRI-ARC, norton at sri-arc, brignoli
Received at: 24-OCT-74 18:52:29

7j27

Hi Martin, This is to let you know that the two terminals arrived today (in more or less operable condition=nothing we

more messages on network performance

couldn't fix with a screwdriver), Thanks. Also, can you tell me if there is a Washington, D.C. affiliate of international computer eqpt. that can handle maintenance for the terminals if required? Regards, Frank

7j27a

17-OCT-74 1351-PDT BRIGNOLI at OFFICE-1: terminals
Distribution: HARDY AT SRI-ARC, brignoli
Received at: 17-OCT-74 16:53:23

7j28

Hi Martin, What's the latest on those TI terminals for us. Tried calling but everyone out to lunch. Frank

7j28a

8-OCT-74 1132-PDT BRIGNOLI at OFFICE-1: modems for DNLS terminal

Distribution: HARDY AT SRI-ARC, brignoli, avrunin
Received at: 8-OCT-74 18:00:59

7j29

Martin, We have ordered the leased lines and the modems for use with DNLS terminals. There is no need for you to do so. I will talk with Jim about this tomorrow. Regards, Frank

7j29a

ARC

7k

12-FEB-75 1000-PST HARDY: Missing Property
Distribution: JOHNSON, hardy, norton, watson, engelbart
Received at: 12-FEB-75 10:00:17

7k1

Sandy:

As you know, SRI Property has been conducting a property inventory check of project 1868. The following is a list of the property they, and Rodney, have not been able to find. They are now waiting for use to declair where abouts (stolden, at home, etc).

Would you please send a journal item to ARC people to try to locate.

thanks... martin.

7k1a

- 1) tape recorder model 230 ser #9040
 - 2) tape recorder model 124cs ser # 29935
 - 3) mouse ser # 07
 - 4) file cabinet model 18354 sri ser # g00109801
 - 5) tape recorder model tc126 ser # 10372
 - 6) tZ terminal model 725 property tag # g00112045
 - 7) miniture joystick model x2438
 - 8) mouse property tag #g59190017
-

7k1b

11-FEB-75 0817-PST HARDY: Where to put Rita

more messages on network performance

Distribution: NORTON, hardy
Received at: 11-FEB-75 08:17:02

7k2

Have any ideas?

Mine are: room with Jeannie L, a corner of j2028 (other side of NIC room partitions), see if we can get our room back FROM Bert (AI) or share it, Parsely room; set it up as a user development (or Application) room. Move the modem and LP display in there, Talk to Wing for more room.

????

..,martin...

7k2a

10-FEB-75 1152-PST HARDY: Space Plan

Distribution: NORTON, hardy
Received at: 10-FEB-75 11:52:16

7k3

Jim:

I would like to journalize my file APLAN. I gave you a copy last week for review. What do you say?

..,martin,

7k3a

6-FEB-75 1508-PST HARDY: RPO4s

Distribution: TAGGART AT OFFICE-1, HILL AT OFFICE-1, hardy
Received at: 6-FEB-75 15:08:15

7k4

No I sure don't, I don't even know the characteristics of a RPO4. Is it a higher density than RPO3?

..,martin..

7k4a

6-FEB-75 1320-PST HARDY: Purchase Request for PDP-11 Add-on.

Distribution: JOHNSON, hardy
Received at: 6-FEB-75 13:20:40

7k5

Sandy:

Would you please type up a Purchase Request to DEC for two (2) DM11-DB Line Adapters 8 ports total). Charge to Capital -same as p.O. B96684). I will write a memo to go with it.

..,martin..

7k5a

6-FEB-75 1255-PST TAGGART at OFFICE-1: Disks for TENEX

Distribution: HARDY AT SRI-ARC, taggart, hill
Received at: 6-FEB-75 12:55:13

7k6

Martin-

Do you know of anybody using RPO4's for a TENEX system? we are finally getting around to ordering and want to check out

various disks.

7k6a

more messages on network performance

Thanks much
Steve Bailey
TAGGART@OFFICE-1

7k6b

4-FEB-75 0932-PST HARDY: Dial-up phones for our 11,
Distribution: JOHNSON, hardy, watson, irby, victor, andrews
Received at: 4-FEB-75 09:32:21

7k7

Sandy:
Sometime ago we requested? our 10 data phone 329-8226 be
disconnect from the ring loop so we could connect it to our
11. Ring Loop: when you dial any number in the loop:
329-8220 to 8226 if it is busy you automatically get
switched to the next number, hence you don't have to redial)
Could you check with the phone company to see if this has
happened, also request they disconnect 329-8224,5 from the
loop too,
...martin..

7k7a

4-FEB-75 0812-PST HARDY: Door and Cabinet Locks
Distribution: JOHNSON, hardy, feinler
Received at: 4-FEB-75 08:12:14

7k8

Sandy:
You kind of have to keep bugging maintenance to get them to
do things, would you please keep on top of them until we get
the locks installed?
thanks..
....martin...

7k8a

17-JAN-75 0837-PST WATSON: status report
Distribution: VANNOUHUYS, HARDY, IRBY, POSTEL, WHITE,
MICHAEL, watson
Received at: 17-JAN-75 08:37:10

7k9

I'd like to send a short mid point satus report on our work
to the NSW steering committee. Martin what I would like
from you is a brief statement of the two PDP 11 situation,
delivery, installation dates etc, and what problems exist or
are expected.

For the others I would like a half page to page on each of
the three areas, NLS, Frontend, Protocols that:

- 1) gives your subjective feeling about where we are relative
to where you think we should be, like I'd feel better about
meeting our July commitment if we were where we are now a
week ago , a month ago or whatever.
- 2) accomplishments (highlights only) to date.
- 3) additional tsks or unexpected things along the way to
now.

more messages on network performance

4) what yet remains to be done before July
 5) any general concerns about NSW that should be brought to Bill's attention
 I would appreciate receiving your replies by noon Monday after which I will edit together a report. Thanks Dick

7K9a

30-DEC-74 1215-PST HARDY: CHARGES.nls
 Distribution: JOHNSON, hardy, norton
 Received at: 30-DEC-74 12:15:54

7K10

Sandy:
 D mods look good, go ahead and send through the Journal to ALL ARC.
 Thanks
 ...martin...

7K10a

14-DEC-74 1804-PST ENGELBART: Printouts of our proposal to NSF, "A Special-Studies Support Center" (24758,)
 Distribution: LEAVITT, watson, norton, irby, victor, belleville, martin, maynard,, white, postel, feinler, kelley, hopper, bair, michael,, vannouhuys, peters, hardy, lehtman, meyer, beck, engelbart
 Received at: 14-DEC-74 18:04:22

7K11

I'd like for everyone who is interested to have a chance to read it. I just printed out two copies for Jeanne Leavitt to circulate. Ask her if you are particularly interested. If you want a private copy, the file <ENGELBART>osisprop.1;1 can be copied to lpt: to avoid burning up CPU cycles with the Output Processor. Note == 30 pages in length.

Sorry that more people didn't get in on discussion and review. I had decided against submitting a proposal to this 16 Dec deadline, then after returning from Washington last weekend, I got the idea for this particular project, and it seemed like such a natural blend of what NSF seems aimed for, and what we'd like to see, that I re-decided Monday to try for it. Too little time, too much hassle I was experiencing simultaneously in budget struggles, to do much collaborating. I would think that since such a project would potentially open up a great deal of contact and application support in the civilian sector, like for supporting Special Study Groups in Energy, Environment, national economics, technology transfer, etc., most of us would be very pleased if the proposal gets accepted.

Anyway, whether this proposal is accepted or not, I'd still like to hear your comments. If the proposal isn't bought by NSF, I'd be interested in improving it and trying

more messages on network performance

again.

Regards, Doug

7k11a

13-DEC-74 0930-PST HARDY: pay check

Distribution: JOHNSON, hardy

Received at: 13-DEC-74 09:30:58

7k12

Sandy:

I will come in over the week-end and pick up my check. I f
you leave it in your desk and lock it, please let me know
where the key will be.. thanks

...martin..

P.S.

Have the 735 terminals come in yet??

7k12a

7-DEC-74 0954-PST NORTON: joan

Distribution: HARDY, norton

Received at: 7-DEC-74 09:54:34

7k13

whats this about joans time? i didnt get the first part of
the discussion just yer message? dick upset about
something? or joan? or what?

jim

7k13a

7-DEC-74 0934-PST HARDY: Joans Time

Distribution: WATSON, NORTON, VANNOUHUYS, hardy, hamilton

Received at: 7-DEC-74 09:34:20

7k14

Dick:

I don't know what the big deal is since we all work for ARC.
However I must say that I have never asked Joan to do
Application work (or Sandy or Jeanne to do Development work)
unless the work was urgent emergency) and then I always
asked them for a picture of their stack to determine
priority or who I must talk to in order to get in front of..

7k14a

...martin..

7k14b

6-DEC-74 0940-PST WATSON: Joans Time

Distribution: HARDY, HAMILTON, VANNOUHUYS, watson

Received at: 6-DEC-74 09:40:35

7k15

I just noticed Dirks note on Joan doing typing for Martin.
Thats all cool but only as lowest priority task for Joan.
Her work for development top priority unless emergency.
Thanks dick

7k15a

12-NOV-74 1005-PST ENGELBART: CY75 Capital Equipment
estimates

more messages on network performance

Distribution: WATSON, NORTON, HARDY, engelbart
 Received at: 12-NOV-74 10:05:51 7k16

Bob Wing needs ARC's input soon. They will be part of Bart's total-budget data when he gets into the intra-division go-round. I'd like to be brought up to date later today on where we stand. I'll either be around shortly before noon, or please find me between 1:30 and 2:00 p.m.
 Regards, Doug 7k16a

31-OCT-74 0841-PDT JOHNSON: martin, i feel really shitty.....may try to make it this afternoon if i feel any better....sorry, but cant help it.....see you later.
 Distribution: HARDY
 Received at: 31-OCT-74 08:41:32 7k17

17-OCT-74 1402-PDT HARDY: SRI comp 80?
 Distribution: VANNOUHUYS, hardy
 Received at: 17-OCT-74 14:02:48 7k18

SRI has a Cal Comp 565 connected to a sds 930, zzhey apparently do not have a comp 80. If you want to nose around more call ART at X3676 (computer operator).
 ...martin.. 7k18a

17-OCT-74 0924-PDT HARDY: frep
 Distribution: LEAVITT, hardy
 Received at: 17-OCT-74 09:24:12 7k19

Jeannie:
 thanks a lot for you help with the frep paper, I do want the heading centered, Perhaps dirk has it under control since he did the com directives. Did you proof after reading in edits?? Itt sounds like you did and if so I intend to pass paper directly to dirk for COM pprint.
 ...martin.. 7k19a

15-OCT-74 1707-PDT WATSON: pdp 11 order oked
 Distribution: IRBY, HARDY, NORTON
 Received at: 15-OCT-74 17:07:28 7k20

Bart called and said pdp 11 order oked by anderson. 7k20a

15-OCT-74 1616-PDT JOHNSON: PDP-11 Capital Order
 Distribution: ENGELBART, NORTON, WATSON, hardy, johnson
 Received at: 15-OCT-74 16:16:23 7k21

Anderson said he would sign the PDP-11 order if Bart Cox will write a one-page memo explaining our low sold time.

more messages on network performance

Bart agreed and said Wing is coordinating and expects all to occur by Thursday of this week. ==Martin

7k21a

11-OCT-74 1540-PDT HARDY: some questions about ARC Workstations and equipment
Distribution: ENGELBART, NORTON, WATSON, hardy
Received at: 11-OCT-74 15:40:39

7k22

< HARDY, LOCPR,NLS;11, >, 11-OCT-74 15:33 MEH !!!!!

7k22a

I am concerned that we are not addressing some questions about ARC Workstations configuration after our PDP-10 goes away, and some related questions.

7k22b

1) Will we connect directly to the PDP-11 we already have (NSW machine) to access office-1? or will we order more modems and leased lines?

7k22c

2) Will the Patch Panel be used to connect workstations to only one of the PDP-11s? (terminal access machine?).

7k22d

3) Will we want new tables to hold the displays and Lineprocessors?

7k22e

4) Will we want hard copy printers for some of our Workstations? If so, operational by January?

7k22f

5) what equipment (1868 stuff) do we want to transfer to NSW contract (the only other government contract we have (?) that we can transfer government equipment to),

7k22g

For instance: how much of the TV system, sound system, Plasma display system, Imlac, etc do we want to retain, if any?

7k22h

6) Should I order a new light valve to replace the bad one in our TV projector (will cost about \$8,500)? This will be necessary to mend it's ailing performance (to restore to as good as it was

more messages on network performance

when we
first got it), 7k221

...martin,, 7k221

11-OCT-74 0814-PDT HARDY: my stuff
Distribution: LEAVITT, hardy
Received at: 11-OCT-74 08:14:05 7k23

Thanks a lot for what you have done so far. It is important
that the FREP file you get is the matches the hardcopy
version you have. You can tell if this is so by comparing
file information on first page of hardcopy.
...martin,, 7k23a

9-OCT-74 0958-PDT HARDY: Purchase Order signatures
Distribution: NORTON, hardy
Received at: 9-OCT-74 09:58:20 7k24

Jim:
Sandy says I now have authority to sign P.O.s for ARC (dept
approval). Whats up?? 7k24a

9-OCT-74 1320-PDT JOHNSON:
Distribution: HARDY
Received at: 9-OCT-74 13:20:47 7k25

hi, what are you doing in there with doug all that time --
looks like (?) fun.....i have an appointment this
afternoon...have been working on editing that stuff for
you...will return later...sandy. 7k25a

5-OCT-74 0939-PDT HARDY: Ed Van De Riet - Patch Panel
Distribution: NORTON, ENGELBART, WATSON, hardy
Received at: 5-OCT-74 09:39:19 7k26

Ed will start work for us monday (7th). His will determine
and plan what we must be done to connect our PDP-10 patch
panel to a PDP-11. He will also run some tests to
determine maximum line lengths for Lineprocessor RS-232
connections.
...martin,, 7k26a

26-SEP-74 1202-PDT ENGELBART: Odd SNDMSG format crashes
INMESS
Distribution: WATSON, meyer, hardy, andrews, norton, lee at
office-1, engelbart
Received at: 26-SEP-74 12:02:37 7k27

more messages on network performance

Dick: You recently sent a message to all on this distribution list (except for NDM), where the format that I got had the distribution list at the end of the message. Whether for this reason or not, INMES bombed out with an "EXCEED CAPACITY". I read the situation as a likely development issue -- if SNDMSG has a way in which a user may launch a message with that format, then INMES must be modified to accept that format. Did you do something like modify the distribution list after you had finished the message? Your untangling the issue will be appreciated. Regards, Doug [Copy of message follows]

26-SEP-74 09:10:23,694

Date: 26 SEP 1974 0910-PDT

From: WATSON

Subject: NSW Demo In Washington Oct 7-8. There are four hours of Line Processor Demo scheduled for NSW users including Coles and other big wigs. These are important demos not only effecting what is done this year but funding for FY76. The thing needs to work and those of us going need to familiarize ourselves with its problems recovery procedures etc. Everyone involved with aspects of the Line Processor should do whatever is needed this week to fix any problems known at this time and we should pay close attention to Susans messages indicating present state. Dick

7K27a

26-SEP-74 1214-PDT ENGELBART: SNDMSG problems, continued
Distribution: WATSON, meyer, hardy, irby, andrews, norton, lee at office-1,, engelbart
Received at: 26-SEP-74 12:14:08

7K28

The "funny-formatted" SNDMSG that I appended to my previous message didn't bring across the last line, which was:
"TO: hardy, irby, andrews, norton, lee at OFFICE-1, engelbart"

IT didn't bring it in, when I did a "B etc., because just after Dick's signoff there was a "Z, so the "B file-copy operation in my SNDMSG stopped copying from the message file at that point. Very interesting set of problems. Noted also that the "Subject" and "Message text" weren't separated by EOL in Dick's original message. Likely that would be source of problem, where INMES would hardly expect such a long string as Subject. More regards, Doug

7K28a

1-OCT-74 1250-PDT JOHNSON: Hardware Needs
Distribution: ENGELBART, NORTON, WATSON, hardy, johnson
Received at: 1-OCT-74 12:51:01

7K29

more messages on network performance

Doug, Jim, Dick:

7k29a

We have two immediate needs for hardware help.

1. figure out how to connect the TTY patch panel to the PDP-11 terminal access machine after the PDP-10 goes away.

7k29b

I would like to give this task to van de Riet (on overhead?). I estimate it will take him about 3 to 4 weeks to determine and document exactly how to do it (but not actually making the changes).

7k29c

2. repair broken TV monitors and TV projector, and assist Rodney in maintaining tasker.

7k29d

Rodney is and will be completely loaded with tasks directly associated with lineprocessor development, installation, an assembly. (Documenting, checking out the next batch, repairing broken ones, etc.).

7k29e

I would like to get Jake Ratliff back to take care of these problems and to stay on at least until Jan. 1 to assist Rodney (project 9206 and some overhead).
--Martin

7k29f

1-OCT-74 1344-PDT NORTON: ed help
Distribution: HARDY, norton, watson
Received at: 1-OCT-74 13:44:22

7k30

ok from mystandpoint... Jim

7k30a

AFAA

71

JCN 23=DEC-74 21:10 24724
Proposal ISU 74=253 NLS Workshop support for AFAA
Location: (GJOURNAL, 24724, 1:w)
*****Note: [INFO-ONLY] *****

711

Comments: Signed hardcopy printed today, to be sent to RADC and AFAA tomorrow 12/24

711a

LFAC

7m

13-FEB-75 1419-PST HARDY: ARC EBN User List (retransmission)
Distribution: NORTON, WATSON, ENGELBART, IRBY, hardy,
feinler
Received at: 13-FEB-75 14:19:11-PST

7m1

more messages on network performance

Sorry for the subject message with no text. Here is the text:< HARDY, JAKE,NLS;2, >, 12-FEB-75 08:43 MEH ;;;

7m1a

JAKE 11-FEB-75 01:39 25338

User names for BBN

Message: I talked to Ted Strollo at BBN today and he would like to have

a list of SRI people that will be using BBN after March 1.

Jake

*****Note: [ACTION] *****

7m1b

...martin...

7m1c

13-FEB-75 0922-PST HARDY: display repairs, equipment hook-ups
Distribution: OCHOA, hardy, hardware, johnson
Received at: 13-FEB-75 09:22:07

7m2

Renea:

As you know you are to become our PDP-11 computer operator after our 10 goes away. In addition, it will be your responsibility to hook-up equipment when needed, and see that it is repaired when busted. Feel free to ask Rod and Sandy for help until you learn the ropes.

What we would like to do (starting now) is keep a log of equipment repairs. I think binders that you can keep hand written stuff in will be good enough: one for Displays, one for lineprocessors (this may be redundant You should talk to Rod and ask how he wants to handle), one for each PDP-11, one for cassette recordern, and one for terminals. You will need to keep in these binders; if the equipment is leased, owned, will call maintenance, contract maintenance, serial number, location, and who to call for maintenance.

I can give you help with the binder set-up if you needed.

...martin...

7m2a

3-FEB-75 1046-PST HARDY: Lineprocessor Tables
Distribution: JOHNSON, hardy, norton
Received at: 3-FEB-75 10:46:46

7m3

Sandy:

We are going to need more Lineprocessor Tables. Please type up another Work Request for eight. Charge to Over Head (750, with the correct Sub)

thanks

...martin..

7m3a

12-FEB-75 0847-PST HARDY: ARC BBN User List,
Distribution: WATSON, NORTON, IRBY, hardy, feinler
Received at: 12-FEB-75 08:47:54

7m4

more messages on network performance

...martin...

7m4a

11-FEB-75 1338-PST STONE at OFFICE-1: Escaped Mouse
Distribution: HARDY AT SRI-ARC, stone
Received at: 11-FEB-75 13:37:12

7m5

Rod Bendurant? called me 11 FEB to see if we had a mouse that was missing from SRI. I located one with a tag stuck to the bottom that had a US GOVT label with the number AF-105028 on it. Would you please pass this note on to Rod
Thanks
Stoney

7m5a

11-FEB-75 1040-PST HARDY: Equipment TAXES
Distribution: NORTON, WATSON, hardy, johnson
Received at: 11-FEB-75 10:40:07

7m6

Regardless if equipment is leased, rentd, or purchased on project or not, we are subject to two types of taxes; one is a monthly use tax called sales tax, the other is a yearly tax called property tax.
We have received some yproperty tax bills already.
Purchasing says some of our contracts say we must pay and some do not. They will give us a list so we know what to expect.

... martin...

7m6a

11-FEB-75 1040-PST HARDY: Equipment TAXES
Distribution: NORTON, WATSON, hardy, johnson
Received at: 11-FEB-75 10:40:07

7m7

Regardless if equipment is leased, rentd, or purchased on project or not, we are subject to two types of taxes; one is a monthly use tax called sales tax, the other is a yearly tax called property tax.
We have received some yproperty tax bills already.
Purchasing says some of our contracts say we must pay and some do not. They will give us a list so we know what to expect.

... martin...

7m7a

11-FEB-75 0943-PST JOHNSON: 1200 baud
Distribution: HARDY
Received at: 11-FEB-75 09:43:37

7m8

rita is handling it...will have more final info this afternoo n. shez had trouble getting aa hold of the sales people...but whold nice typing should have it taken care of today

7m8a

more messages on network performance

11-FEB-75 0938-PST JOHNSON:

Distribution: HARDY

Received at: 11-FEB-75 09:38:42

7m9

the adm guys will come this aft or tomorrow morning.

7m9a

11-FEB-75 0929-PST HARDY: Terminal connection after March 1.

Distribution: NORTON, WATSON, ENGELBART, hardy

Received at: 11-FEB-75 09:29:36

7m10

Watson informs me that they will need to operate an experimental PDP-11 system very soon. Although we now have both 11s and IMP side IMP interfaces, we are still waiting for a DEC PDP-11 side IMP interface, also software, for the second PDP-11. The DEC interface is expected mid Feb. Watson? Knows when for the software. Some alternative to provide an experimental 11 for Dev and terminal access for Appl use are:

7m10a

1) Connect the experimental 11 to the Net via the Terminal access 11 TTY port.

2) When experimenting, use the AI PDP-10 and Telnet for terminal access. (alright with AI).

3) Share machine use: Hourly or daily? or when experiment use for terminal access at own risk.

4) Buy a cheap (AI copy) 11 interface for experimental 11, and use AI software already developed. \$800?

5) Install more modems to Tymshare TIP; \$300 ea, 3 to 4 wks to install.

6) use 300 baud dial-up when experimenting.

7) mix of 1 to 6.

...martin..

7m10b

10-FEB-75 1008-PST HARDY: adm2 service

Distribution: JOHNSON, hardy, watson

Received at: 10-FEB-75 10:08:52

7m11

Sandy:

The two adm=2 displays on the yellow table in the Tasker console area are not working. They have keyboard troubles.

Would you please call the service rep and ask them to repair. Request they give you a date when they will come.

Thanks

...martin..

7m11a

9-FEB-75 1050-PST GEOFF:

Distribution: PETERS, hardy

Received at: 9-FEB-75 10:50:21

7m12

more messages on network performance

IF ANY ONE BITCHES THAT I CAME IN LATE TODAY, IT IS BECAUSE I WAS HERE TILL 5:30 AM OR SO HELPING GETTING THE SYSTEM BACK IN SHAPE... I THEN LEFT TO GO HOME TO GET SOE SLEEP, AND JUST GOT BACK,

7m12a

I DID HOWEVER LEAVE A NOTE ON THE CONSOLE THAT SAID TO CALL ME (WAKE ME) IF SOMETHING DID HAPPEN AND I WAS NEEDED.

7m12b

IT SEEMS THT YOUR DRUM US BROKEN AGAIN, AS YOU ARE STILL SWAPING ON THE DISK...

[GEOFF]

7m12c

6-FEB-75 1539-PST HARDY: PDP-11 Network Checkout.
Distribution: WATSON, NORTON, ENGELBART, hardy, irby, victor, ehardt
Received at: 6-FEB-75 15:39:16

7m13

Yesterday we connected the 11 to the Net using one of the AI ports. The IMP interface seems to work (the diagnostics show no errors when looping back through the Net). However, we have not loaded ELF yet or tried Lineprocessors. Ken tells me that we will be ready to test next week,
...martin..

7m13a

6-FEB-75 1524-PST HARDY: IMP Side IMP Interfaces
Distribution: WATSON, NORTON, ENGELBART, IRBY, EHARDT, VICTOR, hardy
Received at: 6-FEB-75 15:24:52

7m14

NCC has informed us that they have scheduled to install our (2) IMP side IMP interfaces for our PDP-11s this coming Monday the 10th,
...martin..

7m14a

6-FEB-75 1514-PST HARDY: Data Media Displays
Distribution: JOHNSON, hardy
Received at: 6-FEB-75 15:14:53

7m15

As you know we recently recieved eight Data Media displays -out of the 13 or so we have on order. PBe sure to log their serial numbers in the book. I will give you charge numbers later.
..martin..

7m15a

30-JAN-75 1733-PST HARDY: Display orders

more messages on network performance

Distribution: JOHNSON, hardy
Received at: 30-JAN-75 17:33:56 7m16

Sandy:
A few days ago I put in your in basket two Purchase Request that need typing. These requests are really important; if we do not get them placed soon we will not have enough displays for us come March 1 when our Ten goes away. I think this should be number 1 priority until we get them out.,
..martin.,

7m16a

30-JAN-75 1442-PST JOHNSON: me
Distribution: HARDY, LIEBERMAN
Received at: 30-JAN-75 14:42:51 7m17

i'm just getting out for lunch it's been so fucking busy..so probably (read definitely) not coming back...love, ms. m. rob, i'll try again on yer stuff tomorrow, afternoon, timecards in a.m. sorry sometimes there just ain't enuf time.,,

7m17a

29-JAN-75 1656-PST JOHNSON:
Distribution: HARDY
Received at: 29-JAN-75 16:56:33 7m18

i tried to get more than an elog for two hours...to finish the last 20 characters of your file and couldnt. will do it first thing tomorrow. --sandy...unless you cant wait then copy it from me its called "marty"

7m18a

29-JAN-75 1357-PST HARDY: Office Equipment
Distribution: JOHNSON, hardy
Received at: 29-JAN-75 13:57:38 7m19

Sandy:
Joe Ehardt needs a four high file cabinet and Jake Feinler needs a two door tall metal cabinet, can you see if SRI surplus have, if not order, Durk sort of know the procedure if you need help,
..martin.,

7m19a

29-JAN-75 0837-PST HARDY: Geoff
Distribution: LYNCH AT SRI-AI, hardy
Received at: 29-JAN-75 08:37:08 7m20

Dan:
I thought you might agree, I don't mind if he does work for you (free) until our 10 goes away however he must give

more messages on network performance

priority to us and either be in our console area or machine room most of the time.

I have mentioned this to him before and will again and it would be very helpful if you would also. thanks -- matyin, P.S.

Lineprocessors as a hardware device, and in concept, do not suck, however programmers do live in their own world, sometimes without windows and the warm Sun... bye for now this time i will spell my name correct.. martin..

7m20a

28-JAN-75 1611-PST LYNCH at SRI-AI; Geoff
Distribution: HARDY AT ARC
Received at: 28-JAN-75 17:06:22

7m21

Martin,

I agree completely (would any other position be defensible?) that Geoff should home out in your territory. He has been living in my machine room and I thought he had set up links to all your system terminals and sorta watched them like a "war room" attendant. I supposee that I should blast him a bit on this matter and you should do the same. As for paying for his services, I am warming Raphael up to that one and suppose that your gentle nudge will cause me to lay it on the table. I was hoping to get a free ride till your 10 wwent to SCI...

Dan

PS. line processors eat it, you guys forget that the rest of the world has to type cr-lf and tha all the software does wraparound with ** at the fron of every line...

7m21a

28-JAN-75 1631-PST HARDY: Joe's Move
Distribution: JOHNSON, hardy, ehardt
Received at: 28-JAN-75 16:31:23

7m22

Sandy:

Joe Ehardt is transferring into our group to help with NSW stuff. He will move into Adreins room who will move into the NIC room, sometime this week. Could you locate some boxes for Joe so he can pack for Rena to move.

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thanks
martin

7m22a

28-JAN-75 1558-PST HARDY: geoff's time
Distribution: LYNCH AT SRI-AI, hardy
Received at: 28-JAN-75 15:58:12

7m23

Dan:

Seems Geoff is spending most of his week-ends working on your machine. It has caused some problems for me in that he has not been available (in reach) to local users when he is suppose to. I don't mind him doing stuff for you when we have nothing, however he must be in easy reach of arc users. Perhaps he can work from in the ARC machine room? (via modem...)? Also he probably should charge some of that time to your project..

martin

7m23a

24-JAN-75 1425-PDT FEINLER: Visit from Craig Fields and Misc
Distribution: HARDY
Received at: 24-JAN-75 1431:36-PDT

7m24

Craig Fields will be at the Institute next friday for a 'general friendly visit'. Just thought I would pass on the info. Don't know time or particular occasion,

7m24a

Adrian is working on floor plan for NIC room. We will try to get moving but I have very little extra time. Really looking forward to getting a weekend away...think I am getting soggy and hard to light! See you monday or tuesday. Jake

7m24b

22-JAN-75 1513-PST JOHNSON: terminal progress
Distribution: MCLINDON AT OFFICE-1, hardy, norton
Received at: 22-JAN-75 15:13:25

7m25

connie* the fourth delta data is being shipped to you today, lineprocessor being shipped tomorrow. Martin Hardy is working on the problem you have with the one there already, thanks for your patience.

7m25a

22-JAN-75 1026-PST WATSON: ADM 2 in far end of room keyboard needs immediate attention
Distribution: HARDY
Received at: 22-JAN-75 10:26:00

7m26

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16-JAN-75 2141-PST GEOFF at SRI-AI: Planned abance,
 Distribution: HARDY AT ARC
 Received at: 16-JAN-75 21:42:18 7m27

Martin,
 I will be down in LA for the last week of Jan, for a wedding
 in the
 family, therefore I will be unable to be on guard at ARC for
 that
 weekend. 7m27a

I will however be taking a TI down there, and coming in
 through the USC-TIP, and will be keeping in touch that
 way....
 ...If that weekend is like that last weekend, (no crashes, no
 archive
 requests) it shouldn't be any problem for You, but Jeff
 suggested
 I sndmsg to you about it.
 [Geoff] 7m27b

10-JAN-75 1325-PST WATSON: Second IMP Interface for NSW
 Distribution: CARLSON AT ISI, hardy, mckenzie at bbn
 Received at: 10-JAN-75 13:25:14 7m28

Bill, in recent note from Alex he indicates that second IMP
 side interface that we need may not be available for several
 months. For us to function smoothly we must have both our
 PD 11's on the net nd operational by March 1. What if
 anything can be done about looking at priorities on various
 deliveries etc. to get delivery ooner? Thanks Dick 7m28a

10-JAN-75 1301-PST LYNCH at SRI-AI: WHERE TO PUT THE
 IMPPORTS
 Distribution: HARDY AT ARC, mckenzie at bbn
 Received at: 10-JAN-75 13:01:47 7m29

MARTIN,
 LET ALEX PUT THEM WHEREVERHE CAN THAT IS FASTEST. I
 WILL MOVE THE INDUSTRIALAUTOMATION PDP-11INTERFACE TO
 WHEREEVER
 YOU WANT ME TO. THAT WAY YOU CAN GO ON EITHER IMP,
 DAN 7m29a

10-JAN-75 1550-EST MCKENZIE at BBN-TENEX: IMP interface
 Installation
 Distribution: HARDY AT SRI-ARC, watson at sri-arc, norton
 at sri-arc, lynch at sri-ai,, hbrown at bbn, mckenzie at bbn
 Received at: 10-JAN-75 12:51:53 7m30

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Martin,
 Bandwidth if the 316 IMP is about .8 the bandwidth of the
 516 IMP.
 I don't believe you will be able to tell the difference
 during normal
 operation. Schedules are currently not settled; either one
 or
 two interfaces will probably be in the 316 by early
 February.
 If one of the two interfaces must go into the 516, THAT
 interface
 will be done in late February or early March. I can't even 7m30a
 guess about the third interface (second for NSW) at this
 time,
 although I suspect it will be several months.
 Regards,
 Alex 7m30b

9-JAN-75 1805-PST HARDY: IMP interface installation.
 Distribution: MCKENZIE AT BBN, hardy, lynch at sri-ai,
 watson, norton
 Received at: 9-JAN-75 18:05:15 7m31

Installing SRI-ARC's Distant host IMP interface in the 316
 IMP instead of the 516 is ok with us as long as the
 processing rate is similar (ie: not slower). If it is we
 first want to know how much and your thought on what that really
 means to us before agreeing. In any case we need to know
 when to expect installation.
 P.S.
 BY now you should have received Carlson's sndmsg stating
 that we will get two distant interfaces. Need to know
 installation schedule for both of these as soon as possible.
 martin HARDY@SRI-ARC 7m31a

9-JAN-75 1604-PST CARLSON at USC-ISI: IMP PORTS
 Distribution: MCKENZIE AT BBN, carlson, hardy at sri-arc,
 norton at sri-arc,, watson at sri-arc, engelbart at sri-arc
 Received at: 9-JAN-75 16:17:08 7m32

I INTEND TO HAVE ONE OF THE DISTANT HOST IMP INTERFACES
 WHICH YOU
 ARE INCLUDING IN THE PROPOSAL YOU ARE PREPARING FOR ME BE
 INSTALLED
 ON THE SRI-ARC IMP, THAT WILL MAKE A TOTAL OF TWO DISTANT
 HOST
 INTERFACES WHICH I WANT INSTALLED THERE FOR THE NSW, THE
 DISTANT

more messages on network performance

DRIVER FOR WATSON'S DEVELOPMENT PDP-11 HAS BEEN EXPEDITED. I
REALIZE
THERE ARE NO MORE DISTANT DRIVERS IN INVENTORY, SO WHAT IS
THE
EARLIEST WE CAN POSSIBLY GET THE SECOND INTERFACE OUT TO
SRI?

7m32a

THANKS,
BILL

7m32b

9-JAN-75 1038-EST MCKENZIE at BBN-TENEX: Location of new
interfaces at SRI

Distribution: HARDY AT SRI-ARC, watson at sri-arc, norton
at sri-arc, white at sri-arc,, irby at sri-arc, lynch at
sri-ai, mckenzie at bbn,, hbrown at bbn

Received at: 9-JAN-75 07:39:55

7m33

Martin,

I have already had a bit of communication with Dan Lynch
about this
topic; perhaps you should talk to him a bit also. It will
be
infinately easier, and quite a bit quicker, for us to put
the interface
for the "NSW" project, AND the interface for the "Compute
Consultant" project BOTH in the 316 IMP. We will plan to
do
this unless there is a compelling reason to use the 516 for
the
"NSW" interface. Please let me know.
Regards,
Alex

7m33a

8-JAN-75 1520-PST JOHNSON: wednesday

Distribution: HARDY

Received at: 8-JAN-75 15:20:50

7m34

sorry its taking me all day to get to the phone man etc, am
finishing moving in today, be here thursday, thanks for
understanding, --sandy,

7m34a

8-JAN-75 1236-PST HARDY: IMP Ports For SRI-ARC,

Distribution: CARLSON AT ISI, hardy, norton, watson,
engelbart

Received at: 8-JAN-75 12:36:48

7m35

...martin,, HARDY@SRI-ARC

7m35a

8-JAN-75 1224-PST HARDY: Imp Connection For SRI-ARC PDP-11,

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Distribution: MCKENZIE AT BBN-TENEX, hardy, watson, norton,
white, irby
Received at: 8-JAN-75 12:24:04 7m36

Mc Kenzie:
< HARDY, MCKIN,NLS;3, >, 8-JAN-75 12:07 MEH ;;; 7m36a

In your communique (26 DEC 74, 1621 EST) an ARPA owned IMP
distant host interface was listed as authorized by ARPA for
our NSW project use. I will be the coordinator for that
installation and would like to proceed with a schedule. 7m36b

The machine we will connect is up and has a distant Network
host
interface and we desire to connect it to the IMP as soon as
possible. 7m36c

In looking at our IMPs configurations it appears that port 3
in the 516 IMP is empty (was a VDH but is now
disconnected?). 7m36d

Can you configure port 3 of the SRI 516 IMP with a distant
host
interface for us as soon as possible? 7m36e

....martin... HARDY@SRI=ARC 7m36f

6-JAN-75 1702-PST VICTOR: tenex 133 and upcoming tenex
advisory meeting
Distribution: IRBY, WATSON, ANDREWS, NORTON, PETERS, HARDY,
HOPPER
Received at: 6-JAN-75 17:02:24 7m37

lets meet at 1pm tuesday (1/7) to discuss our 133 plans and
what we
would like to see discussed at the upcoming tenex advisory
meeting. 7m37a

2-JAN-75 1452-PST LEAVITT: Be Sure and Secure
Distribution: FEINLER, HARDY, HOPPER, IRBY, NORTON, VICTOR,
WATSON,, WHITE
Received at: 2-JAN-75 14:52:31 7m38

I have been empowered by the Division office to give each of
you the following message, I do not consider myself
responsible for, or associated with, its sentiments.
However:
Be it hereby known that in the Information science and
Engineering Division it is not necessary for each staff

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member to have a Security Guide. An updated copy of the Security Guide will be kept in Doug's office, to which each of you can refer if you have a Security or other type of emotional disorder. I repeat: if at any time you feel insecure in any way, you can refer to the Security Guide, which will be available at all times in Doug's office. End of unquote.
Jeanne L.

7m38a

2-JAN-75 0837-PST PETERS: PRINTER
Distribution: HARDY
Received at: 2-JAN-75 08:37:39

7m39

NO - REMEMBER I SAID THE NUMBER YOU GAVE ME HAD BEEN DISCONNECTED WITH NO NEW NUMBER. YOU OR MIRANDA HAVE TO GIVE ME A PHONE NUMBER FOR THE PRINTER GUYS THAT WORKS. - JEFF

7m39a

1-JAN-75 2142-PST HARDY: PRINTER
Distribution: PETERS, hardy
Received at: 1-JAN-75 21:42:51

7m40

JEFF:
DID YOU EVER SET-UP ANYTHING WITH THE PRINTER PEOPLE TO HAVE THEM REPAIR THE BAD PRINT DRUM SHAFT??
...MARTIN..

7m40a

30-DEC-74 0815-PST HARDY: LOGO JOB
Distribution: GEOFF, hardy
Received at: 30-DEC-74 08:16:00

7m41

Thanks for the info, thats what I will do next time. What happened was I was trying to log in at Office=1 and specified (connection 43) which did not connect me to Office=1 as I thought it would. The machine I got connected to would not leave go of me; "c, ?, and others would get only ILLIGAL PASSWORD responce, and I could not talk to the tip by typing @, so I had to break the connection by hanging up and calling in on another Line..
...martin...

7m41a

29-DEC-74 2205-PST GEOFF at SRI-AI: killing other jobs.
Distribution: HARDY AT ARC
Received at: 29-DEC-74 22:10:58

7m42

Hi,
sorry i wasn't around when you linked but in the future, you can logout

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a job, by doing:

@logo #

where # is the number of your job, if it is a job other than your

own you must enable first.

[Geoff]

7m42a

29-DEC-74 1953-PST HARDY: My Link To You.

Distribution: VANNOUHUYS, hardy

Received at: 29-DEC-74 19:53:32

7m43

Dirk:

Perhaps you were refused because I was linked to Geoff at the time? Anyway I caught him and he was able to help with what I needed. Thanks for the attempted link back.,.

...martin..

7m43a

28-DEC-74 0930-PST VANNOUHUYS: Just Affter you linked at about 9:30 I got back tried to link to you, was refused,;try again

Distribution: HARDY

Received at: 28-DEC-74 09:30:36

7m44

26-DEC-74 2227-PST PETERS: LATE ON FRIDAY

Distribution: NORTON, HARDY, OPERATOR

Received at: 26-DEC-74 22:27:03

7m45

I'LL BE A BIT LATE FRIDAY 12/27 (10 AM) AS I HAVE MORE DENTIST

GRIEF. = JEFF

7m45a

20-DEC-74 1247-PST JOHNSON:

Distribution: HARDY

Received at: 20-DEC-74 12:47:29

7m46

hi, i finished "charges", having added a paragraph called "note",...to rfect the new changes in overhead numbers.....can i send it to journal nw...people need to be aware of this stuff.....

7m46a

17-DEC-74 1715-PST JOHNSON:

Distribution: HARDY

Received at: 17-DEC-74 17:15:32

7m47

hi, i edited the <charges > thing and sent a copy to the printers.....bon appetit,

7m47a

17-DEC-74 1109-PST ANDREWS: phone for PDP-11

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Distribution: WATSON, IRBY, VICTOR, hardy
Received at: 17-DEC-74 11:09:54

7m48

Exidently we cannot easily move one of the dataphones to the 11.
Martin suggests we get another, attached to the 11. -- takes 2 weeks. We can probably do some temp. patching in the meantime.
Don

7m48a

16-DEC-74 1148-PST OCHOA: FILE REQUEST
Distribution: HARDY
Received at: 16-DEC-74 11:48:21

7m49

FILE REQUEST <LJOURNAL>11824,NLS;1 NOW ONLINE

7m49a

DCE 26-DEC-74 18:36 24837
SPI-ARC CY74 Accomplishment List
Location: (GJOURNAL, 24837, 1:w)
*****Note: [INFO-ONLY] *****

7m50

Comments: A list requested by Licklider of all PI's -- contributed to by Watson, Norton and Feinler, and assembled/edited by Engelbart. The original was Output to Sequential File with VSPECS 'wynhA', and the resulting sequential file SNDMSG'd to Licklider at ISI, with alternate copies at OFFICE-1 and BBN-TENEX. Considerable trouble getting through to ISI, don't know if succeeded.

7m50a

11-DEC-74 1057-PST JOHNSON:
Distribution: HARDY
Received at: 11-DEC-74 10:57:27

7m51

ok, lieberman leavin here 9am tomorrow. so good to bring it this eve. worldcom has promised to bring up some printheads tomorrow....

7m51a

11-DEC-74 0912-PST HARDY: Terminal I Have at Home, and Status of P.O and Stuff.
Distribution: JOHNSON, hardy
Received at: 11-DEC-74 09:12:23

7m52

Sandy, I did not make it in last night, however i expect to make it tonight. I will bring the Exec term with me and exchange it with the TI in NIC room. I would appreciate it if you would have the Data Media P.O. and memo stuff typed up for me to sign. Thanks..

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...martin..

P.S

If the new PSR's are out, please leave a copy of all 1868 (including subs) and 3074, and 9229 with the stuff I must sign.. Thanks again..

7m52a

10-DEC-74 1605-PST JOHNSON:

Distribution: HARDY

Received at: 10-DEC-74 16:05:34

7m53

marty, please bring in that execuport, you can take the ti and coupler which is in the NIC room since Bair was using it and he's on a trip until first week in january.

7m53a

10-DEC-74 1428-PST PETERS: TIME SCHED

Distribution: HARDY

Received at: 10-DEC-74 14:28:45

7m54

I WON'T BE ABLE TO GET IN TILL 10 AM ON THURSDAY, AS I HAVE TO TAKE OUR CAT IN FOR DISTEMPER SHOT. PLEASE TELL ME BY TOMORROW (WED) IF THIS IS A PROBLEM. - JEFF

7m54a

9-DEC-74 1434-PST PETERS: DISC SPACE FOR HOLSWORTH

Distribution: HARDY

Received at: 9-DEC-74 14:34:21

7m55

I HAVE LOADED THE SOURCE FILES FOR THE 132 MONITOR IN TO HOLSWORTH'S DIRECTORY. BUT THIS HAS USED UP ALL OF HIS DISC SPACE AND HE NEEDS PROBABLY 500 PAGES MORE FOR REL FILES AND FINISHED MONITORS. SEND ME A MESSAGE IF AND WHEN I CAN DO THIS. - JEFF

7m55a

8-DEC-74 1228-PST GEOFF: BANANARD

Distribution: NORTON, hardy, peters, bair, geoff

Received at: 8-DEC-74 12:28:38

7m56

JIM

I ASKED JEFF PETERS THE OTHER DAY BEFORE I PUT IT IN THE SYSTEM, AND HE TOLD ME A WAS WELCOME TO BRING IT OVER AND TO SEND OUT A MESSAGE TO THE USERS. ORIGINALY I THOUGHT THAT THERE HAD TO BE A SAIL SEGEMENT, BUT WAS WRONG. SO I DIDN'T NEED TO CREATE A <SAIL> FOR THE SEG, SO

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WENT AHEAD ON INSTALATION THIS WEEKEND, SINCE JEFF SAID OK ON FRIDAY, OTHERWISE, I WOULDN'T HAVE PUT IT IN W/O CHECKING 1ST [GEOFF]

7m56a

8-DEC-74 1152-PST NORTON: bananard
Distribution: HARDY, norton, peters, bair, geoff
Received at: 8-DEC-74 11:52:56

7m57

although bananard looks interesting as an upgrade of rd, it was NOT brought up at sri-arc in the manner we must use when we introduce new subsystems to our users...even at ARC. Applications staff (as well as Development, I think) must review all such subsystems before release to users. This may not have been made clear enough to all ARCers, perhaps, but sure is the way we must go.

Geoff: I'm sure you were acting with the best of intentions in brining up ban...rd perhaps at someone else's request....BUT....

Can you make me a hardcopy of the manual and leave it on my chair...if you can't, ill do so when i can. In the meantime, please remove bananard and the login message until we can look more closely at it, THANKS

Jim Norton

7m57a

4-DEC-74 1000-PST BEACH: SHIFT SWICH
Distribution: HARDY
Received at: 4-DEC-74 10:00:49

7m58

I AGREE THAT ARC COULD HAVE A MORE ATENTIVE DAY OPERATOR THAN IT DOSE NOW. PLEASE FORGIVE ME IF I MADE IT DIFFICULT FOR YOU TO TELL ME WHAT YOU WERE GOING TO DO AT THE END OF THE MONTH, THAT SWICH THOUGH, IF YOU WOULD LIKE CAN BE ANYTIME, THIS TIME OF YEAR I CAN USE EXTRA BUCKS. MARK

7m58a

3-DEC-74 1533-PST LEAVITT: you won't believe it, but...
Distribution: KELLEY, LEHTMAN, HARDY, BONDURANT, PETERS, KEENEY, VANNOUHUYS,, IRBY, WATSON, ANDREWS, ADRIAN, feinler
Received at: 3-DEC-74 15:33:25

7m59

No, indeed, you won't believe it. It's certainly been a long time since Mil Jernigan left, and Mark and I got some \$\$ together and bought a wool plaid shawl for Mil as a going away present. Since I despise going around and asking people for gift money, I have put off asking you until now. I would have forgotten it long ago if it was my own money, but it wasn't. Please could y'all give me fifty cents? Thanks awfully, as a certain computing compatriot of ours from LA would say...

7m59a

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3-DEC-74 1234-PST JOHNSON:

Distribution: HARDY

Received at: 3-DEC-74 12:34:44

7m60

lieberman needs execuport for his trip...Can You return it? 7m60a

30-NOV-74 1056-PST HARDY: computer fix, and geoffs haours and how to get a hold of him on weekends.

Distribution: ENGELBART, hardy

Received at: 30-NOV-74 10:56:43

7m61

Doug:

Geoff regular hours are 9 to 7 Sat and Sun. Much of his time is spent in and around the AI machine. However he normally logs in on our machine from the AI so people can link to him when help is needed. He also carries our beeper SRI ext 2460 unit 14 which he can be reached on most any time.

...martin..

P.S.

Geoff fixed the system problem this morrning. It was a locked journal directory..

7m61a

21-NOV-74 0952-PST HARDY: vacation

Distribution: NORTON, hardy

Received at: 21-NOV-74 09:52:44

7m62

Jim:

I plan on taking the rest of the day off and tommorrow (fri). I will take a term home and will read and answer mail in moring. Please feel free to call. I am adding a addition to my house and trying to get form work done..

...martin...

7m62a

21-NOV-74 0935-PST HARDY: NLS file : <norton>charges

Distribution: NORTON, hardy

Received at: 21-NOV-74 09:35:44

7m63

Jim:

tried to copy CHARGES from your file and get "SYS FILE ERROR". Jeff looked at the file and it verified but I still can't copy it. (I am assuming it is the file picturing project account numbers. The hard copy you passed back to me looked fine, except I would like to make some minor edits before sending...

...martin...

7m63a

20-NOV-74 1244-PST WATSON: Line processors for Office us

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Distribution: HARDY
Received at: 20-NOV-74 12:44:50 7m64

Martin, as we set up for line processors all over the place I just want to double check to be sure they can be run from the outlets in our offices. Thanks Dick 7m64a

13-NOV-74 1216-PST WATSON: IMLAC Setup
Distribution: HARDY, NORTON
Received at: 13-NOV-74 12:16:31 7m65

I strongly object to setting up the Imlac in the main work area because of its noise the over crowding in that area already etc. Dick 7m65a

13-NOV-74 1010-PST HARDY: Someplace to setup our Imlac and another Lineprocessor for debugging.
Distribution: NORTON, WATSON, ENGELBART, hardy, bair, feinler
Received at: 13-NOV-74 10:10:30 7m66

< HARDY, SPACE,NLS;5, >, 13-NOV-74 10:03 MEH ;;;; 7m66a

We immediately need some space to setup the Imlac to test some suspected NLS-8 bugs RADC is experiencing with their Imlacs. Also, to setup a second Lineprocessor to test the new circuit board we are developing to allow inputting DEX and connecting a graphics display. Also, in about 6 weeks, the Graphic display will arrive and we will need some space to work with it. 7m66b

My suggestion is that we temporarily use the area next to the Office-1 Lineprocessor workstation in the console area near Jenne's office. This will crowd the console area a bit but we expect the Lineprocessor card debugging to last no more than one week; no guess about Imlac debugging. Anyhow, in January after the TEN goes away we can move this equipment to the computer room if we desire. 7m66c

This suggestion is a switch from my original request to use the NIC

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room because it seems that if we setup Workstations in that area it should be Workstations which training could use because it is a separate room large enough for group training sessions.

7m66d

OK??

...martin..

7m66e

13-NOV-74 1630-PST LYNCH at SRI-AI: I HIT "Z TOO SOON
Distribution: KAHN AT ISI, hardy at arc, craighill at aic
Received at: 13-NOV-74 16:31:21

7m67

13-NOV-74 15:34:22-PST,2934;000000000000
Net mail from site SRI-AI rcvd at 13-NOV-74 15:34:19
Date: 13 NOV 1974 1534-PST
From: LYNCH at SRI-AI
Subject: MORE IMP PORTS FOR SRI
To: FIELDS at ISI
cc: CARLSON at ISI, LICKLIDER at ISI, RUSSELL at ISI,
cc: STUBBS at ISI, RAPHAEL at AIC, NILSSON at AIC, HART at AIC,
cc: ENGELBART at ARC, WATSON at ARC, NORTON at ARC,
cc: FRALICK at AIC, PEARCE at ISI

7m67a

Craig,
The current configuration of things on the IMPS at SRI is as follows:

7m67b

516 IMP (# 2 decimal)

7m67c

0) ARC PDP-10 (local)
1) AI PDP-10 (distant)
2) IA PDP-11 (distant)
3) SU-DSL PDP-11 (very distant host)

7m67d

316 IMP (# 51 decimal)

7m67e

0) NSC PDP-11 (distant)
1) empty
2) empty
3) empty

7m67f

This fall we have 3 more PDP-11's which will all be distant hosts due to the uncertainty of being able to place the host computers within 30 feet of the IMPS. Therefore, as soon as the remaining ports on the 316 IMP can be fitted

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with distant host interfaces, we would like to see the following as the configuration:

7m67g

516 IMP

7m67h

- 0) ARC PDP-10 until it goes to SCI (local)
- 1) NSW Development ARC PDP-11 (distant)
- 2) ARC PDP-11 (distant) Network access
- 3) SU-DSL PDP-11 (vdh)

7m67i

316 IMP

7m67j

- 0) NSC PDP-11 (distant)
- 1) AI PDP-10 (distant)
- 2) IA PDP-11 (distant)
- 3) CBC PDP-11 (distant)

7m67k

The new hosts that are generating the requirement for more distant

host interfaces to be placed on the 316 IMP are as follows:

7m67l

NSW PDP-11 Development Machine; Dick Watson (PI); Bill Carlson (ARPA)
 ARC Net Access (NSW,OFFICE=N); Jim Norton (PI); Stubbs, Carlson, Russell, Fields
 CBC PDP-11 Workstation Controller; Nils Nilsson (PI); Licklider (ARPA)

7m67m

All the above machines need immediate access. Additionally, in March 1975

there will be another PDP-11 to hook up to the IMP. This is the Packet

Radio host that Stan Fralick is developing for Bob Kahn.

This last host

will have to be put on the 516 IMP and will be a distant

host. So, sometime

after the PDP-10 from ARC goes away or the SU-DSL host gets moved up to

the AI Lab at Stanford University, we will need one of the host slots

converted to a distant host,

7m67n

For now, though, we need to have ARPA request that BBN come to SRI and

install three more distant host interfaces on the 316 IMP,

7m67o

As for provisions for the cost of doing the installation, we at SRI

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all have the understanding that each project was to pay for its own PDP-11 network interface which includes a cable up to the back of the IMP. Those costs have been provided for in each contract. The cost of making the IMP capable of receiving signals from the PDP-11s was assumed by SRI to be a part of the overall IMP, which cost is currently being borne by ARPA directly. Hence, no provisions in the contracts were made.

7m67p

The technical urgency of the modifications to the IMP can be met quickly by directing BBN to do so.

7m67q

I hope this clearly delineates the needs.
Regards,
Dan Lynch

7m67r

7-NOV-74 0929-PST WATSON: the printer flap
Distribution: KEENEY, NORTON, PETERS, HARDY
Received at: 7-NOV-74 09:29:39

7m68

marcia, now that I have your attention.....sorry for the sharp tone in my note, we were under considerable pressure to get stuff printed and I felt pretty irritated about the printer out of adjustment. I really do not care who the last person at the printer was, but do feel that if the repair man was here it is probably worth the operator doubling checking things. The high number of crashes and other operational problems have also left their mark on my impressions that someplace on the operations side some details are not being paid attention to and that also came out in this case as part of my irritation. The total level was clearly beyond the problem, my apologies. Dick

7m68a

6-NOV-74 2153-PST KEENEY: MORE THOUGHTS ON THE PRINTER
Distribution: WATSON, HARDY, NORTON, OCHOA, PETERS
Received at: 6-NOV-74 21:53:23

7m69

WHILE I FIX THE PRINTER IF I SEE THAT IT IS JAMMED OR IF SOMEONE TELLS ME IT IS MESSED UP, I (AND THE OTHER OPERATORS) ARE NOT THE ONLY PEOPLE WHO FIX (OR TRY TO) IT. SOMETIMES OTHER PEOPLE IN

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THE GROUP HAVE BEEN KNOW TO WALK IN AND DO A REAL JOB ON IT!
 INDEED LAST NIGHT'S PROBLEM COULD HAVE BEEN CAUSED BY
 SOMEONE
 BESIDES AN OPERATOR! I RESENT THE SOMEWHAT PAT ASSUMPTION
 THAT IT WAS DEFINITELY THE CARELESSNESS OF AN OPERATOR!!
 I KNOW THAT BOTH RENE AND I ARE QUITE CAREFUL WITH THE
 PRINTER
 (AND MARK WASN'T HERE), I, FRANKLY, THINK YOU MIGHT DO WELL
 TO SCOLD ARC IN GENERAL FOR SAID "CARELESSNESS".
 MARCIA

7m69a

6-NOV-74 2127-PST KEENEY: PRINTER ALIGNMENT
 Distribution: WATSON, NORTON, HARDY
 Received at: 6-NOV-74 21:27:57

7m70

I SUPPOSE THAT ONE OF US MAY HAVE MISALIGNED THE PRINTER
 ALTHOUGH
 I AM PRETTY CAREFUL ABOUT THAT -- BUT PLEASE NOTE THAT THE
 PRINTER
 FIXING MAN WAS OUT HERE SOMETIME LAST NIGHT. IT MAY VERY
 WELL HAVE
 BEEN HIM!!!
 MARCIA

7m70a

6-NOV-74 0818-PST WATSON: Operator Care
 Distribution: OPERATOR, NORTON, HARDY
 Received at: 6-NOV-74 08:18:25

7m71

Last night after the printer was down and a lot of hard work
 during the day by people writing much printing was left in
 the printer queue to print our overnight. Somebody
 carelessly aleigned the printer paper and we had to start
 from scratch this morning. Operators are not so busy that
 they do not need to pay attention to important small
 details. Appreciate Greater care in the future. Dick

7m71a

1-NOV-74 2040-PDT VANNOUHUYS: The terminal that was in the
 hall
 Distribution: HARDY, peters, leavitt
 Received at: 1-NOV-74 20:40:34

7m72

I was planing to take Jeannie's terminal home for the
 weekend, but when I saw it hooked up to the 3-phoenix guy
 just now, I took the one in the hall instead. Hope this does
 not screw up anything

7m72a

30-OCT-74 1930-PDT PETERS: BE A LITTLE LATE TOMORROW
 Distribution: HARDY
 Received at: 30-OCT-74 19:30:39

7m73

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I'VE GOT ANOTHER (THE LAST I THINK!) DENTIST APPOINTMENT
TOMORROW
(THURS) TO HAVE A FINISHED CROWN INSTALLED. APPOINTMENT IS
AT 8 AM
SO WOULD HOPE TO BE IN BY 9:30 OR SO. - JEFF

7m73a

30-OCT-74 1724-PDT KEENEY: HEADPHONES
Distribution: BEACH, OCHOA, VICTOR, HARDY, BONDURANT
Received at: 30-OCT-74 17:24:17

7m74

DOES ANYBODY KNOW WHERE THE HEADPHONES WENT?? THERE USED TO
BE 2
PAIRS IN HERE -- NOW NONE! AND THE NOISE IS DRIVING ME
CRAZY IN HERE!
MARCIA

7m74a

29-OCT-74 1421-PDT HOPPER: Monitor work on Sunday
Distribution: PETERS, VICTOR, hardy
Received at: 29-OCT-74 14:21:48

7m75

This is to complain about your taking the system Sunday
instead of
Saturday. I generally observe more people working Sunday
than Saturday. In my case, I can work at Office-1 if ARC is
down
Saturday, but not if it goes down Sunday since Office-1 is
also
down.

7m75a

21-OCT-74 1644-PDT PETERS: IN LATE TUESDAY
Distribution: HARDY
Received at: 21-OCT-74 16:44:04

7m76

WE ARE DOING LATE MONITOR WORK AGAIN TONIGHT (MONDAY), SO I
WILL
BE IN LATE ON TUESDAY. ESPECIALLY SINCE I HAVE ANOTHER
DENTIST
APPOINTMENT TUESDAY MORNING ALSO, SO MAY BE IN AS LATE AS
NOON. -
JEFF

7m76a

17-OCT-74 0917-PDT HARDY: larger group allocation for IBM
(assoc with SCI)
Distribution: NORTON, hardy, peters
Received at: 17-OCT-74 09:17:27

7m77

Jim:
Bob Down at SCI wants to increase his group allocation from
1 to 3. They are Fortran hackers. He claims only one will

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run Fortran, the others will be working on assembly lang
stuff. Do you want to talk to him or what should I tell him
(should he request from ARPA? or what?).
,,,martin,,

7m77a

14-OCT-74 2147-PDT PETERS: REMEMBER
Distribution: HARDY
Received at: 14-OCT-74 21:47:50

7m78

REMEMBER THAT I'M WORKING LATE TONIGHT ON THE MONITOR
(MONDAY)
AND PROBABLY WON'T BE IN TILL 12 OR 1 TOMMORROW (TUESDAY) -
JEFF

7m78a

11-OCT-74 1044-PDT PETERS: MONITOR WORK
Distribution: NORTON, HARDY
Received at: 11-OCT-74 10:44:17

7m79

KEN AND I WILL BE TAKING THE SYSTEM DOWN ON MONDAY NIGHT
(10/14)
FROM 9 PM TILL 3 AM FOR WORK ON TENEX 132. MARTIN HAS
EXPRESSED HIS
FEELING THAT IT WOULD BE BEST IF WE DID THIS ON SATURDAY,
BUT
KEN WANTS TO WORK MONDAY NIGHT, AND SINCE I NEED HIS
EXPERTISE I
THINK WE SHOULD TAILOR THE SCHEDULING TO HIS INCLINATION IN
THIS
CASE. - JEFF

7m79a

9-OCT-74 0955-PDT HARDY: Jake Ratliff and TV repairs
Distribution: ENGELBART, NORTON, WATSON, hardy
Received at: 9-OCT-74 09:55:03

7m80

Jake will be giving us a few days a week help until we get
out of the woods with TV repairs.
He has been working with DD Group (milt Adams) for the past
several months. They now intend to transfer him to their
group permanately. So he will most likely become
unavailable to us in the near future.

7m80a

6-OCT-74 2232-PDI PETERS: DENTIST
Distribution: HARDY, beach
Received at: 6-OCT-74 22:32:07

7m81

I HAVE A DENTIST APPOINTMENT EARLY TOMORROW (MONDAY OCT. 7)
AND SO WON'T
BE ABLE TO MAKE IT IN TILL 10:00 OR A LITTLE AFTER - HAVING
A CROWN

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INSTALLED, THOUGHT I'D GIVE YOU THIS WARNING SINCE I FORGOT
TO ON
FRIDAY AND THERE IS THE DEMO TOMORROW (MONDAY). - JEFF

7m81a

5-OCT-74 1201-PDT WATSON: orders for terminals and pdp 11
peripherals

Distribution: HARDY
Received at: 5-OCT-74 12:01:18

7m82

Just a reminder to ask Sandy to get the papers needed to get
us in the queue for terminals keyboards etc. Please check
with Tom Little on PDP 11 order and have him followup on
Univ of Ill at least once a week. Thnaks Dick

7m82a

5-OCT-74 0924-PDT HARDY: second imp
Distribution: NORTON, ENGELBART, WATSON, hardy, peters
Received at: 5-OCT-74 09:24:29

7m83

The installation of the second IMP is complete. It
essentially required no down time (5, 10 min is all) of the
other IMP. Both machines have been strapped to operate at
230KB but will continue to operate at 50KB until the phone
lines are expanded.

7m83a

5-OCT-74 0859-PDT HARDY: washington demo
Distribution: GEOFF, hardy, peters
Received at: 5-OCT-74 08:59:59

7m84

Geoff:
This monday (the 7th) some of our development people will be
giving a very important demo at SRI-WASH using the
Lineprocessor workstation installed there. They will start
praticing tomorrow (SUN) inconjuntion with a person here at
ARC. The word I have today is that they are planing to
pratice about 8:00 wash time (5:00 our time). If you could
plan your stay here Sunday to assist them if needed I would
appreciate it. The persons in Wash will be Elizabeth
Michael, Harvey Lehtman, and Dick Wa
on. The person here will be Charles Irby.
thanks

..martin.. (if you have any questions call me at home
today, I will be out of town tomorrow)

7m84a

5-OCT-74 0840-PDT HARDY: your schedule
Distribution: GEOFF, hardy, peters
Received at: 5-OCT-74 08:40:35

7m85

Geoff:
I would like to get together with you sometime next week to

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work out your time schedule. We need to do this so we can inform user when they can expect operator help over the week-ends.

7m85a

3-OCT-74 0949-PDT NORTON: sandy and schedule
Distribution: HARDY, norton
Received at: 3-OCT-74 09:49:49

7m86

2-OCT-74 1707-PDT HARDY: Installing second IMP
Distribution: ENGELBART, WATSON, NORTON, hardy, peters
Received at: 2-OCT-74 17:07:15

7m87

As you know we are getting a second IMP here at SRI. This IMP has arrived and we now must make up a installation schedule. To install it will require taking the IMP we already have down from time to time. My plan is to let the installation people (Honeywell and BBN) take it down during our normal PM (PDP-10) times and if need be on Saturdays. I will let Jeff handle this scheduling and informing users. If you are not in agreement with this please let me know so I can work out some other schedule more suiting.

...martin..

7m87a

Sorry I should have told you that she came in Saturday and worked out the accounting changes for us...because I was in a bind and no other time, she planned to take some time off Thursday....good god thats today..i fouled you up I can see now...I should have told you...(sorry again). No I dont expect her to work freaky schedules..just that one time to help out. I guess from your message she isnt in today. any day either she or Joan or Jeanne arent in, they will have to share the workload

there's no other way to run an office with 3 girls, can you live the rest of the day that way, if I'd done a better job of communicating, it might have gone smoothly...but I didnt give good warning for some other time I make special arrangements.. Jim

7m88

24-SEP-74 1730-PDT VANNOUHUYS: Printer paper
Distribution: OPERATOR, hardy
Received at: 24-SEP-74 17:30:13

7m89

we are out,

7m89a

27-SEP-74 1848-PDT GEOFF: Sat and Sun.
Distribution: HARDY
Received at: 27-SEP-74 18:48:16

7m90

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I haven't gotten any word back from Jeff yet this week, it seems he must be on vacation or something. So unless I hear other wise, I'll just come in anyway, and baby sit the 10, unless you want me to do anything else.

7m90a

[Geoff]

7m90b

P,S> When do I get my door key, and card, etc?

7m90c

3-OCT-74 0623-PDT NORTON: second imp
Distribution: HARDY, norton
Received at: 3-OCT-74 06:23:17

7m91

ok for them to take our imp off hours with warnings, I want to see the schedule though. Jjim

7m91a

2-OCT-74 1707-PDT HARDY: Installing second IMP
Distribution: ENGELBART, WATSON, NORTON, hardy, peters
Received at: 2-OCT-74 17:07:15

7m92

As you know we are getting a second IMP here at SRI. This IMP has arrived and we now must make up a installation schedule. To install it will require taking the IMP we already have down from time to time. My plan is to let the installation people (Honeywell and BBN) take it down during our normal PM (PDP-10) times and if need be on Saturdays. I will let Jeff handle this scheduling and informing users. If you are not in agreement with this please let me know so I can work out some othe schedule more suiting.
...martin..

7m92a

1-OCT-74 1857-PDT KEENEY: A MYRIAD OF COMMENTS
Distribution: HARDY
Received at: 1-OCT-74 18:57:43

7m93

i thought i might express myself a bit better on "paper" than in person about your request for my doing some nls input, forgive me if i am over-reacting (and i may very well be!), but these were some of the things that went through my head,
one of the main reasons i took the operator job was to get away from secretarial-clerical-typing types of work. i'm just not suited either typing speed-wise or temperament-wise to that sort of thing,
but i further object to the request in that, as an operator, i feel it just is not within the scope of my duties to do

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clerical things like typing, certainly it has never been requested of jeff (in his operator days), mark beach, or rene,
 now i am certainly happy to do any number of operator-oriented tasks - from restoring files to fixing the identfile to modifying someone's directory, etc. but i really rebel against the prospect of being clerical support! it just ain't my bag.
 i also don't have a whole lot of free time on my hands, i might even venture to say that, at this point, i have more tasks assigned to me than either mark or rene, besides the usual system monitoring, system restoring, archive retrievals, etc., i am also responsible for giving new people idents, deleting all occurrences of obsolete idents from the idents, master file, running the catalog, transferring dca files from office one to arc each night, printing out or listing various files that are o lengthy to do in the day, doing this cassette jazz in the night for engelbart, etc!! if you want to pick an operator with spare time, pick mark or rene! but, as i said, i really don't think typing is within the realm of the operator job.
 anyway, i'm sure i am making a much bigger deal out of this than is necessary, but please understand how strongly i feel about this.
 marcia

7m93a

1-OCT-74 0131-PDI NORTON: Junk Around
 Distribution: HARDY, norton, lehtman, watson
 Received at: 1-OCT-74 01:31:39

7m94

Hmm Harvey is quite right, It's been getting messy,,perhaps dangeous, I asked Mark to get the cabinets out of the console area, but Harvey had pointed out much more that looks bad, etc, Martin,,,can you get some help to clean it up,,you now, our usual 2 year stint? Thanks Jim

7m94a

30-SEP-74 0913-PDI LEHTMAN: Crud in work areas
 Distribution: NORTON, WATSON, HARDY
 Received at: 30-SEP-74 09:13:30

7m95

Why is the console area being used for a store room for random electronic gear and unused terminals? Besides being a pain to work around (in the case of Hazeltines on work tables next to other consoles), it is probably offensive to visitors as well as to other ARC staff.

7m95a

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Also while I'm bitching about it, I almost tripped twice on the loose wire coming out of susan Lee's office. Can't something be done about that?

7m95b

And what about the two storage cabinets and boxes which have found their way into the work area? And the spare computers buried beneath junk in the former PSO room (IMLAC and NOVA)? These unused resources could prove embarassing if the wrong visitors came by.

7m95c

HGL

7m95d

29-SEP-74 2052-PDT NORTON: geoff again!!

Distribution: HARDY, norton

Received at: 29-SEP-74 20:52:54

7m96

I note that he has 5000 pages allocation. What the fuck is going on? Love Jim

7m96a

28-SEP-74 1819-PDT NORTON: geoff

Distribution: HARDY, norton

Received at: 28-SEP-74 18:19:27

7m97

martin i have a feeling that geoff the oer is using our system in ways i dont approve of he is supposed to use it ONLY to keep it up NOT to go to other sites,,,to create files at office-1,, (in the now-defunct guest acct),,,and god knows what else,,,,hmm can you find out what's going on hope im wrong but sure feels funny,,,, his use of rsexec may be part of it.....

7m97a

SCI

7n

29-JAN-75 1105-PST HARDY: Drum papers for SCI

Distribution: JOHNSON, hardy

Received at: 29-JAN-75 11:05:50

7n1

Sandy:

Yesterday the temp gal copied some papers for that we must send to Bob Burns at SCI. I put them in you in basket stapled together with bobs name on them.

His address is: BOB Burns, 1801 Page Mill Rd, P.A., 94304

Please send, thanks,, martin,,

7n1a

13-DEC-74 1304-EST BTHOMAS at BBN-TENEXA: BBN CONTACTS FOR TENEX PREPARATION FOR SYSTEMS CONTROL

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Distribution: HOLSWORTH AT SRI-ARC, hardy at arc, banin at arc

Received at: 13-DEC-74 10:06:01

7n2

YOU SHOULD CONTACT EITHER BOB CLEMENTS OR BILL PLUMMER REGARDING GENERATION OF A VERSION OF 1,32 FOR YOUR INSTALLATION'S CONFIGURATION,

7n2a

BOB THOMAS

7n2b

11-DEC-74 1209-PST HOLSWORTH: Preparation for new Tenex site, Distribution: MCKENZIE AT BBN-TENEX, BTHOMAS AT BBN-TENEX, hardy, banin

Received at: 11-DEC-74 12:09:04

7n3

As part of an ARPA contract, Systems Control Inc, of Palo Alto will be obtaining the PDP-10 from SRI-ARC sometime around January 1975,

7n3a

Our desire is to build a Tenex 1,32 system suitable for our installation but tested at the SRI site prior to moving the machine,

7n3b

I'd be most grateful if you could tell me
 (1) who should I be contacting at BBN,
 and (2) who can help us with the mechanics of building and testing a system,

7n3c

MIT-S

7o

6-FEB-75 0956-PST JOHNSON: techtran arrival
 Distribution: SHEPPARD AT OFFICE-1, hardy
 Received at: 6-FEB-75 09:56:34

7o1

thank you for your patience. The TechTran is on its way,

7o1a

3-FEB-75 1116-PST JOHNSON at OFFICE-1: Delta Data Droopiness
 Distribution: SHEPPARD, HARDY AT SRI-ARC
 Received at: 3-FEB-75 11:21:19

7o2

sorry you're having such problems with those d,d, dowdies, I'll call our purchasing and see what suggestions they have,,,will let u know what i discover,,, sandy

7o2a

31-JAN-75 1427-PST JOHNSON: charge for maintenance of delta data

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Distribution: SHEPPARD AT OFFICE-1, hardy
Received at: 31-JAN-75 14:27:46

703

all u have to do is tell delta data that the terminal is leased with a maintenance clause and the purchase order number is through SRI, #B96121, the cost of maintenance is already paid,

703a

30-JAN-75 1756-PST HARDY: DEX Recorder
Distribution: SHEPPARD AT OFFICE-1, hardy, leavitt, johnson, norton, bair
Received at: 30-JAN-75 17:56:40

704

Bob:
Jeannie tells me that we are very close to finishing the documentation for the Techtran machines. She expects to have it completed by Fri, 31. If this really happens we will send you a Techtran like we originally planned, instead of an ICP. In either case you will get something by end of next week.
martin..

704a

30-JAN-75 1525-PST HARDY: DEX recorder
Distribution: JOHNSON, hardy, leavitt, norton, sheppard at office-1, bair
Received at: 30-JAN-75 15:25:23

705

Sandy:
Bob Sheppard (MIT-S) needs a cassette recorder right away, as soon as we can send him one. Since we have not gotten everything together for the Techtrons, would you please ask Jeannie to test the ICP cassette recorder (to insure that it is not broken) then send it to Bob right away.
thanks..
..martin..

705a

29-JAN-75 1101-PST JOHNSON: same
Distribution: SHEPPARD AT OFFICE-1, hardy
Received at: 29-JAN-75 11:01:24

706

incidentally, if you just want to let us know in case of a breakdown, we can of course call the representative for ICE in san fran for you.

706a

29-JAN-75 1059-PST JOHNSON: repairs for delta data an ti
Distribution: SHEPPARD AT OFFICE-1, hardy
Received at: 29-JAN-75 10:59:56

707

delta data: call (215)639-9400 home office in PA, and they

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will make arrangements for you, for T.I., contact Bob Hampton @ ICE in San Francisco (415) 563-7155 he will arrange with ti in cambridge to fix until June when ICE will have their own office in Boston (they are the company we lease the particular terinal fron). any other problems, let me know. --sandy

707a

28-JAN-75 0939-PST JOHNSON: techtran documentation
Distribution: HARDY, WEINBERG, LEAVITT, norton, johnson
Received at: 28-JAN-75 09:39:08

708

episode 7, verse 3, after conferring with the co-conspirators, it has now been determined that in fact the matter of documentation was discussed with jcn several days ago and extra time is apparently being allocated in order that the documentation emerges in somewhat of an accurate configuration, the words match the spagetti of the appaloosic effort.

708a

28-JAN-75 0816-PST HARDY: DEX Program Office-1
Distribution: PETERS, BAIR, hardy, norton
Received at: 28-JAN-75 08:16:17

709

I don't know who I could ask this so i will ask you both; We are shipping Sheppard at MIT-S a Techtran cassette recorder, it will require a new DEX program at Office-1 which Harvey has already written and Jennie has already checked out; What procedure is required to move it over to office-1?

709a

28-JAN-75 0807-PST HARDY: techtrans for MIT-S
Distribution: JOHNSON, hardy, norton
Received at: 28-JAN-75 08:07:56

7010

Sandy:
Don't askme when it's going, your suppose to be handling that with Jeanie. why hasn't it gone already? I thought Jeanie had the DEX doc done and Ann had checked it over, and all that was waiting was to ship it?
..martin..

7010a

27-JAN-75 1350-PDT JOHNSON: techtran shipment and documentation
Distribution: LEAVITT, HARDY, norton, johnson
Received at: 27-JAN-75 13:50:22

7011

genii, how is it coming?
martin, when is it going?

7011a

15-JAN-75 1409-PST HARDY: Techtran for Sheppard

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Distribution: JOHNSON, LEAVITT, hardy
Received at: 15-JAN-75 14:09:24

7012

Sandy:

Jeannie has a modified version of the DEX manual that describes how to use the techtran, be sure to send a clean copy of it along with the a copy of the Techtran operating manual (she has that also). Also i think we would be wise to make a test tape: HI ob, how are you...or something like that,, and send it along.
thanks..

martin... hmmm this keyboard seems to drop character ob =Bob 7012a

15-JAN-75 1355-PST HARDY: Cassette Recorders

Distribution: SHEPPARD AT OFFICE-1, hardy, norton, bair,
johnson

Received at: 15-JAN-75 13:55:34

7013

Bob:

Ok, we will send you just one cassette recorder for now. You realize that they do not come with a keyboard, to operate them you plug into a computer or terminal. (You should have a hardcopy of WORKSTATION EQUIPMENT REFERENCE MANUAL" 10 DEC 74, look at pages 21 and 22: DEX WORKSTATION, CASSETTE RECORDER, these branches describe the connection and operation.) The Techtran we will send you is 300 baud.
.martin.. HRDY@SRI=ARC

7013a

15-JAN-75 0711-PDT SHEPPARD at OFFICE-1: DEX TERMINALS

Distribution: HARDY AT SRI=ARC, sheppard

Received at: 15-JAN-75 07:10:29

7014

I am happy to hear that you have some terminals you can send us. We actually need only one terminal. It seems that we can handle them without much problem. However, can you tell me what data rate is necessary, i.e. 300 or 2400 or some other.

7014a

We would like to run the terminal through our system ELF Mark I. I see no problem so far. Any information you have about these unit would be appreciated.

7014b

...BOB...

7014c

14-JAN-75 1702-PST LEAVITT: Techtran

Distribution: HARDY, johnson

Received at: 14-JAN-75 17:02:25

7015

more messages on network performance

I have one hooked up, I'll test it out tomorrow for you,
J.

7015a

14-JAN-75 1627-PST HARDY: Techtran Cassette Recorders for
MIT-Seismic Project

Distribution: LEAVITT, JOHNSON, hardy

Received at: 14-JAN-75 16:27:00

7016

Jeannie, Sandy:

We need to send two Techtran cassette recorders to Bob Sheppard at MIT-S. He will use them at Office=1 in conjunction with project 3749=2. It is important that we send him two that work, could you one of you or both check two out, Ask Rena to hook up, he should know how, if not he needs the experience.

martin.,

7016a

14-JAN-75 1552-PST HARDY: Cassette Recorders

Distribution: SHEPPARD AT OFFICE=1, hardy, norton, johnson,
bair

Received at: 14-JAN-75 15:52:09

7017

Bob:

We have two Techtran cassette recorders here that we can send you right away. Sandy Johnson will do swtomorrow or Thur. She will send you a message when they leave and when to expect them.

I would like to point out a characteristic of the cassette that you may or may not be aware of, namely that the cassette outputs data in bursts (80 characters maximum). This means that input buffers along the path to the Host must be large enough to handle 80 characters. Do you want to discuss in more detail?

..martin.. HARDY@SRI=ARC

7017a

14-JAN-75 1236-PDT SHEPPARD at OFFICE=1; DEX TERMINAL

Distribution: HARDY AT SRI=ARC, sheppard

Received at: 14-JAN-75 12:37:11

7018

In You note on Workstations, you only mentioned two cassette recorders, which of these two would you consider the better terminal?

7018a

How do these terminals connect to a TIP or the ARPA NET?
Are they like teletypes?

7018b

We are looking into getting one of these units, thus my questions,

Would appreciate any reply you can give us.

7018c

more messages on network performance

...Bob...

7018d

18-OCT-74 1321-PDT HARDY: Bob Sheppards problem
 Distribution: NORTON, hardy
 Received at: 18-OCT-74 13:21:55

7019

< HARDY, BOBSHEP,NLS:6, >, 18-OCT-74 13:14 MEH ;;;;

7019a

The MIT-SEISMIC installation has become a critical situation because a installation team such as I proposed in a sndmsg sent you, dce, and rww upon my return from SRI-Wash has not been established. I assumed that because you (application manager) did not reply to that sndmsg you did not agree with this need and did not want to form such a team.

7019b

The MIT-SEISMIC situation: I have been in contact with Bob Sheppard recently (last week). I have demostated to him that there is no problem with the Lineprocessor. They are trying to operate the Lineprocessor through a PDP-11 running ANTs and the version of ANTs they have is incompatable with the Lineprocessor when the Lineprocessor data rate is greater than 300 baud (it is most likely that all existing ANTs versions are incompatable).

7019c

What Bob needs is a listing of the Lineprocessor protocols and data string sizes so he can request ANTs people to make his version compatible. He has contacted Andrews and discussed but from what Bob has told me Don has not been very helpful. Don's reply was ANTs must be transparent to Lineprocessor strings--pass all Lineprocessor data to the host without taking action or modifying, this is true but Bob needs more information about what the strings look like before he can request changes in ANTs. I will push ahead to get this information for him but

more messages on network performance

it will be hard because there is no software person I can
turn to that
is responsible for assisting,

7019d

If you expect me to see to it that the new users get all the
help they
need and be responsible there will have to be a software
person I can
turn to for help. If Application had an installation team
like the one
I recommend such a person would exist,

7019e

This team would have the responsibility to see to it that
each
installation worked. In case of new installations, such as
SEIMIC,
provide them with all the help necessary to get them up. I
had
proposed that the team be formed of three members: hardware,
software,
and pusher. The pusher would monitor each new installation
and request
help from hardware/software persons when needed. The
Hardware/software persons would have the responsibility to
to give
immediate help--which might require a visit,

7019f

If we do not establish such a team or state more percisely
what help we
will give many more bad situation like the MIT-SEISMIC
situation will
occurr.

7019g

Establishment of this team would insure good relations
with clients
but will be very expensive and raises the basic question
of how much
help do we really want to commit to giving,

7019h

17-OCT-74 1939-PDT NORTON: msg from Bob Sheppard: Help!
Distribution: HARDY, norton
Received at: 17-OCT-74 19:39:51

7020

17-OCT-74 16:53:39,816
Net mail from site OFFICE=1 rcvd at 17-OCT-74 16:53:38
Date: 17 OCT 1974 1243-PDT
From: SHEPPARD at OFFICE=1
Subject: Lineprocessor

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To: norton at SRI=ARC, norton
cc: sheppard, lacoss

7o20a

For some weeks now I have been trying to get some help with setting up this lineprocessor. Needless to say, the help I have been getting from SRI has left something to be desired. I have asked several people, yourself included, for some information about the special characters used by the line processor. These are the non printing and other special characters needed to run the LP. So far I have not received any help with this problem. If you people and not going to supply any information then the LP will just remain where it now sits...useless. One last plea.....can you help us?

7o20b

Bob....

7o20c

17-OCT-74 1938-PDT NORTON: HELP!!!
Distribution: HARDY, norton
Received at: 17-OCT-74 19:38:48

7o21

The following sndmsg is not good.....Where do we stand with getting Bob Sheppard's LP up and running?? am I missing something about his request...did you get one? and what can we do FAST to solve his problem. This attitude is one we CANT have and at least on the surface sounds justified. Martin: Let's talk tomorrow Friday about what can be done..and get him on the phone with what he needs? Can do? Thanks..I know there's a lot to do, but Bob S, just moved to the critical list..Jim

7o21a

7-OCT-74 1208-PDT SHEPPARD at OFFICE-1: LINEPROCESSOR
Distribution: HARDY AT SRI=ARC, NORTON, sheppard
Received at: 8-OCT-74 17:49:32

7o22

We have been trying to get our lineprocessor working for several weeks now and have discovered a few interesting facts about OUR lineprocessor. We can get the thing to work with ANTS at only two data rates, i.e. 300 and 1200. We cannot get it to work at 2400 and 4800. We are able to use these data rates with ANTS as long as we dont go through the lineprocessor. The lineprocessor fails at these data rates.

7o22a

Any help you can offer is welcomed and encouraged.

7o22b

Hope to hear from you

7o22c

....Bob....

7o22d

more messages on network performance

LINEPROCESSOR

7p

13-FEB-75 1333-PST ANDREWS: DataMedia TTY window problem
 Distribution: BELLEVILLE, irby, hardy, watson
 Received at: 13-FEB-75 13:33:28-PST

7p1

When strings beginning with CR LF are written in a LP/DataMedia's small TTY window, the window does not scroll. (Try a compilation) Notes on that problem: It's a 'state' that it stays in until some unknown thing happens - display message from NLS gets it out, but if you type ^C and talk to EXEC you stay in that state. It does not seem to be a LP=Datamedia timing problem - I ran my LP=Datamedia connection at 1200 baud (with 9600 baud padding) and still got no new lines in the TTY window. It is evident that the LP is sending the right - and same thing it always does to scroll the window, at the time it gets into said bad state (I put Datamedia in Tape mode to look at the junk going to display),
 mmmmm??
 =Don

7p1a

3-FEB-75 1029-PST ROETTER: lperr
 Distribution: MARTIN, hardy
 Received at: 3-FEB-75 10:29:22

7p2

11-FEB-75 1019-PST ANDREWS: Line Processor Protocol part of Protocol Information
 Distribution: POSTEL, hardy, irby
 received at: 11-FEB-75 10:19:32

7p3

It occurs to me that <hardy>lpprot.nls may be a copy of <lp>mcs4,1ig
 I consider the MCS4 file to be the 'real' source and intend to keep it up to date. Also, you should probably cite my NCC paper - '74 AFIPS proceedings. See Charles for a full reference,
 =Don

7p3a

3-FEB-75 1604-PST PETERS: NLPECHODRIVER
 Distribution: HARDY
 Received at: 3-FEB-75 16:04:11

7p4

more messages on network performance

THE <SUBSYS>NLPECHODRIVER,SAV;4 PROGRAM HAS BEEN MOVED OVER
TO
OFFICE-1, = JEFF

7p4a

3-FEB-75 1359-PST ROETTER: lperr program
Distribution: NORTON, WATSON, BAIR, martin, hardy
Received at: 3-FEB-75 13:59:56

7p5

I'd like to make a request that the program lperr be added
to the programs directory, It's currently in the Xprograms
directory, I understand your agreement is necessary,

7p5a

The program formats information collected about LP errors
into a readable form, If you want more info you can see me
for an example or Carolyn for specifics about the program,
Thanks,

7p5b

When I went to the programs subsystem and said load program
lperr it said i wasn't online, When I said load jprogram
<user=progs>lperr it said something about rel file syntax not
quite right, Did I do something wrong? ==Susan

7p6

3-FEB-75 1021-PST ROETTER: lperr programs
Distribution: MARTIN, hardy
Received at: 3-FEB-75 10:21:40

7p7

I copied th lperr programs to <user=progs> today so You can
delete them out of your directory, ==Susan

7p7a

23-JAN-75 0425-PDT AVRUNIN at OFFICE-1: Displays
Distribution: HARDY AT SRI-ARC, brigoli, avrunin
Received at: 23-JAN-75 04:24:22

7p8

Martin:
Frank will be out there today and tomorrow, Our 208A
modems have just been installed and need software changed
at MITRE to be usable,
If set up for 208A will be fine, Just as long as we know
what has
to be done to change to VADIC at 1200 or even Bell at 300,
Perhaps you
could show Frank while he is there,
Thanks
Larry

7p8a

22-JAN-75 2103-PDT PETERS: UP!!!!
Distribution: HARDY
Received at: 22-JAN-75 21:03:45

7p9

more messages on network performance

THE NEW MONITOR COMPLETE WITH 768 (DECIMAL) CHARACTERS OF
NETWORK TTY
BUFFER SPACE IS NOW UP AND RUNNING. - JEFF

7p9a

22-JAN-75 1541-PST HARDY: lineprocessor Program
Distribution: KESSELMAN AT OFFICE-1, hardy
Received at: 22-JAN-75 15:41:52

7p10

We developed our own software to support programming of the
Lineprocessor, I think the software is available over the
NET, you should ask Dave Hopper@SRI=ARC about that, he can
give you more detail.,
martin.,, HARDY@SRI=ARC

7p10a

17-JAN-75 1239-PDT KESSELMAN at OFFICE-1: intel 4004
Distribution: HARDY AT SRI=ARC
Received at: 17-JAN-75 12:39:20

7p11

In the development of the line processor did you happen to
procure the
INTEL software package that supports the 4004 chip or did
you write you
own. If the answer to either questions is yes is the
software available over the network, please send the answer
to murray kesselman at radc at network address kesselman at
office-1.

Thanks
murray kesselman

7p11a

11-JAN-75 0552-PST HARDY: a/d bits
Distribution: BELLEVILLE, hardy, watson, hardware
Received at: 11-JAN-75 05:52:39

7p12

Adding more bits to the A/d is fine with me, Bob should
check with Rod about stability though, it may not be good
enough for 2 more bits.,
martin

7p12a

10-JAN-75 1639-PST WATSON: more bits
Distribution: HARDY, belleville, watson
Received at: 10-JAN-75 16:39:55

7p13

Martin, Bob indicates he needs a couple of more bits on the
line processor A/Ds for use with Tektronix. He says there
is room on the card and knows what needs doing. Would
appreciate ny support you and Rod can give him aginst 9229,
Thanks Dick

7p13a

10-JAN-75 1621-PDT FEEDBACK at OFFICE-1: lp error using

more messages on network performance

RSEXEC

Distribution: ANDREWS AT SRI=ARC, BTHOMAS AT OFFICE=1,
HARDY AT SRI=ARC, feedback

Received at: 10=JAN=75 16:22:02

7p14

It happens only when an <ESC> is typed CR completes a fully typed rsexec command fine. Lights 0 1 & 2 flash and the error light comes on consistently with the Delta Data terminal

. Susa/FEED

7p14a

10=JAN=75 0929=PST ANDREWS: LP error using RSEXEC

Distribution: FEEDBACK AT OFFICE=1, BTHOMAS AT BBN, HARDY

Received at: 10=JAN=75 09:29:18

7p15

Susan- It would help to know the kind of error (i.e. status lights) for such errors. Also, which kind of display are you on. I can only make a wild guess. Does it only happen when you type ESC - or when ever

a command is completed (and RSEXEC echos a CRLF)? Sorry, I cannot duplicate it from here...

Don

7p15a

9=JAN=75 1734=PDT FEEDBACK at OFFICE=1: lp error in rsexec when logging into tip

Distribution: BTHOMAS AT BBN, HARDY AT SRI=ARC, ANDREWS AT SRI=ARC, feedback

Received at: 9=JAN=75 17:43:47

7p16

After typing @@n to log into the tip while at the lineprocessor, any rsexec command which is typed and then recognized via <ESC> sends something which causes an error on the lineprocessor. Once logged on and in TENEX, rsexec commands can be recognized by using <ESC> without error. Looking forward to hearing from you.

Susan/feedback@office=1

7p16a

1=JAN=75 2154=PST HARDY: TENEX OUTPUT BUFFERS

Distribution: PETERS, hardy

Received at: 1=JAN=75 21:54:40

7p17

JEFF:

I AM READY TO TEST LINEPROCESSOR THROUGH=PUT AS A FUNCTION OF TENEX OUTPUT BUFFER SIZE. WOULD YOU PLEASE FIND OUT HOW TO CHANGE ASSIGNMENT (I GUESS CALL ANDREWS, OR TALK TO

more messages on network performance

IRBY), LET ME KNOW AS SON AS YOU CAN, THANKS
 ...MARTIN...

7p17a

18-DEC-74 1056=PST VANNOUHUYS: Changes in the Lineprocessor
 Users' Guide
 Distribution: NORTON, BAIR, LIEBERMAN, ANDREWS, HARDY,
 vannouhuys
 Received at: 18-DEC-74 10:56:22

7p18

Some time ago the two Jim's reviewed the Lineprocessor
 Users' Guide, I have read their suggestions into the file
 and have asked Joan to copy proof the changed statements.
 In the mean time there were some changes in how the TIP
 worked which demanded small additions to the guide. Those
 additions are in <documentation,novguide,4g4> and
 <documentation,novguide,4i> if you are interested in
 checking it. The changes explain what to do when the host
 crashes and that you do not need to log into the net
 rk.

7p18a

7-DEC-74 0915=PST HARDY: Lineprocessors and Display
 Terminals
 Distribution: BRIGNOLI AT OFFICE-1, hardy
 Received at: 7-DEC-74 09:15:29

7p19

Frank:
 Hi, I just got the word that our display terminals will be
 here the 20 th of this month, so if they really arrive we
 will fix you up tthen.
 Also the word is that 733 ASR can be delivered in 2 to 3
 weeks so I will get busy and test compatability as soon as
 possible, so say with in a month you should have one, I
 will have them deliver directly to you,
 ..martin..

7p19a

7-DEC-74 0906=PST HARDY: Lineprocessor Documentation
 Distribution: JOHNSON, hardy
 Received at: 7-DEC-74 09:06:40

7p20

Sandy:
 Hi, you remember all that Lineprocessor documentation stuff
 that I asked you to mail out to several Workshop Utility
 people? Well if you have sent would you please send each
 one a send message saying it comming. Bill it as
 Lineprocessor Documentation, Also mention that if they want
 more detail or expalination to contact me at HARDY@SRI-ARC
 Thanks,, martin..

7p20a

4-DEC-74 0951=PST HARDY: No TIP Login Required for

more messages on network performance

Lineprocessor connections (as long as the port is configured "Wild").

Distribution: NORTON, WATSON, IRBY, BAIR, LIEBERMAN,
HOPPER, VANNOUHUYS,, ANDREWS, hardy, hardware

Received at: 4-DEC-74 09:51:08

7p21

Recently all the TIP ports that have a Lineprocessor connected to them have been set permanently "Wild". This means that a Lineprocessor user will not be required to login to the Network to use it. We had the ports set wild to facilitate trouble shooting Lineprocessor connections from a remote terminal.

Also, a Network user from a Wild port will not be charged for using it, I suppose we will have to make our own arrangements with TIP owners when that time comes.. The following are the two sndmsgs implementing Lineprocessor ports Wild.

7p21a

--

7p21b

< HARDY, WILD,NLS;3, >, 4-DEC-74 09:15 MEH ;;;;

7p21c

27-NOV-74 1052-PST HARDY: "Wild" ports for Lineprocessor connections.

Distribution: MALMAN AT BBN, hardy, hardware
Received at: 27-NOV-74 10:52:09

7p21d

Joel:

First, Thanks for implementing the device rate change for ARPA

Lineprocessor connection.

Second, We have developed some test programs to assist us in debugging and repairing Lineprocessor connections. These programs operate from a remote terminal and essentially reach

out and test each Lineprocessor device in the circuit in sort

of a loop back mode. To operate these programs from a remote

terminal requires the TIP port to be set "Wild". A TIP port

set permanently wild does not interfere with normal Lineprocessor operation. Hence, could You please set the following ports permanently "WILD" for us:

Tymshare TIP port: 15 base 8

tymshare TIP port: 16 base 8

MITRE TIP port 34 base 8

Rutgers TIP port 71 base 8

more messages on network performance

ARPA TIP port 3 base 8
ARPA TIP port 7 base 8 7p21e

thanks
...martin... HARDY@SRI=ARC
P.S. Please notify me when completed.. bye.. 7p21f

4-DEC-74 0838=EST MALMAN at BBN=TENEX: SETTING PORTS WILD
AT
THE REQUEST OF HARDY

Distribution: HARDY AT SRI=ARC, poh at isi, rutgers at
bbn,
plynch at isi
Received at: 4-DEC-74 05:39:01 7p21g

HI,
THE FOLLOWING PORTS ON THE FOLLOWING TIPS HAVE BEEN SET
WILD, 7p21h

TYMSHARE TIP PORT 15
TYMSHARE TIP PORT 16
MITRE TIP PORT 34
RUTGER TIP PORT 71
ARPA TIP PORT 3
ARPA TIP PORT 7 7p21i

THESE SETTING WILL STAND WHEN TIP 327 IS RELEASE
(SHORTLY),
THEY WILL
IN EFFECT BE "FREE" PORTS, SNDMSG TO HARDY@SRI=ARC FOR
DETAILS, 7p21j

JOEL MALMAN 7p21k

1 7p21l

-- 7p21m

P.S. ALL PORT NUMBERS ARE OCTAL, 7p21n

2 7p21o

-----...martin.. 7p21p

3-DEC-74 1007=PST HARDY: Specifications For Lineprocessor to
TIP Connections,

Distribution: CARLSON AT ISI, hardy, watson, irby
Received at: 3-DEC-74 10:07:04 7p22

more messages on network performance

Carlson:

The following information is the specifications for a Lineprocessor 4800 baud modem connection,

7p22a

--

7p22b

< HARDY, TLCONNECTION,NLS;5, >, 3=DEC-74 09:41 MEH ;;;;

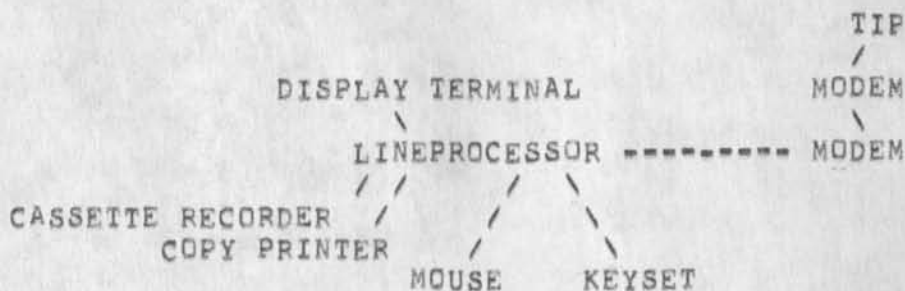
7p22c

4800 baud modem connection for Lineprocessor to TIP

7p22d

CONFIGURATION

7p22e



7p22f

MODEM

7p22g

AT&T 208A

7p22h

(two required: one at the Lineprocessor, one at the TIP.)

7p22i

DATA RATE

7p22j

4800

7p22k

LINE CONDITIONING

7p22l

None required,

7p22m

COST

7p22n

Leases for \$116/mo, month to month, each,

7p22o

OPTIONS (REQUIRED)

7p22p

- 1) internal timing
- 2) continuous carrier
- 3) continuous Request-to-Send
- 4) one second carrier holdover
- 5) strap AB to AA (grounds)

more messages on network performance

6) CC on when AL button depressed
7) DO NOT USE New Sync Option 7p22q

LINE 7p22r

Full-duplex 4-wire connection required, 7p22s

3002 type 7p22t

1 7p22u

...martin... HARDY@SRI-ARC 7p22v

21-NOV-74 1140-PST DALE at USC-ISIB: TIP buffers
Distribution: HARDY AT SRI-ARC
Received at: 21-NOV-74 11:40:11 7p23

Yes, I would be very interested in the results of your tests
and all comments you have regarding these buffer sizes.
Dale 7p23a

21-NOV-74 0926-PST HARDY: Tenex and Tip buffer sizes for
terminals
Distribution: DALE AT ISIB, hardy
received at: 21-NOV-74 09:26:55 7p24

We are writing some programsto facilitate determining the
buffer sizes required for our Lineprocessor displays that
have 4800 baud (or 1200 baud) connections to TIPS as a
function of distance from the host computer. If this data
wwill help you, or if you would like to discuss in more
detail, send me another message.
best

...martin... HARDY@SRI-ARC 7p24a

21-NOV-74 0804-PST HARDY: Can Lineprocessors Run From Outlets
in Offices.
Distribution: WATSON, hardy, norton
Received at: 21-NOV-74 08:04:50 7p25

Dick:
Yes,
...martin.. 7p25a

15-NOV-74 15:00:08-PST,423; DALE at USC-ISIB, Tenex and TIP
buffer sizes for terminals 7p26

Net mail from site ISIB rcvd at 15-NOV-74 15:00:04 7p26a

more messages on network performance

Date: 15 NOV 1974 1459=PST 7p26b

From: DALE at USC=ISIB 7p26c

Subject: Buffer sizes 7p26d

To: HARDY at SRI=ARC 7p26e

I received a message from Charles Irby a while back saying you 7p26f

could tell me appropriate sizes for terminal buffers in TENEX 7p26g

and in the TIP as a function of terminal speed. I'd appreciate 7p26h

your comments on this subject. Thanx= 7p26i

Dale Russell (DALE@ISIB) 7p26j

13-NOV-74 0806=PST HARDY: time quantum overrun, Lineprocessor program, 7p27

Distribution: HOPPER, hardy

Received at: 13-NOV-74 08:06:51

Dave:

Sorry I overran and ofcourse the need is urgent. I really need a time estimate for planning. I expect the job will not be simple and if it looks like it will be some time before you can get to it I would like to know. thanks..

...martin.... 7p27a

13-NOV-74 0041=PST HOPPER: Lineprocessor, tip, etc. 7p28

Distribution: HARDY

Received at: 13-NOV-74 00:41:34

You overran your time quantum last week on TIP diagnostic programs.

I haven't read your last request yet. (I's still in the NLS bug fix part of the queue) Hope it isn't too urgent, will try to get to it . 7p28a

12-NOV-74 1005=PST HARDY: Lineprocessor program support to determine TIP buffer sizes required, 7p29

Distribution: HOPPER, hardy

Received at: 12-NOV-74 10:05:32

more messages on Network performance

Dave:

I haven't heard a word from you in response to my request for program development help to determine proper buffer sizes for Lineprocessor connections.
...martin..

7p29a

11-NOV-74 2226-PST VANNOUHUYS: How to Discover the TIP Intercept Character
Distribution: MCKENZIE AT BBN-TENEX, neigus at bbn, hardy, andrews

Received at: 11-NOV-74 22:26:43

7p30

< VANNOUHUYS, TIPP,NLS;1, >, 11-NOV-74 20:47 DVN ;;;
I am writing a users' guide for our Lineprocessor that assumes connection to a TIP. I hear from the field that from time to time something (noise on the telephone connection?) inadvertantly resets the intercept character. It's a rare occurence (once a week or less maybe in regular use) but when it happens it's a bind for our naive and even our experinecd users because in the context of other input its very hard to realize what is happening. I can tell them to check for what is happening by sending a linefeed (in which case the TIP replis "BAD") but then there is no way that I can see for them to learn the current intercept character so they can reset the TIP. Can they call the Network Control Center and ask you to tell them their intercept character? If so are you game for such calls? If not, can you suggest some other course?

7p30a

8-NOV-74 1435-PST HARDY: LineProcessor program to test TIP buffer sizes,

Distribution: HOPPER, hardy, norton, hardware, peters

Received at: 8-NOV-74 14:35:52

7p31

Dave:

As you know we do not know what TIP buffers size is required for Lineprocessor connections. I inteend to test this empirically as soon as possible. I have talked this proble over with Don and it seems to us that the best way to test

more messages on network performance

this is with a simple Lineprocessor program that senses the first text character and time untill the last text character is recieved. When the end character is recieved, send time back to host for averaging. You may have a better idea, in any case, would you have time to help , like do the programming?
 ...martin..

7p31a

8-NOV-74 0859-PST ANDREWS: LPechodriver
 Distribution: HOPPER, andrews, hardY, bondurant
 Received at: 8-NOV-74 08:59:55

7p32

We need to have the between-character timeout parameter user-settable for insanelY slow NET connections ...
 --Don

7p32a

7-NOV-74 1445-PST VANNOUHUYS: Prom Updates"
 Distribution: HARDY, watson
 Received at: 7-NOV-74 14:45:47

7p33

Dick put that question at the end of his copy of the LP guide. I take it he means we should say something about getting them. What should I say? If you can get htis information back to me today I will get a draft back to hiim

7p33a

7-NOV-74 1431-PST HARDY: Lineprocessor and cassette input.
 Distribution: ANDREWS, IRBY, BELLEVILLE, hardy, watson,
 norton
 Received at: 7-NOV-74 14:31:18

7p34

Don:
 Great, glad to here that we may be able to input cassette via the Lineprocessor CP port. This will be a real saver to LP users for they will not have to have a second TIP port specificallyy configured for cassette input. I agree that we should coordinate development with graphic stuff. When do you want to get together??
 Ed is building up a proto type board now, it may be ready for testing next week. What I would like to do is test it right away for cassette input?, so I can tell clients such a card will be available, and when.
 ...martin..

7p34a

7-NOV-74 0928-PST ANDREWS: DEX input and the LP
 Distribution: HARDY, watson, norton, bair, hopper,
 lieberman, andrews
 Received at: 7-NOV-74 09:28:31

7p35

I think Cassette input for DEX woulr require a relatively

more messages on network performance

simple change in the LP program == and allow users to use Cassettes in the current way
 -i.e. terminal tied up while the Cassette to TEN operation is in progress.
 Experience shows, however, that relatively simple changes in the LP program MAY take a good chunk of time.
 That operation is similar to the way graphics/LP's with Tektronics storages tubes will operate and I suggest we coordinate the developement of those two things.
 Also, we should think about the possibility of running a TI as a separate device (separate job) thru the CP port == that would be reasonable thru the PDP-11 frontend, but not feasible directly to TENEX,
 ==Don

7p35a

6-NOV-74 1748-PST HARDY: DEX input and the Lineprocessor
 Distribution: ANDREWS, WATSON, hardY, norton, bair, hopper, lieberman
 Received at: 6-NOV-74 17:48:28

7p36

Don:
 Can Applications expect that when the cCP input card is developed for Graphics display use that that port can also be used for Cassette input? Assuming it can, what programming will be needed (Lineprocessor, TEN)?
 ...martin..

7p36a

5-NOV-74 2133-PDT BAIR at OFFICE-1: Documentation on the LP
 Distribution: WINGFIELD, bair at sri-arc, hardy at sri-arc
 Received at: 5-NOV-74 21:34:02

7p37

Mike, Have you received the documentation on the Line Processor? If not let me know. It should have been mailed to you last week (early).
 Meanwhile take advantage of Susan Lee (I dont mean THAT way) for training when shes there next week. I f you have any questions about NLS that deserve discussion, let me know and I can give you a call. Best, Jim

7p37a

28-OCT-74 1350-PDT ANDREWS: Lineprocessor version
 Distribution: HARDY
 Received at: 28-OCT-74 13:50:30

7p38

The echotest program is included in all new LP programs - the Delta Data

more messages on network performance

are ARC, and at Washington (version D94).
 The version is not included in any interrogate now.
 However, it appears
 on the screen when user hits system reset. In order to send
 and read the
 response from the interrogate, the LP would have to be
 online and logged in
 --hence why not just call the user and ask him to hit system
 reset
 and read the version to you?
 There are not enough bits to include the version in current
 interrogate

7p38a

protocol -- another interrogate could be invented but the
 user
 would have to be sitting idle while he was interrogated - -
 seems
 lots easier to have the user tell you.
 This may not be very clearly explained but I'm sure you get
 the picture.
 Don

7p38b

28-OCT-74 1009-PDT LEAVITT: Lineprocessor Paper
 Distribution: HARDY
 Received at: 28-OCT-74 10:09:04

7p39

Hooray, there are three letter-perfect copies of it on your
 chair. I'm going to have to stop working on it now. Sandy
 I guess will be the one to interface with Toni to get the
 pictures in straight...

7p39a

25-OCT-74 1129-PDT HARDY: Coding the Lineprocessor to include
 PROM status information.
 Distribution: ANDREWS, hardy, norton, hopper, watson, irby
 Received at: 25-OCT-74 11:29:32

7p40

DON:
 Could you code the Lineprocessors to include PROM version
 number in the status word(s)? This is desirable in order to
 keep track of what version what Lineprocessor has, and is
 the only way I can see that will provide reliable status.
 I would suggest that we code this as soon as possible so
 that we can swap the ones in the field before the population
 gets large.
 This brings to mind a point: We decided to incorporate the
 hardware test stuff (echo) in new versions of PROMs. What
 is the status of this? It would be nice to have this code
 in the PROMs also at time of swap.
 ...martin..

7p40a

more messages on network performance

25-OCT-74 1109-PDT HARDY: Keeping track of what version of PROM program Lineprocessors have.

Distribution: WATSON, NORTON, ANDREWS, IRBY, hardy, bair, hopper

Received at: 25-OCT-74 11:09:07

7p41

Dick:

We presently try our best to keep a hardcopy record of what PROMs are installed in each Lineprocessor. This method will undoubtedly fail as the number of Lineprocessors in use increases.

The Lineprocessor is presently coded for status (display type, LP to host baud rate, Lineprocessor type,) and can be interrogated by the host. Hence the best thing to do is to code the Lineprocessor to also include the PROM version number in the status information.

..,martin..

7p41a

22-OCT-74 1011-PDT HAMILTON: PROM's

Distribution: HARDY, BAIR, NORTON, ANDREWS, hamilton

Received at: 22-OCT-74 10:11:32

7p42

Is there presently a procedure for keeping track of which version of Line Processor Proms is running in all the LP's in the field? Is there an established procedure for issuing new PROM releases and getting back old PROM's? If answer is no I feel applications would be advised to establish such. If answer is yes please let Don and I know what they are. Thanks, Dick

7p42a

21-OCT-74 1115-PDT ANDREWS: LP printer port

Distribution: WATSON, lee, irby, hardy

Received at: 21-OCT-74 11:15:06

7p43

MY copy printer port works fine. At 300 baud*

*not counting pauses during display updates, unreasonable load.

Briefly, I am aware that:

1) Some LP's in the field have old PROMS and won't lpprint right

2) Evidently 300 baud is limit - faster prog will exist later

but will hog the terminal while printing

3) Very bad phone lines may cause printing to stop -- system reset fixed

System reset could be avoided by 'timeout' code in NLS, not yet implemented

4) The lpprint program could be incorporated into NLS

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anytime now

That would avoid loading user program lpprint

7p43a

sorry: 3) should read "system reset fixes it"

I will expand on these if you like

--Don

7p43b

21-OCT-74 0846-PDT VANNOUHUYS: Status of Lineprocessor User's guide

Distribution: BECK, weinberg, watson, kelley, norton, hardy, vannouhuys, lee,, andrews

Received at: 21-OCT-74 08:46:34

7p44

Perhaps you exaggerated te readiness of the Guide from the minutes of the documentation meeting. You, Jeanne, or anyone who gets this message are welcome to look at my file septline, but it does not include several pending improvements and is not ready for distribution.

7p44a

18-OCT-74 1714-PDT WATSON: copy printer

Distribution: ANDREWS, LEE, IRBY, HARDY

Received at: 18-OCT-74 17:14:25

7p45

Does the the copy printer port work on the line processor?

7p45a

24-OCT-74 1335-PDT HARDY: lineprocessor protocol

Distribution: HARDY

Received at: 24-OCT-74 13:35:20

7p46

this is a copy of DON's MCS4 file branch 1, which contains all the Lineprocessor protocols.

< HARDY, LPPORT,NLS;3, >, 24-OCT-74 12:49 MEH ;;;;< HARDY, LPPORT,NLS;2, >, 24-OCT-74 12:43 MEH

7p46a

protocol for TENEX <=> Line Processor interactions

1

7p46b

NOTICE:

1A

7p46c

This document is not yet cast is concrete, We don't expect sweeping changes of any kind but we reserve the right to change our minds about how some things should be done. Send your

comments or reactions to this protocol to

1A1

7p46d

more messages on network performance

1A1A Don Andrews, NIC ident DIA 7p46e

1A1B ARPANET address ANDREWS@SRI-ARC 7p46f

1A1C Augmentation Research Center 7p46g

1A1D Stanford Research Insitiute 7p46h

1A1E Menlo Park, California 94025 7p46i

1B Introduction 7p46j

This document is a detailed description of the Line Processor protocol. It is intended to serve as a guide to anyone wishing to impliment the Line Processor protocol as well piece of documentation for the Line Processor.

1B1 7p46k

It should be pointed out here that the Line Processor contains a very small, slow microcomputer with little read/write memory.

For this reason the protocol is terse and error reports and/or recovery non-existant. The Line Processor terminal is treated

more as a hardware device than an intelligent terminal, 1B2

7p46l

1C Conventions 7p46m

Coordinates designate character positions. For example (1,1) is the second character on the second line up from the bottom. 1C1

7p46n

1C2 The origin is at the lower left corner of the screen,

7p46o

more messages on network performance

As components of the protocol, coordinates are passed as one byte of X and one of Y and always have 40B added to them to get them in the printing character range. This limits the max coordinate value to 137B which is 95.

1C3 7p46p

In TTY simulation, scrolling always takes place on a line feed (LF) not a carriage return (CR). Carriage return does the obvious thing and no more.

1C4 7p46q

When inside a protocol string, RUBOUT is NOT ignored. When outside, it is ignored.

1C5 7p46r

When outside a protocol string, all control characters (0 thru 37B) are ignored by the Line Processor, except:

1C6 7p46s

When the cursor is being tracked:

1C6A 7p46t

*G which rings a bell if possible

1C6A1 7p46u

CR and LF which do the right thing

1C6A2 7p46v

Notice that backspace character (BH) is not implimented in TTY simulation (i.e. when the cursor is being tracked). We have no immediate use for this, but it may be implimented later.

1C6B 7p46w

When the cursor has been positioned:

1C6C 7p46x

*G which rings a bell if possible

1C6C1 7p46y

more messages on network performance

"H which does a backspace cursor
 1C6C2 7p46z

From Line Processor to TENEX (mouse input etc.)
 1D 7p46a@

Communication in this direction will adhere generally
 to the IMLAC protocol as outlined in (IJOURNAL,14345,).
 1D1 7p46aa

In particular:
 1D2 7p46ab

Keyboard characters 40B thru 177B are unescorted.
 1D2A 7p46ac

Keyboard characters 0 thru 37B are sent as:
 1D2B 7p46ad

34B, 43B, char+140B, X+40B, Y+40B
 1D2B1 7p46ae

Mouse button changes are send as:
 1D2C 7p46af

34B, 43B, buttons+100B, X+40B, Y+40B
 1D2C1 7p46ag

where buttons is the binary image of button
 positons 1D2C2 7p46ah

Keypset strokes 1 thru 32B are send as:
 1D2D 7p46ai

stroke+140B (e.g, 1 => a)
 1D2D1 7p46aj

keyset strokes 33B thru 37B are sent as:
 1D2E 7p46ak

33B => 54B (,)
 1D2E1 7p46al

34B => 56B (.)
 1D2E2 7p46am

35B => 73B (;)
 1D2E3 7p46an

more messages on network performance

1E1A1		7p46av
1E1B	position cursor and stop tracking mouse,	7p46aw
1E1B1	Send(34B, 40B, X', Y')	7p46ax
1E1B1A	X' = X coord (0 thru Xmax) + 40B	7p46ay
1E1B1B	Y' = Y coord (0 thru Ymax) + 40B	7p46az
1E1B2	result:	7p46b@
Tracking stops received, Any screen and character, advised as the and model,	Positions cursor to specified location, until a "resume tracking" or a reset is unescorted characters will be written on the the cursor will be advanced once after each Writing beyond the end of the line is not result depends on the terminal manufacturer	
1E1B2A		7p46ba
1E1C	specify (small) TTY simulation window	7p46bb
1E1C1	Send(34B, 41B, top, bottom)	7p46bc
1E1C1A	top = Y' for top line of window	7p46bd
1E1C1B	bottom = Y' for bottom line of window	7p46be
1E1C2	result:	7p46bf
	Invokes a small TTY simulation window of	

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specified size and location, This window will be used until
 a new one is specified or a reset is received. This
 does not change the tracking mode.

1E1C2A 7p46bg

reset

1E1D 7p46bh

Send(34B, 51B)

1E1D1 7p46bi

result:

1E1D2 7p46bj

screen cleared

1E1D2A 7p46bk

TTY simulation window set to full screen

1E1D2B 7p46bl

bug selection stack reset

1E1D2C 7p46bm

resume tracking (see)

1E1D2D 7p46bn

padding:

1E1D3 7p46bo

Send pads as for clear screen.

1E1D3A 7p46bp

resume tracking mouse

1E1E 7p46bq

Send(34B, 42B)

1E1E1 7p46br

result:

1E1E2 7p46bs

unescorted The cursor is used to track the mouse. Any
 window characters will go into the TTY simulation

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1E1E2A	currently in use,	7p46bt
1E1F	write string of blanks	7p46bu
1E1F1	Send(34B, 43B, N')	7p46bv
1E1F1A	N' = number of blanks to be written,	7p46bw
1E1F2	result:	7p46bx
starting at left at the Assumes the beforehand,	The specified number of blanks are written the current cursor position. The cursor is character position following the last blank, cursor has been positioned appropriately	
1E1F2A		7p46by
177B],	This command is a no-op if N' is not IN [41B, 177B],	
1E1F2B		7p46bz
1E1F3	padding:	7p46ce
following	This command must have N/f padding characters it,	
1E1F3A		7p46ca
1E1G	push bug selection	7p46cb
1E1G1	Send(34B, 46B, X', Y')	7p46cc
1E1G2	result:	7p46cd
	The coordinates are pushed on a stack and the	

more messages on network performance

character at that location is somehow brought to the
 user's attention, but not obliterated. The stack
 will hold a maximum of 8 selections. This command
 includes a resume tracking.

1E1G2A 7p46ce

padding:

1E1G3 7p46cf

This command must have 8/f padding characters
 following it.

1E1G3A 7p46cg

pop bug selection

1E1H 7p46ch

Send(34B, 47B)

1E1H1 7p46ci

result:

1E1H2 7p46cj

The top entry on the bug selection stack is
 popped. The corresponding character on the screen is no
 longer marked in a special way. If the stack is
 empty, this command is a no-op. This command includes a
 resume tracking.

1E1H2A 7p46ck

padding:

1E1H3 7p46cl

This command must have 8/f padding characters
 following it.

1E1H3A 7p46cm

delete selected line

1E1I 7p46cn

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1E1I1	Send(34B, 44B)	7p46co
1E1I2	result:	7p46cp
removed from one line. The X results are	The cursor position selects a line to be the screen. All following lines are moved up The contents of the last line are undefined, coordinate should be zero, otherwise the undefined,	7p46cq
1E1I2A		7p46cq
1E1I3	padding:	7p46cr
characters (Del is	This command requires del/f padding obtained from TENEX).	7p46cs
1E1I3A		7p46cs
1E1J	insert selected line	7p46ct
1E1J1	Send(34B, 45B)	7p46cu
1E1J2	result:	7p46cv
following is not above the the considered "lost," the results	The line which the cursor is on, and all lines, are moved down one line. The cursor moved, and hence is on a blank line. Lines cursor are not altered. The last line (before execution of this command) should be The X coordinate should be zero, otherwise are undefined,	7p46cw
1E1J2A		7p46cw

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1E1K	clear screen	7p46cx
1E1K1	Send(34B, 50B)	7p46cy
1E1K2	result:	7p46cz
1E1K2A	The entire screen is cleared. The cursor position is not generally known. The TTY simulation window location and the bug selection stack are not altered. The tracking mode is not changed.	7p46de
1E1K3	padding:	7p46da
1E1K3A	This command requires del/f pad characters;	7p46db
1E1L	Interrogate line processor	7p46dc
1E1L1	Send(34B, 55B)	7p46dd
1E1L2	result:	7p46de
1E1L2A	A response to the interrogate command is sent as a protocol string of this form;	7p46df
1E1L2A1	34B, 46B, Xmax+40B, Ymax+40B, Lptype, Del, Rate	7p46dg
1E1L2A2	Where	7p46dh
1E1L2A2A	Xmax is the maximum x coordinate	7p46di

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1E1L2A2B	Ymax is the maximum y coordinate	7p46dj
type 1E1L2A2C	LPtrype is in [40B=177B] and designats	7p46dk
LPtrype	The least significant four bits of	
(call it	designate display terminal type	
1E1L2A2C1	Ditype)	7p46dl
1E1L2A2C1A	Currently defined are:	7p46dm
1E1L2A2C1A1	(1) Delta Data 5200	7p46dn
1E1L2A2C1A2	(2) Hazeltine H2000	7p46do
designate Line	The most significant three bits	
1E1L2A2C2	Processor type (call it Type)	7p46dp
1E1L2A2C2A	Currently defined are:	7p46dq
Keyset,	(2) Line Processor with Mouse,	
1E1L2A2C2A1	Printer	7p46dr
(RUBOUT)	Del is the number of "pad" characters	
takes place,	needed to delay while a delete line	
1E1L2A2D		7p46ds
receive baud	Rate indicates the Line Processor	
1E1L2A2E	rate:	7p46dt
1E1L2A2E1	300 buad; 100B, f=32 decimal	7p46du

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1E1L2A2E2	600 baud: 60B, f=16	7p46dv
1E1L2A2E3	1200 baud: 50B, f=8	7p46dw
1E1L2A2E4	2400 baud: 44B, f=4	7p46dx
1E1L2A2E5	4800 baud: 42B, f=2	7p46dy
1E1L2A2E6	9600 baud: 41B, f=1	7p46dz
1E1L2A2E7	The baud rate factor, $f = \text{Rate} / 40B$;	7p46e@
applications	Note: Lptype is not generally used by	
the true	programs but should allow discovery of	
Lptype	nature of the Line Processor terminal,	
best	should be assigned by ARC personel for	
1E1L2A2F	results. See DIA or CHI @SRI-ARC.	7p46ea
to the user,	The responce back to the TEN is not visible	
user	TENEX grabs it, but the info is available to	
will be sent	programs via JSYS RLPMD. The interrogate	
type to Line	by the EXEC when the user sets his terminal	
tracking	Processor. This command does not change the	
1E1L2B	mode.	7p46eb
1E1M	Turn off coordinate mode	7p46ec
1E1M1	Send(34B, 60B)	7p46ed

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	result:	
1E1M2		7p46ee
Processor,	Turns off the coordinate mode in the Line	
1E1M2A	This does not change the tracking mode,	7p46ef
control	Mouse buttons become inactive, Keyboard	
protocol	characters sent to main computer without	
1E1M2B	formatting.	7p46eg
	Turn on coordinate mode	
1E1N		7p46eh
1E1N1	Send(34B, 61B)	7p46ei
	result:	
1E1N2		7p46ej
Processor,	Turns on the coordinate mode in the Line	
1E1N2A	This does not change the tracking mode,	7p46ek
characters	Mouse buttons become active, Keyboard control	
1E1N2B	are sent in input protocol format,	7p46el
	Begin standout mode	
1E1O		7p46em
1E1O1	Send(34B, 56B)	7p46en
	result:	
1E1O2		7p46eo
be altered	All following text written on the screen will	
unfortunately	is some way from "normal" text. This	
simulation	includes characters which go into the TTY	

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processor in this window also, so don't leave the line
state indefinitely, Does not change the
tracking mode,

1E1Q2A 7p46ep

1E1P End standout mode 7p46eq

1E1P1 Send(34B, 57B) 7p46er

1E1P2 result: 7p46es

in Subsequent text written on the screen will be
mode, 1E1P2A "normal" mode. Does not change the tracking 7p46et

1E1Q TENEX RESTARTING 7p46eu

BY locking The Line Processor will detect a TENEX restart,
At that for the ten 34B's it sends out at startup time,
the hardware time it will place itself in a state as though
reset button had been pushed,

1E1Q1 7p46ev

1E1R start coord tracking 7p46ew

1E1R1 not implemented, 7p46ex

the future We may impliment a "mouse linking" feature in
Line using this and the two following commands, A
strings that Processor could then be asked to send protocol
an "extra" indicate the mouse movement, It will also plot
mouse tracking spot, given a stream of tracking
coordinates. This will enable two users to see

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each	other's tracking spots,	
1E1R2		7p46ey
	stop coord tracking	
1E1S		7p46ez
	not implemented,	
1E1S1		7p46f@
	linked tracking location (X, Y)	
1E1T		7p46fa
	not implimented,	
1E1T1		7p46fb
	open printer	
1E1U		7p46fc
	Send(34B, 53B)	
1E1U1		7p46fd
	Result:	
1E1U2		7p46fe
the printer	Opens the printer for output. Protocall to	
protocol	must be observed: (1) open it, (2) wait for	
response	string "request" (below), (3) send strings in	
	to requests, (4) close it,	
1E1U2A		7p46ff
	"Request" string, sent back to the main	
computer:		
1E1U2A1		7p46fg
	34B, 47B, Dev, Count	
1E1U2A1A		7p46fh
	Dev is a device code, normally 40B	
for the	printer,	
1E1U2A1A1		7p46fi
	Count is the number of characters to	
send,		

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```

                                +40B,
1E1U2A1A2                                7p46fj
                                Note: The count indicates the Line Processor
storage                                allocated for the next printer string,
Sending a longer                                string will result in a "receive error"
(error light on                                panel).
1E1U2B                                7p46fk
                                close printer
1E1V                                7p46fl
                                Send( 34B, 54B )
1E1V1                                7p46fm
                                Result:
1E1V2                                7p46fn
                                Closes the printer. Actual close will not
take place                                until all characters in the output buffer are
printed,                                That is, the close may follow the last string
of                                characters immediately. It is possible (but
very                                unlikely) that a "request" protocol string
may be sent                                to the main computer after the close is sent
to the Line                                Processor.
1E1V2A                                7p46fo
                                printer string
1E1W                                7p46fp
                                Send( 34B, 52B, Dev, Count+40B, <characters> )
1E1W1                                7p46fq
                                Result:
1E1W2                                7p46fr
                                The Dev is normally 40B and is ignored by
Line                                Processors with one printer. The Count must
not be

```

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"request" greater than the sum of the counts in all
 may be less, protocol string not already fulfilled. It
 characters, The actual character string may contain any
 translation or They will be send to the printer without
 1E1W2A special handling, 7p46fs

1E1X local input string collection and echo 7p46ft

commands We will soon release and document a set of
 Line enabling the main computer to request that the
 user, up to Processor collect and echo input text from the
 1E1X1 any of a set of "break" characters, 7p46fu

1E2 Application notes; 7p46fv

the end of a Avoid writing text (or "string of blanks") beyond
 drop the line; the display may insert an unwanted line or
 1E2A extra characters, 7p46fw

y>Ymax. Avoid positioning the cursor to any x>Xmax or
 1E2B 7p46fx

display may Avoid doing an insert line on the last line; the
 scroll the entire screen,
 1E2C 7p46fy

case in the Delta Data (Ditype=1) must be treated as a special
 following respect:
 1E2D 7p46fz

not already When writing text at (x,y) on a line which does
 have text on it up to position x (e.g, after a

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clear screen
 or insert line), the applications program must
 send x/f pad characters after the first character written at
 position (x,y). The display takes that long to move a CR
 symbol into the proper display memory location. (Our
 thanks to Delta Data),
 1E2D1 7p46g@

NOTE:
 1E3 7p46ga

The Line Processor has a reset button on it (which
 will be used only on rare occasions). After power up or a
 hardware reset, the following state prevails:
 1E3A 7p46gb

The screen is clear, the mouse tracking in
 operation. 1E3A1 7p46gc

The bug selection stack is empty.
 1E3A2 7p46gd

The full screen TTY simulation is in effect.
 1E3A3 7p46ge

Coordinate mode is NOT in effect.
 1E3A4 7p46gf

Printer is closed
 1E3A5 7p46gg

All TTY simulation windows currently work as
 follows: Text is
 inserted in the last line and "scrolling" occurs on
 each line feed (i.e. it does not start on the top line of the
 window as you may prefer). A CR moves the cursor to left
 margin, a LF effects a line break. Typing beyond the last
 character of the line causes a line "wrap" - i.e. new text replaces
 the old

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line, starting from the left margin. The only way to clear a small TTY window is to send N line feeds into it, where N is the number of lines in the window.

1E3B

7p46gh

The usual sequence from the applications program will be to position the cursor and perform some function, or write text, or both. It must end such a sequence with a "resume tracking" command. Any broadcast messages, links, etc, that come down the line between the cursor position and the "resume tracking" will go wherever the cursor happens to be.

1E3C

7p46gi

Normally, broadcast messages and the like will go into the TTY simulation window. The difference being that they are not preceded by a position cursor command.

1E3C1

7p46gj

We are modifying the TENEX SOUT (string output) JSYS so that the entire string will be placed in the output buffer in one piece. This will allow the applications program to construct strings so that the cursor is always being tracked when miscellaneous text (e.g. system wide messages) happen to be sent to the Line Processor, and the screen will never be messed up.

1E3C2

7p46gk

REENTER code in NLS will clear and repaint the entire screen

1E3D

7p46gl

Mouse tracking will be done by the Line Processor under the

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following conditions:

1E3E 7p46gm

IF the terminal has received a "resume tracking"
command

1E3E1 7p46gn
since the last position cursor command, AND

1E3E2 7p46go
IF there is no input from the TEN, AND

the mouse coords have changed since the last
mouse tracking
operation, or the cursor has been moved since
the last
mouse tracking operation.

1E3E3 7p46gp

Tracking stops under the following conditions:

1E3F 7p46gq

1E3F1 7p46gr
A position cursor command comes from the TEN,

11-OCT-74 0947-PDT ANDREWS: meeting on mon, 10am
Distribution: HARDY, watson
Received at: 11-OCT-74 09:47:27

7p47

Could you please bring data on TIP input and output buffer
sizes for
ARPA, MITRE, OFFICE-1 TIPS? I.e., I want to know current
sizes.
Thanks, Don

7p47a

11-OCT-74 0912-PDT WATSON: meeting to discuss line processor
speed and analysis of office 1 performance and configuration
recommendations.

Distribution: LIEBERMAN, IRBY, ANDREWS, HOPPER, LEE,
PETERS, HARDY, VICTOR
Received at: 11-OCT-74 09:12:54

7p48

lets meet to discuss above mon at 10:00. JDick

7p48a

11-OCT-74 1252-PDT HARDY: Across the board cut in TIP buffer
Allocations.

Distribution: ENGELBART, NORTON, WATSON, RATNER AT
OFFICE-1, IRBY, ANDREWS,, HOPPER, BAIR, LIEBERMAN, hardy
Received at: 11-OCT-74 12:52:11

7p49

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< HARDY, TIPB.NLS;5, >, 11-OCT-74 12:32 MEH ;;;;

7p49a

IN conversation with Malman (Network software manager for BBN) he has told me that TIP operating system 322 required cutting each terminal buffer allocation by about 50% (322 was brought up about a month ago on most TIPS, at the MITRE TIP after Rods and I returned from our SRI-Wash trip). (I checked two of our connections; actual decline was more like 30% not 50). He also says that as soon as TIP operating system that will contain loggin routines comes up buffer allocation will again be cut in half. This mean about NOV 1 we will have only about 1/3 the buffer sizes we think we need today. This decision to take buffer space for operating programs was apparently a directive from ARPA (according to Malman).

7p49b

I see our alternatives as follows:

7p49c

A. Barter with each TIP manager for more buffer space and buy more buffer memory if needed for the TIPS that do not have full capacity and can not give us the buffer space that we require.

7p49d

B. Find an alternative way of connecting clients to Office-1.

7p49e

1. A simple communication net of our own: like a wideband leased line to the East Coast with small terminal concentrators (PDP-8, lineprocessor?, etc),.

7p49f

2) Make an arrangement with Tymshare for early installation of a part of their wideband Telnet.

7p49g

C. Buy and install TIPS of our own at strategic locations.

7p49h

At this time we have no alternative but to initiate

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alternative A in order to continue operation and provide connections for our present and immediate future clients,

7p491

Alternative A--as a permanent tactic--has some disadvantages that I would like to point out: 1) until operating a TIP become profitable, it will be very difficult to get approval for connecting to a TIP and/or increasing buffer sizes. (we require large buffer sizes--by comparison--which take away limited and valuable buffer space available to the TIP managers for their own or related use), 2) we do not really know how much buffer space we really need and may have to ask for more later (it would be best to barter for what we really need the first time), 3) We do not know if the Network will be able to accommodate our future client load projections (these connection problems may only get worse--especially in the Washington area--and sometime in the near future we may not be able to find a TIP that will allow a new client to connect, or the cost to connect may be too expensive. A different alternative choice now, though more expensive and harder to implement, could be the best choice considering our future configuration and loads projected).

7p49J

I recommend we assign a task force to evaluate this new ARPA decision (using buffer space for operating programs) and long term effects on Applications (buffer space is severely limited and already in short supply) so that we can make a proper decision that can be implemented in time before we become trapped,

7p49k

...martin..

7p491

11-OCT-74 1410-PDT HARDY: changes to lineprocessor echo test

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program

Distribution: ANDREWS, HOPPER, irby, watson, hardy
Received at: 11-OCT-74 14:10:45

7p50

Don:

Thanks alot for implementing the changes so soon. I have not had a chance to test them but Rod will on Monday when he tests out the SRI-SRI connection.

...martin..

7p50a

10-OCT-74 1222-PDT ANDREWS: LP echo program modification

Distribution: HARDY, HOPPER, WATSON, norton, irby, engelbart, bondurant

Received at: 10-OCT-74 12:22:08

7p51

The subsystem LPECHODRIVER has been modified to work with hardware loopback connections as well as Lineprocessor loopback tests, as per Martin's request.

The program has two test modes (hardware or Lineprocessor loopback) and the mode is changed by the 'H' command.

7p51a

--Don

7p51b

9-OCT-74 1408-PDT HOPPER: Echo Test Program Modifications

Distribution: HARDY, andrews, watson, norton

Received at: 9-OCT-74 14:08:57

7p52

Don is working on the changes to the program regarding control characters and retransmission. (not difficult) Will you be able to handle your work with the current means of connecting? This means establishing a connection to SRI from the remote end and then looping the modem. Then the program must be run from another line.

7p52a

9-OCT-74 1043-PDT HARDY: Lineprocessor test program

Distribution: ANDREWS, HOPPER, WATSON, ENGELBART, NORTON, hardy

Received at: 9-OCT-74 10:43:32

7p53

Don:

We need a change in the echo test program in order to facilitate installations and isolating the clock problem at MITRE TIP (SRI-W connection). We need to test the modem

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connection at the TIP. To do this we must be able to loop back the modem and run the echo test program. I guess what this means is that the program must not do the retransmission stuff and not send control characters. As scheduled we intend to connect and test out the SRI-menlo connection this coming Monday (14th), th

the following Monday Rodney will go to MITRE to meet BBN man and to isolate the problem there. The program is needed mainly for the MITRE TIP trouble shooting and the trip can not come off with out it.

...martin..

7p53a

9-OCT-74 0928-PDT HARDY: lineguide
Distribution: WATSON, NORTON, VANNOUHUYS, hardy
Received at: 9-OCT-74 09:28:10

7p54

Dirk:

We might consider including a note in the Lineprocessor lineguide manual stating expected changes in the ARPA Network login procedure about Nov 1 74.

...martin...

7p54a

6-OCT-74 1722-PDT WATSON: line processor response
Distribution: ENGELBART, IRBY, ANDREWS, HARDY
Received at: 6-OCT-74 17:22:38

7p55

The load average is .19 and response seems quite slow especially recreating the screen. Even sitting here sending this message the response seems slow. I believe most of the problem is in the network. We need to have bbn tell us how many hops are involved and their interpretations of the effect on response at the speed we want to operate at. Even though this is a delta data, its much slower than at ARC. Having fun playing, Dick

7p55a

4-OCT-74 1159-PDT HARDY: PROMS
Distribution: HOPPER, ANDREWS, IRBY, HARDWARE, WATSON,
hardy
Received at: 4-OCT-74 11:59:36

7p56

The PROMS in the storage room were purchased for the next batch of Lineprocessors Cybernex is assembling for us and offi clients. I have noticed that many of them are missing. If we need more for development we should buy more for development and not rip off the ones in the storage room.

...martin..

7p56a

1-OCT-74 1151-PDT VANNOUHUYS: DRAFT Line Processor Users' Guide

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Distribution: WATSON, HARDY, bair, norton, kelley,
weinberg, beck, vannouhuys
Received at: 1-OCT-74 11:51:28

7p57

I just gave Dick, Martin, and Don Andrews copies of a draft reflecting suggestions by Jim Norton, Jim Bair, and Ann Weinberg,

7p57a

30-SEP-74 1520-PDT ANDREWS: Lineprocessor error documentation file

Distribution: WATSON, IRBY, hardy, andrews, hopper
Received at: 30-SEP-74 15:20:40

7p58

I am writing the code in NLS to append a string on a file to document each Lineprocessor fatal error. It seems a good idea for the utwo diagnostic programs to append information about the diagnostic testing done also. E.g. the lpechotest prog to stick on a message describing the echo test done and the results of the test. The user-oriented test could do likewise including such things as "he forgot to set his terminal type"
==Should put as much information in one place as possible to get a clear picture of whats going on...
-Don

7p58a

26-SEP-74 1729-PDT WATSON: Line Processor Maintenance Costs
Distribution: CARLSON AT ISI, crain at isi, irby, norton, hardy, warshall
Received at: 26-SEP-74 17:29:55

7p59

Bill, in answer to your question of Irby on what the monthly maintenance charge and policy will be on Line Processors I can give the following initial answer, you should put about \$40/month in your budget as a contingency sum to cover a possible trip east by someone. We have yet to establish a firm charging policy. Norton is in charge of such things and is working on it along with other pricing issues. Normal maintenance would probably be handled by mailing either a whole Line Processor or a card each way (ie we send a good one while you mail the defective one). We do not expect many problems in the Line Processor itself. Experience todte indicates most problems of a serious nature have been at the TIP you are using. It is this type of

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thing that could require a trip. We consider the Line Processor in field test at this time and would pay for certain classes of things our selves.
For furthe discussion contact Norton Dick

7p59a

SRIW

7q

30-OCT-74 1246-PDT JORDAN at OFFICE-1: Demos
Distribution: ENGELBART AT SRI-ARC, LIEBERMAN AT SRI-ARC,,
VANNOUHUYS AT SRI-ARC, hardy at sri-arc, bondurant at sri-arc,
jordan

Received at: 30-OCT-74 12:46:40

7q1

I understand that there will be demonstrations in the conference room at WDC next week. Well the only problem is the usual problem, Lineprocessor. I have notified Martin and Rod about the problem's particulars already. I wanted to let everyone know beforehand so disastorous situations could be avoided. Rita,

7q1a

30-OCT-74 1159-PDT JORDAN(RJ) at OFFICE-1: Trouble
Distribution: Hardyohardy at SRI-ARC, Bondarunt at SRI-ARC,
JORDAN at

Received at: 30-OCT-74 12:00:24

7q2

Hardy@SRI-ARC

7q2a

29-OCT-74 1324-PDT JORDAN: Trouble
Distribution: HARDY AT SRI-ARC, jordan
Received at: 29-OCT-74 13:24:41

7q2b

Martin: I just wanted to let you know that when I go into Display
NLS I have the characters D94 in the top left-hand part of the
screen. Also I am having trouble with loosing the display. I will
give it any edit command like replace, and the screen will blank
off and never return. I end up having to turn everything off, let
it sit for awhile and log back on. I did it on Friday, I called
the Delta Data people, who were here yesterday. They replaced the
cards but I'm not sure if it is real
the machine (CRT). It did not do it while they were here, natch.
It had had a chance to rest over the weekend. I have

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called them
back to return tomorrow, but I have a feeling the problem
is
somewhere else because it only happens in lineprocessor
mode. I
just wanted to forewarn you, Rita,

7q2c

P.S. Regular mail failed yesterday. That's why it is
dated
yesterday.

7q2d

2-OCT-74 1642-PDI HARDY: sri=wash lineprocessor
Distribution: LEE, hardy
Received at: 2-OCT-74 16:42:22

7q3

Susan:
How are things working now? Are you still getting errors when
you use nls at ARC? Let me know so I can help if possible to
fix things before next week's demo..
thanks
..martin..

7q3a

3-OCT-74 1310-PDI LEE at SRI=ARC: mouse at sri
Distribution: HARDY AT ARC
Received at: 3-OCT-74 13:10:45

7q4

The bug on the screen seems to be flickering a lot on the
sri lp - I'll be there tomorrow morning if you want more
info...

7q4a

3-OCT-74 0832-PDI LEE at SRI=ARC: The SRI LP
Distribution: WATSON AT ARC, MICHAEL AT ARC, LEHTMAN AT
ARC, HARDY AT ARC,, ANDREWS AT ARC, IRBY AT ARC
Received at: 3-OCT-74 08:32:56

7q5

I've been using the SRI LP this morning with nls at ARC and
had the following problems:

7q5a

1. Twice when trying to delete a character I got the message
pbug error, fndchr. Once when I had deleted a character and
typed a CTL B I got the message BAD (which may have been
from the TIP) and then after that NO SUCH MARKER. Neither
time was there an error on the LP - both times the command
worked fine after I had repeated it again.

7q5b

2. I did a jump to file return and it left the previous text
in the blank lines of the new text. A viewspec f from the
mouse and keyset had no effect - fa set viewspec f recreated
the screen and it was o.k.

7q5c

more messages on network performance

Maybe these things are trivial but they are the only problems I've had so far today - I'll be working on it for awhile longer and will let you know if anything else happens...

7q5d

24-SEP-74 1202-PDT IRBY: lp printer slowness in wash, d.c.
Distribution: ANDREWS, hardy, watson, norton, engelbart
Received at: 24-SEP-74 12:02:48

7q6

Don, in your last message you said that 1) lp printer ran at or about 1200 baud when connected to Data Line Scanner and about the same through timeshare tip and 2) that slowness is solely due to buffer size in LP. These are contradictory statements. In fact, I would conclude from 1 that the slowness is not at all a function of buffer size in LP but due entirely to net delays.

7q6a

-- Charles,

7q6b

27-SEP-74 1401-PDT ANDREWS: Susan Lee's Lineprocessor Problem
Distribution: WATSON, IRBY, HARDY, NORTON, hopper
Received at: 27-SEP-74 14:01:42

7q7

Susan's messages of Sept 25th and 26th describe a lineprocessor problem -- when doing a jump to a statement on the screen the LP crashed while deleting some of the lines. Martin noticed this problem when he was there and thought we were cutting the timing too close because the type of error indicated 'display buffer overflow' in the LP. We have evidently isolated the problem to the OFFICE-1 version of NLS (both NLS there and OLDNLS at ARC) -- and it is associated with deleting a statement partially displayed at the bottom of the screen. It looks like a bug in OLDNLS which can be fixed.
--Don

7q7a

26-SEP-74 0607-PDT LEE at OFFICE-1: lineprocessor
Distribution: HARDY AT ARC, ANDREWS AT ARC, norton at arc, watson at arc
Received at: 26-SEP-74 10:59:20

7q8

Yesterday afternoon I worked on the arpa lineprocessor and noticed an inordinate number of errors after executing the Jump command - didn't seem to happen when it was an offscreen jump - just when it was a Jump (to item). This is the same problem as I was having down at SRI earlier in the

more messages on network performance

day. System reset fixes the problem. Just seems strange that it always happens with a jump...

7q8a

Also, you all may know but it seems you can't use the lineprocessor after telnetting. When I have logged in the second time and try to say ter<ESC> li<ESC> I get -1@ then if I type nls I get the message No Line-Processor data from RLPMD JSYS in GETDEV. If I skip the ter li step and say nls immediately I get the same message = no Line-Processor data etc.

7q8b

Seems you should be able to use the lineprocessor to telnet...

7q8c

25-SEP-74 1211-PDT LEE at OFFICE-1: SRI Lineprocessor
Distribution: HARDY AT ARC, ANDREWS AT ARC, norton at arc,
watson at arc
Received at: 25-SEP-74 12:13:57

7q9

I was using the SRI lineprocessor this morning and I would guess that 95% of the time when I did a Jump (to Item) the error light started flashing. System reset corrected the problem and the jump was done in the process of recreating the screen. However, you should not have to get into the habit of doing system reset after each jump!

7q9a

If anyone else should get this please pass it along...

7q9b

24-SEP-74 1118-PDT WATSON: The Line Processor Connection Chain Meeting
Distribution: HARDY, IRBY, ANDREWS, VICTOR, HOPPER
Received at: 24-SEP-74 11:19:00

7q10

Martin, got the problems in DC solved and is putting together his thoughts from that experience, needs for additional tools etc. Would like to get together say 11:00 Thurs to hear them and see what we can do to help. Doug also complained about the poor speed of the unit and we should discuss what if anything would help speed it up or what measurements are needed to find where the bottleneck is.
Dick

7q10a

2-OCT-74 1642-PDT HARDY: sri-wash lineprocessor
Distribution: LEE, hardy
Received at: 2-OCT-74 16:42:22

7q11

Susan:
How are things working now? Are you still getting errors when you use nls at ARC? Let me know so I can help if possible to

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fix things before next weeks demo,,
thanks
..martin..

7q11a

NBS

7r

17-OCT-74 1358-PDT HARDY: testing NBS input output tip
buffers

Distribution: ANDREWS, hardy, irby
Received at: 17-OCT-74 13:58:39

7r1

Don:

NSRDC will be connecting to Office-1 through two
connections: 1) through the MITRE tip using 208A modems, and
2) through NBS tip using Vadic 1200 baud modems on a
dial-up bases. NBS has given me a number for one of their
Vadic modems which we can use to determine buffer size.
What I would like to do is set-up a couple of days to
perform such tests. I don't think it will take all day each
day but we will have to reconfigure buffer each time which
may take over night. As a first try could
ou call NBS tip (301, 948-5983), and test the connection?
It does not have large buffer sizes yet so the only testing
you can do now is to see if it answers. Could you let me
know if it answers so I can let NBS know and make
arrangements for next step.
thanks
...martin..

7r1a

SRI-SRI

7s

6-DEC-74 0903-PDT PLACKO at OFFICE-1: Hazeltine
Distribution: HARDY AT SRI-ARC, placko
Received at: 6-DEC-74 09:04:52

7s1

I received a call from Tom Little this morning. My
Hazeltine is scheduled to be delivered Dec 20th. If you
think that date might be firm and would like to schedule use
of the display you've loaned SRI, feel free. -- Mike

7s1a

5-NOV-74 1338-PDT PLACKO at OFFICE-1: memo
Distribution: HARDY AT SRI-ARC
Received at: 5-NOV-74 13:38:24

7s2

the memo you received from O'KEEFE was really from PLACKO! -
Mike

7s2a

5-NOV-74 1336-PDT O'KEEFE at OFFICE-1: Problems with
equipment

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Distribution: HARDY AT SRI=ARC, placko
Received at: 5-NOV-74 13:36:43 7s3

I can't seem to be able to execute a process commands in
Plex without the lineprocessor status lights going blooey.
-- Mike 7s3a

4-NOV-74 1530-PDT PLACKO at OFFICE-1: Loaner equipment
Distribution: HARDY AT SRI=ARC, placko
Received at: 4-NOV-74 20:36:51 7s4

I'm still getting a lot of "B>>" on this display, ???? And
the mouse that was here has disappeared (at the same time as
the first lineprocessor did), -- Mike 7s4a

22-OCT-74 1317-PDT PLACKO at OFFICE-1: DNLS station at SRI
Distribution: HARDY AT ARC, norton, placko
Received at: 23-OCT-74 12:20:11 7s5

Thought I'd ask for an update on that terminal that forever
fades away.
Any good news for us? Keep me posted (it's kinda like
keeping up
with the daily double) -- Forever Yours, Mike 7s5a

16-OCT-74 0812-PDT HARDY: 2 modems
Distribution: PLACKO AT OFFICE-1, hardy
Received at: 16-OCT-74 08:12:37 7s6

Mike:
Each installation requires two modems. One at the user site
and one at the TIP site (ie; one on each end of the cable),
...martin.. 7s6a

15-OCT-74 1513-PDT PLACKO at OFFICE-1: High-speed modems
Distribution: HARDY AT ARC, placko
Received at: 15-OCT-74 15:15:33 7s7

In reviewing the PO's I have today, I noticed that the order
for modems
states two (2) modems. Why? Any explanation? Curious --
Mike 7s7a

14-OCT-74 0811-PDT HARDY: SRI=SRI Workstation
Distribution: PLACKO AT OFFICE-1, hardy, norton
Received at: 14-OCT-74 08:11:12 7s8

Mike:
Rodney intends to check out the connection today but I don't

more messages on network performance

think the Workstation will be ready for your use before Monday next. One of the problems causing this delay is that we need the Lineprocessor we intended to loan you to help us debug a TIP problem at another site. Will keep you posted.

7s8a

11-OCT-74 1924-PDT PLACKO at OFFICE-1: Clumsy is as clumsy does

Distribution: HARDY AT SRI=ARC, norton at sri=arc
Received at: 11-OCT-74 19:26:26

7s9

MY message generating capabilities should improve with time, I hope ... sorry for the verbosity == Mike

7s9a

11-OCT-74 1921-PDT PLACKO at OFFICE-1: SRI Utility Facility
Distribution: HARDY AT SRI=ARC, norton at sri=arc, placko
Received at: 11-OCT-74 19:23:24

7s10

With any luck at all (as I understand it) I'll have a display and lineprocessor at the workstation (J1068) Monday. TRUE? Please keep me posted == it's getting important that I have answers for the questions I'm getting. Thanks == MIKE

7s10a

11-OCT-74 1918-PDT PLACKO at OFFICE-1: With a little luck I'll have a hazeltine and lineprocessor at
Distribution: HARDY AT SRI=ARC, placko, norton at sri=arc
Received at: 11-OCT-74 19:20:33

7s11

11-OCT-74 1916-PDT PLACKO at OFFICE-1: Net mail from site OFFICE-1

Distribution: HARDY AT SRI=ARC, placko, norton at sri=arc
Received at: 11-OCT-74 19:18:32

7s12

NSW

7t

11-FEB-75 1006-PST HARDY: LP documentation for Maj Lloyd at the Pentagon.

Distribution: JOHNSON, hardy, norton, watson, bair, irby
Received at: 11-FEB-75 10:06:20

7t1

Sandy:

Would you please send a copy of "WORKSTATION EQUIPMENT REFERENCE MANUAL" and "MICROPROCESSOR TECHNOLOGY TO EXTEND THE UTILITY OF COMPUTER PERIPHERALS" to:

Maj James Lloyd

AFDSC/XM Pentagon, Wash. D.C., 20301.

7t1a

more messages on network performance

Thanks.,
 ..,martin.,

7t1b

11-FEB-75 0959-PST HARDY: ADR NSW Lineprocessors
 Distribution: WATSON, IRBY, NORTON, hardy
 Received at: 11-FEB-75 09:59:26

7t2

Dick:
 Cybernex says ADR is ordering 5 LPs. Four for the Pentagon and one for Gunter AFB.
 Maj Lloyd called yesterday from the Pentagon and says they intend to use three with a Data Interface printer (model unk?), and one with Tektronix 4014-1 graphic display and 4610 hardcopier. Have not heard anything from Gunter. Lloyd expects to use Data Media displays.
 To deliver what Lloyd want will require:
 FOR DM and DI printer
 1) DM and DI LP Firmware,

7t2a

For 4014-1 and 4610
 1) DM, 4014-1, 4610 LP Firmware
 2) 10 bit A/D LP converter
 3) LP foot switch

7t2b

Two and three above have not been cast in cement yet. When they are it will take a month to at least to produce a card and modify the LP box.
 The question also arrises how do we pay for and do Tektronix modifications.
 1) Let Cybernex do all? ; will take a long time, and be expensive.
 2) Have cyernex deliver standard LP box to us, then we mod.
 3)do all the development and documentation, then pass to cybernex to provide as an LP option?

7t2c

..,martin.,

7t2d

2-JAN-75 1143-PST WATSON: Terminals
 Distribution: HARDY, postel, watson
 Received at: 2-JAN-75 11:43:14

7t3

Martin, I promised Jon a TI for Home use last summer. He is now moved in so can utilize it. My own need has been building so would like to use this opportunity to have you order a couple TI's for us and get an extra phone installed at each place. Thanks Dick

7t3a

17-DEC-74 1109-PST ANDREWS: phone for PDP-11

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Distribution: WATSON, IRBY, VICTOR, hardy
Received at: 17-DEC-74 11:09:54

7t4

Exidently we cannot easily move one of the dataphones to the 11.
Martin suggests we get another, attached to the 11, -- takes 2 weeks. We can probably do some temp, patching in the meantime.
Don

7t4a

17-DEC-74 1343-PST HARDY: pdp-11 dial-up
Distribution: ANDREWS, IRBY, WATSON, hardy
Received at: 17-DEC-74 13:43:12

7t5

Don:
I have temporarily moved 329-8226 to the pdp-11. It is still in the ring loop for with the pdp-10, however it is the end one and I think not used very often if at all these days.
In regards to a perminate one for the 11 I have asked Sandy to request that 8226 be taken out of the 10 ring loop so we can connect it to the 11.
Also; at the patch panel is connected to the 11, so whenever you want to connect terminals to it you can--the RED jacks.
...martin...

7t5a

13-DEC-74 1122-PST ANDREWS: ESC on LSI terminals
Distribution: HARDY, watson
Received at: 13-DEC-74 11:22:50

7t6

I just sent message to Dick which should have cc to you also.
The LSI terminals hold the ESC code til it gets next char - which is very bad.
That key should be disabled altogether if possible. skull and crossbones
on it at least!!!!
We will translate another key to ESC.
Don

7t6a

13-DEC-74 1103-PST WATSON: lsi terminals
Distribution: ANDREWS, BELLEVILLE, HARDY, watson
Received at: 13-DEC-74 11:03:17

7t7

i note that to get ESC to work requires two hits of the key.
why is that? Dick

7t7a

2-DEC-74 1015-PST IRBY: telephone line for 4800 baud line

more messages on network performance

processor

Distribution: HARDY, carlson at isi
Received at: 2-DEC-74 10:15:00

7t8

Martin, please sndms9 carlson@isi the exact specs for the phone lines and modems used in SRI-Washington to the Mitre tip. He wants to order two of them for the Pentagon. Thanks and please expedite.
-- Charles,

7t8a

2-DEC-74 0808-PST HARDY: PSR petty cash charge (245).
Distribution: WATSON, hardy
Received at: 2-DEC-74 08:08:24

7t9

Dick:

7t9a

The petty cash charge for \$245, was by Harvey for rental of a TV monitor and tape recorder for the NSW demonstration you guys put on in the East.. See Harvey for the specifics.,
...martin.,

7t9b

20-NOV-74 0952-PST HARDY: Revised NSW Proposal Schedule F (11/14/74).

Distribution: STONE AT OFFICE-1, watson, hardy, engelbart
Received at: 20-NOV-74 09:52:57

7t10

Duane:

Journal 24523 is a new schedule F that was revised 11/14/74 during work sessions with the government auditors here at SRI. The reason for the changes is because we knew more exactly the particular equipment that would be used and their cost,

Could you have a copy of this new schedule F passed to your Price Analyses people as soon as possible to facilitate contract negotiation,
thanks,

...martin... HARDY@SRI-ARC

7t10a

30-SEP-74 0546-PDT LEE at OFFICE-1: dex for nsw

Distribution: HARDY AT ARC, NORTON AT ARC, meyer at arc, peters at arc

Received at: 30-SEP-74 05:48:36

7t11

Does Office-1 have a number (like the one Dean mentioned that can be used to dial direct? If not - what other alternatives do we have - i.e, I need to get back to Liz one of these days...!

7t11a

more messages on network performance

For Jeff; we're looking for a way to bypass the tip?? 7t11b

28-SEP-74 1113-PDT MEYER at OFFICE-1: DEX for NSW
 Distribution: LEE, norton, hardy at arc
 Received at: 28-SEP-74 11:14:35 7t12

Susan: I think Liz will have to dial the Office-1 computer directly, not through the Tymshare TIP. 7t12a

Martin: They're trying to do DEX, TIP input buffer problems, of course. Susan will need a number to call computer directly. If O-1 doesn't have it, maybe we have to set up a special DEX port and special number on Tymshare TIP? 7t12b

26-SEP-74 0909-PDT WATSON: NSW Demo In Washington Oct 7-8. There are four hours of Line Processor Demo scheduled for NSW users including Cols and other big wigs. These are important demos not only effecting what is done this year but funding for FY76. The thing needs to work and those of us going need to familiarize ourselves with its problems recovery procedures etc. Everyone involved with aspects of the Line Processor should do whatever is needed this week to fix any problems known at this time and we should pay close attention to Susans messages indicating present state. Dick

Distribution: HARDY, IRBY, ANDREWS, NORTON, LEE AT OFFICE-1, ENGELBART
 Received at: 26-SEP-74 09:09:42 7t13

BRL

JCN 23-DEC-74 21:20 24727
 Proposal ISD 74-256 Continued NLS Workshop Support for BRL
 Location: (GJOURNAL, 24727, 1:W)
 *****Note: [INFO-ONLY] ***** 7u1

Comments: Signed hardcopy printed today and to be mailed to BRL and RADC tomorrow. 7u1a

18-OCT-74 0920-PDT HARDY: OOPs-error in Lineprocessor cable length.
 Distribution: DTAYLOR AT OFFICE-1, hardy, taylor at office=1
 Received at: 18-OCT-74 09:20:23 7u2

Don:
 It's better than we thought==the person that performed the

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evaluation for me was thinking characters instead of bits, so his calculations were in error by a factor of 8. This means that you can expect satisfactory operation of the Lineprocessor using 20pf cable twisted pair up to approximately 4,800 feet!! We have tested this in our shop in sort of an ideal situation and our calculations have verify very well. We have also evaluated our worst case cable installation that we use everyday for y connections and again the calculations verify.
 ...martin..

7u2a

15-OCT-74 1701-PDT JOHNSON: cable length for lineprocessor
 Distribution: DTAYLOR AT OFFICE=1, TAYLOR AT OFFICE=1,
 hardy, johnson
 Received at: 15-OCT-74 17:01:16

7u3

we have been experimenting and testing cable types to determine max length that could be used with lineprocessors and modems and PDP-11 peripherals (DJ,DU),

7u3a

I expect to have a chart available in about 2 weeks, but I can give you some preview data tht may interest you at this point.

7u3b

1) assuming a noise level of 2-3v and cable standard telephone tye (20pf/ft twisted pair GBI-ITC-2573 Gray Bare Electric Company) you can expect satisfactoy operation at 4800 baud up to apoximately 600 feet, much better than i expected. The reason is because of the low capacity of the cable and we andmodems use a very high tolerance clock.

7u3c

Other calbe types greater tha 20pf/ft are not nearly as good

7u3d

More later...Martin.

7u3e

4-OCT-74 1051-PDT HARDY: your questions
 Distribution: DTAYLOR AT OFFICE=1, hardy
 Received at: 4-OCT-74 10:51:02

7u4

1) 7bit ASCII; yes I mea 10 bit characters, we do not use the 8th bit but is is included.
 2) tty window; the characters are written at the line baud rate (9600 baud) but program controls the effective rate at which the whole message is written. If you want to know more about this contact Don Andrews@SRI=ARC. He programs the lineProcessor.
 3) RS-232 connection from LP to 10; the Lineprocessor does not require any control line connections, only data and

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grounds of course (for our PDP-10 connection we tie 1 and 7 together at both ends, for a TIP connection through a modem we use two wires; on the TIP end they are separate, on the modem end they are tied together through a strapping option inside the modem. These arrangements seem to work fine.) As far as how to handle the PDP11 connection since the Lineprocessor ignores all control line I would just tie up the ones that must be tied to operate. I would recommend you tie 4,5,6,8,20 together in the cable at the Lineprocessor end (from PDP11). This would allow you to by pass the Lineprocessor and connect the display directly to the PDP11 for trouble shooting. Also, if you haven't found a solution for connecting terminals at long distances you might investigate an RS-232 differential system. If you have found a solution I would be interested in hearing. Sorry for the delay in replying
 ...martin..

7u4a

1-OCT-74 1017-PDI DTAYLOR at OFFICE-1: LINE PROCESSOR AT BRL
 Distribution: HARDY AT ARC
 Received at: 1-OCT-74 10:19:07

7u5

MARTIN
 HAVE LOOKED AT THE COPY OF THE INFO YOU GAVE TO STAN ON THE LINEPROCESSOR
 SEVERAL QUESTIONS ARISE THAR YOU CAN ANSWER FOR US IF YOU WILL,
 1,THE REPORT MENTIONS 7 BIT ASCII,WE ASSUME THIS MEANS 10 BIT
 CHARACTERS(1 START,7 DATA,1 PARITY,1 STOP BIT),IS THAT A VALID ASSUMPTION?
 2,AT WHAT SPEED ARE THE MESSAGES SCROLLED ON THE TTY WINDOW?
 3, RS232 INTERFACE IS SPECIFIED CONNECTING THE LINEPROCESSOR AND THE
 PDP SYSTEM,WHAT WIRE LINES ARE ACTUALLY USED?(IE)HOW MANY WIRES ARE
 REQUIRED IN THE CONNECTING CABLE BETWEEN THE LINEPROCESSOR AND THE
 PDP11? THANKS=
DCN

7u5a

27-SEP-74 1140-PDI DTAYLOR at OFFICE-1: LINE PROCESSORS AT BRL
 Distribution: HARDY AT ARC, dtaylor
 Received at: 27-SEP-74 15:54:11

7u6

MARTIN

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HAVE LOOKED AT THE COPY OF THE INFO YOU GAVE TO STAN ON THE LINEPROCESSOR, SEVERAL QUESTIONS ARISE THAT YOU CAN ANSWER FOR US IF YOU WILL.

1. THE REPORT MENTIONS 7 BIT ASCII, WE ASSUME THIS MEANS 10 BIT CHARACTERS

(1 START, 7 DATA, 1 PARITY, 1 STOP BIT). IS THAT A VALID ASSUMPTION?

2. AT WHAT SPEED ARE THE MESSAGES CSROLLED ON THE TTY WINDOW?

3. RS232 INTERFACE IS SPECIFIED CONNECTING THE LINEPROCESSOR AND THE

PDP SYSTEM, WHAT WIRE LINES ARE ACTYALLY USED? (IE) HOW MANY WIRES ARE REQUIRED IN THE

CONNECTING CABLE BETWEEN THE LINEPROCESOR AND THE PDP11?

...DON

7u6a

BELL

7v

13-JAN-75 0858-PST HARDY: Lineprocessor fuse trouble, and Dvorak Keyboard.

Distribution: BEDFORD AT OFFICE=1, hardy, norton

Received at: 13-JAN-75 08:58:32

7v1

Mike:

The trouble with the Lineprocessor sounds like a power supply problem. Have someone that can open top and use a volt meter get the prints and a volt meter and then call Rodney Bondurant here at ext 4057.

Dvorak Keyboard:

If the keyboard tops are the only differences I see no real problem. However if the code is not 8 bit ASCII or something very similar, it could be a problem. You should talk to Jim N about this. In the mean time send what info you have on it (code, what type terminal it connects to, etc) so we can see more clearly what is involved.

...martin., HARDY@SRI=ARC

7v1a

10-JAN-75 0545-PDT BEDFORD at OFFICE=1: request for suggestion on how to diagnose Bell Canada line processor short circuit.

Distribution: HARDY, hardy at sri=arc, day, mattiuz

Received at: 10-JAN-75 05:45:31

7v2

We noticed that the 3/4 amp fuse in the back of the line processor was blown, replaced it with a 1.0 amp (closest we could come to 3/4 amp), and it blew again.

Do you have any suggestions on what we should do next?

Also, did you get my message regarding possible modifications to the Tenex exec that would let one simulate

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a Dvorak keyboard (a keyboard with a different layout for the letters) ?

7v2a

JCN 23=DEC-74 21:15 24726
 Proposal ISC 74=255 Continued NLS Workshop Support for Bell
 Location: (GJOURNAL, 24726, 1:w)
 *****Note: [INFO-ONLY] *****

7v3

Comments: Hardcopy signed and printed today, to be mailed tomorrow. Bell has an invoice for the first half year at \$ 20,000 (jcn to lhd by hand)

7v3a

4-OCT-74 1010=PDT HARDY: contro; characters from the lineprocessor

Distribution: BEDFORD AT OFFICE=1, hardy
 Received at: 4-OCT-74 1042:41=PDT

7v4

Mikke:

Souds to me like the Lineprocessor has a bit stuck on. Could be due to one of the cards not being seated well; turn the power off and try reinserting them, might also be a bad peripheral or mux card. If you haven't already fixed the problem try these things then let me know, or call and I will try to help over the phone, sorry for the delay in reply..

...martin..

7v4a

4-OCT-74 1022=PDT HARDY: centronics printer

Distribution: BEDFORD AT OFFICE=1, hardy
 Received at: 4-OCT-74 1042:40=PDT

7v5

Mike:

I don't think the program is sending spurious control characters to the printer. You may be having some sort of noise problem (TEL LINES, LOCAL CONNECTION??). There is more that we can do to get to the bottom of things. We could monitor the line at TYMshare and catch all the characters going your way for comparison during printing. The best bet, and the one I recommend, would be for you to send us the printer and let us test it here (device and program) we could then insure you that it works properly.

..martin..

7v5a

27-SEP-74 1835=PDT FEEDBACK at OFFICE=1: LP Problems reported by bedford

Distribution: HARDY AT SRI=ARC, feedback, bedford
 Received at: 27-SEP-74 18:36:25

7v6

more messages on network performance

Martin, I'm assuming you will respond to the bug reported by Mike, so I leave it to you. (The msg was addressed to you),
Jim

PS Mike, Thanks for sending a copy to Feedback,

7v6a

26-SEP-74 1345-PDT BEDFORD at OFFICE-1: Problems with the
Hazeltime/Lineprocessor package.

Distribution: HARDY AT SRI-ARC, bedford, mattiuz, feedback

Received at: 26-SEP-74 13:46:33

7v7

Martin, I don't know who to go to for this one; I thought I'd try one area after another 'til I found someone who recognized something familiar in the symptoms:

Every once in a while, spontaneously and irregularly, the keyboard on the Hazeltime appears to lock in such a fashion that it is possible to transmit only control char's. Typing a c (from either the main keyboard or the 5-finger keyset takes you to the EXEC; typing a "t" then gives you the current load avg, and use-stat.

Does this sound like a terminal, lineprocessor, or computer-related problem to you?

Any suggestions will be appreciated.

P.S. The situatonsituation does not appear to be correctable. Shutting off everything, switching to LOCAL and back, etc, don't have any effect.

7v7a

24-SEP-74 1326-PDT BEDFORD at OFFICE-1: your expectations with respect to our print prob's.

Distribution: HOPPER AT SRI-ARC, hardy at sri-arc, bedford

Received at: 24-SEP-74 13:28:32

7v8

What's the status of things from your end? We believe that there are some undefined control characters coming down the line and causing us to generate spurious characters here. Have you found out anything that might support this?

Where would you suggest we go from here? (.....I can hear it now.....)

7v8a

OFF1

7w

14-FEB-75 1311-PST HARDWARE: Office-1 Software Needs.

Distribution: HOPPER, hardy, bair, norton, roetter

Received at: 14-FEB-75 13:11:42

7w1

Dave:

The following is a list of software things that I would like to make you aware of that are needed at Office-1:

7w1a

1)NLS needs to know about Data Media displays (put back; to

more messages on network performance

put back the character bugged, and delete protocol necessary to delete all the old text when changing the screen view, and I sure some others; like scrolling).

- 2) DEX program changes to support cassette input via Lineprocessors.
- 3) DEX program changes to support TI 733 ASR caassette terminal,

7w1b

In addition, a Software person should be assigned the responsibility for blowing new Lineprocessor PROMs. Some one that us Hardware people can go to and get the latest. Hmm... almost forgot a fourth need:

7w1c

- 4) Push on NCC to include the Network user option to set their TIP intercept character to two characters back to back.

Many of the Lineprocessor troubles, when opsrssting over the Net, are associated with noisy lines. The worst effect of noise is when the TIP interprets the noise as an intercept command. This could be almost completely eliminated with double intercept characters.
...martin..

7wid

13-FEB-75 1357-PST MARTINEZ at OFFICE-1: MONITOR FIELD TEST AT OFFICE=1

Distribution: PETERS AT SRI-ARC, BAIR AT SRI-ARC, NORTON AT SRI-ARC,, ROETTER AT SRI-ARC, HARDY AT SRI-ARC, HOPPER AT SRI-ARC,, FEEDBACK, POLLACK, MARTINEZ, WHEAT

Received at: 13-FEB-75 13:55:57

7w2

ON FRIDAY 02/14/75 1500 (3:00 PM) MONITOR VERSION 13142 WILL BE BROUGHT UP. THIS INSTALLATION WILL INCORPORATE FEATURES AND MODIFICATIONS WHICH WE ANTICIPATE WILL ENHANCE THE EFFICIENCY AND

FLEXIBILITY OF TENEX AT OFFICE-1 (AND SO ON).

PARTICULAR DETAILS CAN BE VIEWED IN

<DOCUMENTATION>TENEX,CHANGES;13142.

YOU ARE INVITED TO LOG ON AT THAT TIME AND GIVE 13142 A WORKOUT.

FEEL FREE TO POUND,STRETCH, WIGGLE AND OTHERWISE SHAKE LOOSE ANY WEAKNESSES, BUGS OR GLITCHES THAT MAY POSSIBLY REMAIN IN THE

CODE SO THEY CAN BE CORRECTED.

BOBM

TYM/OFFICE=1

7w2a

31-JAN-75 1035-PST HARDY: Program Changes Needed at Office-1.

more messages on network performance

Distribution: BAIR, HOPPER, PETERS, hardy, norton
 Received at: 31-JAN-75 10:35:06

7w3

Again i am not sure who to pass this info to, so i will pass to you all;

There are four program changes needed at Office=1;

1) DEX ; modified to work with Techtran cassette recorders.

A version has been modified and checked out; Jeannie and Harvey know its where abouts. We need to get it to Office=1 sometime next week because we are sending Bob Speppard a Techtran and he will expect to be able to use it at Office=1.

2) NLPECHODRIVER.SAV;4 ; current Lineprocessor Test programs

This version lives here at ARC. It tests ok and could be at Office=1 for user to use.

3) Network TTY buffer patch ; Necessary to improve Lineprocessor refresh responce.

The patch hs been made here and work properly. Jeff know what needs to be done at Office=1. (it is a monitor patch). Someone (like Jeff) should notify the proper people at BBN about it because it effects all terminal users of the Net, not just Lineprocessors.

4) NLS fix for Data Medias ; Necessary to have the character bugged put back.

This is a simple mod and has been tested here. NSRDC, and maybe ARPA will be getting Data Medias next week so it would be nice to have it fixed soon. Belleville know what needs to be done.

Best...

...martin..

7w3a

23-JAN-75 1314-PDT OPER at OFFICE=1: MONITOR 13141 AT OFFICE=1

Distribution: PETERS AT SRI-ARC, BAIR AT SRI-ARC, NORTON AT SRI-ARC,, LEE AT SRI-ARC, HARDY AT SRI-ARC, HOPPER AT SRI-ARC,, FEEDBACK, POLLACK, MARTINEZ, WHEAT

Received at: 23-JAN-75 13:20:34

7w4

THIS FRIDAY 01/24/75 1500 OFFICE=1 WILL COME DOWN TO ENABLE ANOTHER

FIELD TEST OF TENEX VERSION 13141. DETAILS ARE IN THE FILE <DOCUMENTATION>TENEX,CHANGES;13141.

THANX

BOBM

TYM/OFFICE=1

7w4a

15-JAN-75 1229-PDT MARTINEZ at OFFICE=1: MONITOR FIELD TEST

more messages on network performance

Distribution: PETERS AT SRI-ARC, BAIR AT SRI-ARC, NORTON AT SRI-ARC,, LEE AT SRI-ARC, HARDY AT SRI-ARC, HOPPER AT SRI-ARC, FEEDBACK,, POLLACK, MARTINEZ, WHEAT

Received at: 15-JAN-75 12:28:02

7w5

ON FRIDAY 01/17/75 1500 (3:00 PM) MONITOR VERSION 13141 WILL BE BROUGHT UP. THIS INSTALLATION WILL INCORPORATE FEATURES AND MODIFICATIONS WHICH WE ANTICIPATE WILL ENHANCE THE EFFICIENCY AND FLEXIBILITY OF TENEX AT OFFICE-1 (AND SO ON).

PARTICULAR DETAILS CAN BE VIEWED IN

<DOCUMENTATION>TENEX.CHANGES;13141.

YOU ARE INVITED TO LOG ON AT THAT TIME AND GIVE 13141 A WORKOUT.

FEEL FREE TO POUND, STRETCH, WIGGLE AND OTHERWISE SHAKE LOOSE ANY WEAKNESSES, BUGS OR GLITCHES THAT MAY POSSIBLY REMAIN IN THE

CODE SO THEY CAN BE CORRECTED.

BOBM

TYM/OFFICE-1

7w5a

3-JAN-75 1253-PDT MARTINEZ at OFFICE-1: (RESEND) CANCEL OF FIELD TEST MONITOR

Distribution: PETERS, BAIR, NORTON, LEE, HARDY AT SRI-ARC,, PETERS AT SRI-ARC

Received at: 3-JAN-75 12:53:25

7w6

THE FIELD TEST OF MONITOR VERSION 13141 HAS BEEN CANCELLED. IT MAY

BE RESCHEDULED FOR NEXT FRIDAY, IF SO YOU WILL RECIEVE ADVANCE

NOTIFICATION VIA SNDMSG.

THANX

BOBM

TYM/OFFICE-1

7w6a

3-JAN-75 1037-PDT MARTINEZ at OFFICE-1: CANCELATION OF FIELD TEST

Distribution: PETERS AT SRI-ARC, BAIR AT SRI-ARC, NORTON AT SRI-ARC,, LEE AT SRI-ARC, HARDY AT SRI-ARC, HOPPER AT SRI-ARC,, FEEDBACK, POLLACK, MARTINEZ, WHEAT

Received at: 3-JAN-75 11:04:14

7w7

THE FIELD TEST OF MONITOR VERSION 13141 HAS BEEN CANCELLED. IT WILL

PRESUMABLY BE RESCHEDULED FOR NEXT FRIDAY, IF SO YOU WILL RECIEVE AN ANNOUNCEMENT VIA SNDMSG.

THANX

more messages on network performance

BOBM
TYM/OFFICE-1

7w7a

2-JAN-75 1529-PDT MARTINEZ at OFFICE-1: RESEND- FIELD TEST
MONITOR

Distribution: LEE, HOPPER, HARDY AT SRI-ARC
Received at: 2-JAN-75 15:30:20

7w8

ON FRIDAY 01/03/74 1500 (3:00 PM) MONITOR VERSION 13141
WILL BE BROUGHT UP. THIS INSTALLATION WILL INCORPORATE
FEATURES AND
MODIFICATIONS WHICH WE ANTICIPATE WILL ENHANCE THE
EFFICIENCY AND
FLEXIBILITY OF TENEX AT OFFICE-1 (AND SO ON).
PARTICULAR DETAILS CAN BE VIEWED IN
<DOCUMENTATION>TENEX.CHANGES;13141.
YOU ARE INVITED TO LOG ON AT THAT TIME AND GIVE 13141 A
WORKOUT.

FEEL FREE TO POUND, STRETCH, WIGGLE AND OTHERWISE SHAKE LOOSE
ANY WEAKNESSES, BUGS OR GLITCHES THAT MAY POSSIBLY REMAIN IN
THE
CODE SO THEY CAN BE CORRECTED.

BOBM
TYM/OFFICE-1

7w8a

2-JAN-75 1525-PDT MARTINEZ at OFFICE-1: FIELD TEST MONITOR
Distribution: PETERS AT SRI-ARC, BAIR AT SRI-ARC, NORTON AT
SRI-ARC,, KUDLICK AT SRI-ARC, LEE AT SRI-ARC, HARDY AT
SRI-ARC,, HOPPER AT SRI-ARC, FEEDBACK, POLLACK, MARTINEZ, WHEAT
Received at: 2-JAN-75 15:29:02

7w9

ON FRIDAY 01/03/74 1500 (3:00 PM) MONITOR VERSION 13141
WILL BE BROUGHT UP. THIS INSTALLATION WILL INCORPORATE
FEATURES AND
MODIFICATIONS WHICH WE ANTICIPATE WILL ENHANCE THE
EFFICIENCY AND
FLEXIBILITY OF TENEX AT OFFICE-1 (AND SO ON).
PARTICULAR DETAILS CAN BE VIEWED IN
<DOCUMENTATION>TENEX.CHANGES;13141.
YOU ARE INVITED TO LOG ON AT THAT TIME AND GIVE 13141 A
WORKOUT.

FEEL FREE TO POUND, STRETCH, WIGGLE AND OTHERWISE SHAKE LOOSE
ANY WEAKNESSES, BUGS OR GLITCHES THAT MAY POSSIBLY REMAIN IN
THE
CODE SO THEY CAN BE CORRECTED.

BOBM
TYM/OFFICE-1

7w9a

7-OCT-74 1112-PDT POLLACK at OFFICE-1: ADDITIONAL MEMORY

more messages on network performance

Distribution: NORTON, HARDY AT ARC, norton at arc, pollack
Received at: 8-OCT-74 18:00:07 7w10

TALKED TO SPENCER AND EVERYTHING SEEMS OK, HE'S GOING BACK
TO ROME AND
D.C. THIS WEEK AND WILL SEE ABOUT GETTING FINAL APPROVAL OF
THE CONTRACT FOR THE LAST 64K. 7w10a

WE'RE GOING AHEAD WITH INSTALLATION SCHEDULED FOR THIS
SUNDAY, OCT
13, OFFICE-1 WILL BE 256K 14 OCT, WHICH IS A HOLIDAY, WHICH
GIVES US SOME
LEEWAY IN THE EVENT OF ANY PROBLEMS. 7w10b

SOME INFORMATION WHICH YOU MIGHT WANT TO THINK ABOUT... DO
YOU WANT OFFICE-1
TO STAY AT 256K OR DO U WANT IT GOING BACK TO 192K WHEN
OFFICE-2
COMES ON-LINE? I'LL NEED TO KNOW THAT WHEN SPENCER AND I SIT
DOWN ABOUT NEXT
YEAR. 7w10c

I'M SENDING SPENCER A COST BREAKDOWN OF THE LATEST 64K, HE
SAID HE
DOES NEED RADC'S APPROVAL. 7w10d

HOPE THIS SIGNIFICANTLY REDUCES LOAD, BUT THE LOAD MEANS NLS
IS
SUCCESSFUL, RIGHT? 7w10e

4-OCT-74 1120-PDT HARDY: add on mem
Distribution: POLLACK AT OFFICE-1, hardy, norton
Received at: 4-OCT-74 11:20:45 7w11

Ed:
everything looks good for adding on the 64K mem, spencer
said he would call you today (your secretary) if he does
not give me a call.
..martin.. 7w11a

4-OCT-74 1108-PDT HARDY: off1 mem add
Distribution: NORTON, hardy
Received at: 4-OCT-74 11:08:21 7w12

Jim:
Talked to Spencer today, he has the P.O. for the add on mem,
Says it looks fine and he will add it to the existing
contract (P.O does not have to go to Purchasing). He insured
me he will call Pollack (secretary because Pollack is gone

more messages on network performance

until monday but will check with her sometime today for messages), I will send Pollack a sndmsg and ask him to call me if he has not heard from Spencer.

..martin..

P.S. About Sandy, your message cleared up alot for me: I was under the impression that the gals were assigned to specific people and tasks: Sandy APPS, Joan: Watson, Jeannie: doug,

7w12a

bye

7w12b

3-OCT-74 1252-PDT HARDY: add-on mem at off1
Distribution: NORTON, hardy
Received at: 3-OCT-74 12:52:49

7w13

jim:

Talked to Spencer Floyd, he says justification sounds ok, and will call Pollack when he gets P.O request reflecting same but he wants to wait until after he returns from trip next week before getting approvals he feels are necessary. Jenne is hand carrying P.O. through..

...martin..

7w13a

3-OCT-74 0905-PDT HARDY: Add-on memory at office-1, and sandy

Distribution: NORTON, hardy
Received at: 3-OCT-74 09:05:32

7w14

Jim:

Received your message about need to add on mem at off-1. Will get started on it right away and get back to today. Sandy has got into a mode of working at nights, on some freaky schedule; at her will, is this something you agreed too with her bfore you left? If so, where do I get clerk help during the days (like typing up the P.O. for add-on mem for off-1 and hand carrying it through)????

...martin..

7w14a

3-OCT-74 0611-PDT NORTON: More Memory at Office-1
Distribution: HARDY, watson, engelbart, norton
Received at: 3-OCT-74 06:11:50

7w15

Martin: The following sndmsg from Pollack tells us that they CAN add 64k memory for 5500/month right now at office-1,,,by Oct 14. We MUST do this. Please go into action,,,requisition, PD after tiking with Pollack and Floyd. RADC does NOT control the configuratin,,,there are too many buyers for them to do so , so i dont think the potential approval delay will effect us. If there is to be one, certainly duane stone (beside me) will approve it).

more messages on network performance

Also, though this addition of memory is not the result of a study determining the optimum way to reconfigure, it appears to be the only quick affordable way to go. With the user responses we are getting, the return of vacationers, the growing sophistication of use, multiple output processing, NSA coming and attitudes that demand attention and action from us WE MUST DO IT AND FAST. So go into action for me please and inform me today before 1pm yer time of the state you get it to today, or call me at (315) 330 3857 to discuss if you want.

Here's Pollack's sndmsg.

2-OCT-74 16:32:18,723

Net mail from site OFFICE=1 rcvd at 2-OCT-74 16:32:16

Date: 2 OCT 1974 1630=PDT

From: POLLACK at OFFICE=1

Subject: ADDITIONAL MEMORY FOR OFFICE=1

To: NORTON, NORTON at ARC

cc: POLLACK

7w15a

SUCCESS, WE CAN ADD 64K TO OFFICE=1 ON OCT 13, ON-LINE OCT 14.

7w15b

THERE ARE CERTAIN ADVANTAGES IN HAVING MORE 10'S THAN ANYONE ELSE AROUND.

7w15c

COST: 5500/MONTH THRU END OF CONTRACT, WE WOULD BE ABLE TO LOWER THE PRICE FOR NEXT YEAR IF YOU DECIDED TO MAKE IT PERMANENT.

7w15d

HOW DOES THAT SOUND? I'VE BEEN A LITTLE FASTER WITH THE RESULTS THIS TIME THAN I WAS WITH THE TOTAL SYSTEMS COSTS, SORRY FOR THAT, HOPE THIS MAKES UP FOR IT.

7w15e

PLEASE LET ME KNOW AS SOON AS POSSIBLE WHAT YOU WANT TO DO ,
THANKS
EDWARD

7w15f

(Letter) Letter format

8

MEH 26-FEB-75 08:39 25481

Augmentation Research
Center
Menlo Park, California
94025
Stanford Research
Institute

* DAY MONTH YEAR *

- * NAME OF RECIEVER *
- * NAME OF RECIEVER'S COMPANY *
- * RECIEVER'S STREET ADDRESS *
- * RECIEVER'S TOWN ADDRESS AND ZIP CODE *

Menlo Park, California 94025

Dear Mr * LAST NAME *:

* BODY OF TEXT *

Sincerely,

Augmentation Research Center

Martin Hardy
Supervisor, Computer Facility
(415) 326-6200 X3921

MEH/* CC=PERSON *
* ETC *
* ETC *

(memo) memo format

MEH 26-FEB-75 08:39 25481

SRI

MEMO

TO: * NAME *
*

DATE: * DAY MONTH YEAR

FROM: Martin Hardy

LOCATION: J-2072

SUBJECT: * text *

CC: * . . . *
* . . . *
TWW

* BODY OF TEXT *

My NLS Initial File The way it was 2/26/75.

(J25481) 26-FEB-75 08:39;;; Title: Author(s): Martin E. Hardy/MEH;
Distribution: /MEH([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk:
MEH; Origin: < HARDY, MEH.NLS;345, >, 24-FEB-75 10:26 MEH
#####

To Dave Potter re Office-1 CONAN problem

Dave: I understand that for a period of less than half an hour yesterday, resulting from a mistake in installing some new support software at Office-1, the L10-compiler code that is called on by NLS to compile content-filter patterns was missing at Office-1. That would produce a very noticeable, explicit, and reproduceable problem for a user. If that happened to be the "content-filter" problem that you were referring to when we were linked this morning, it in itself isn't a problem any more. If the particular problem that you encountered is still inducible, please report it via FEED as soon as you can. We appreciate your alertness. Regards, Doug

1

To Dave Potter re Office-1 CONAN problem

(J25482) 26-FEB-75 09:30;;; Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /DAP([INFO-ONLY]) FEED([INFO-ONLY])
JCN([INFO-ONLY]) JCP([INFO-ONLY]) ; Sub-Collections: SRI-ARC;
Clerk: DCE;

To Ron Uhlig re application planning and coordinating

Ron: Last week, in discussing the potential diversity and scope of AMC applications of what we call "augmented knowledge workshop" techniques (whether they be simply SNDMSG, or larger-tool NLS), I commented that you would soon need one or more people just to cover the planning and coordinating. You mentioned that Stefferud and Hootman, who are currently under contract to you, might be brought in to help. If you are interested, and can consider the question at this time, an opportunity will exist next Tuesday 4 Mar for us to talk with Stefferud (don't know if Hootman will be involved unless specifically brought in) -- Einar is coming here with Dave Farber of UC Irvine on other business. We'll not mention the matter at all unless we explicitly hear from you. Jim Norton would manage our part of any three-party arrangement; please contact him whenever you would like to explore the matter further. Regards, Doug

To Ron Uhlig re application planning and coordinating

(J25483) 26-FEB-75 09:42;;; Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /RPU([ACTION]) JCN([INFO-ONLY])
RLL([INFO-ONLY]) RAZY([INFO-ONLY]) ; Sub-Collections: SRI-ARC;
Clerk: DCE;

To FEED re JI's OP questions

Regarding Jean Iseli's Output-Processor question, as in
(HJOURNAL,25479,1) of 26-FEB-75 05:35, ".PlexNum=yxz(LEVEL)":

1

For Jean Iseli: Jean, I'm referring the question to the experts,
and also getting the issue logged to benefit the people working at
improving our customer service. I myself don't know the answer. I'd
guess that a relativey simple L10 user program could do what you
want; but our providing customer service in training for L10-NLS User
Programming, and/or proiding direct programmer support, are important
services that can't fit into the Utility budget for some months yet.
There was considerable discussion about these matters at the
Architects Meeting here last week. Best Regards, Doug.

2

To FEED: Please aim an Output Processor expert at Jean Iseli's
question. Thanks, Doug

3

DCE 26=FEB=75 10:11 25484

To FEED re JI's OP questions

(J25484) 26=FEB=75 10:11;;; Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /FEED([ACTION]) JI([INFO=ONLY]) ;
Sub-Collections: SRI=ARC; Clerk: DCE;

Frank Murphy of MITRE to visit ARC Fri 28 Feb 75

Frank Murphy, who is with MITRE at Bedford, Mass., called yesterday; he will be in the area and would like to visit us next Friday, 28 Feb 75. He mentioned that he is responsible for the Air Force's part of WWMCCS -- which I'm probably phrasing incorrectly, but any significant relationship there implies substantial mutual interest. 1

He mentioned referral to us by a number of MITRE people, including Chuck Sheehan, whose name I remember from our long discussion with Pete Tasker -- I think Sheehan is Pete's boss on MITRE's CINCPAC J6 project that is somewhat involved in DCOTCO (see detailed visit log -- 24321,). Also, Frank mentioned John Morganstern, who was very much interested in NLS for future Command-Control Systems experimentation, back in Spring 73. 2

Frank will arrive at 0900. I'll receive him and map out a day; will have RLL coordinate the rest -- with due note taken of the special nature of that day for us all. 3

Frank Murphy of MITRE to visit ARC Fri 28 Feb 75

(J25485) 26-FEB-75 11:05;;; Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /RLL([ACTION]) JCN([INFO-ONLY])
RWW([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: DCE;

Content Analyzer Filter: Show only text before double-asterisk; do not edit file.

If doesn't find double-asterisk, won't show.

Content Analyzer Filter: Show only text before double-asterisk; do not edit file.

```
FILE strip % (110,) (meyer,strip.ca,) % 1
  (strip) PROCEDURE (sw) ; 1a
    LOCAL TEXT POINTER ptr1, ptr2 ; 1a1
    LOCAL STRING ststr[2000] ; 1a2
    REF sw ; 1a3
    IF FIND *ptr1 SF(ptr1) *ptr1 ["**"] < 2CH SNP > *ptr2 THEN 1a4
      BEGIN 1a4a
        *ststr* = ptr1 ptr2 ; 1a4b
        send (&sw, sststr) ; 1a4c
      END; 1a4d
    RETURN(FALSE) ; 1a5
  END, 1a6
FINISH 1b
```

Content Analyzer Filter: show only text before double=asterisk; do
not edit file,

(J25486) 21-FEB-75 17:22;;; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /DAP([INFO-ONLY]) JCN([INFO-ONLY]) ;
Sub-Collections: SRI=ARC; Clerk: NDM; Origin: < MEYER,
STRIP,NLS;3, >, 21-FEB-75 17:19 NDM ;;;;####;

It's a BOY !

Wow

It's a BOY !

As the sun entered Pisces on Friday February 21 a Pisces son entered our family, Jordan David was born at 1:55 P.M, weighing in at 7 pounds 7 ounces and measuring 19 inches, Mother and Child are both recuperating beautifully.

1

It's a BOY !

(J25487) 21-FEB-75 22:24;;; Title: Author(s): David S.
Maynard/DSM; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections:
SRI-ARC; Clerk: DSM;

ARC Development Group Disk Directories

The file (nsw-sources,directories,1;x) contains a snapshot of the disk directories of the ARC machine taken last January 22. I have attempted to indicate which of these directories we will need to be transferred to BBN in March. Please look this over to be sure it is complete. Additions, deletions, and changes in category should be made to this working file. Thank You.

1

ARC Development Group Disk Directories

(J25488) 23-FEB-75 22:33;;; Title: Author(s): David S.
Maynard/DSM; Distribution: /NPG([ACTION]) DVN([ACTION]) POOH([ACTION]) RWW([INFO-ONLY]) JCP([INFO-ONLY]) ; Sub-Collections:
SRI-ARC NPG; Clerk: DSM;

PI-Write-up, Abbott

RISOS PROJECT
1974 ARPA Project Summary

Prepared for: ARPA IPT Principal Investigators Conference
San Diego, Mar. 12-14, 1975

Prepared by: Robert P. Abbott
Lawrence Livermore Laboratory
Box 808 L-307
Livermore, California 94550

The program's initial intent was to provide a group which is capable of examining any operating system (O/S) for integrity flaws. The group has evolved into what is better described as an audit team in that a given problem in an O/S may or may not be regarded as a security breach depending on the environment of the computer installation itself. As such, it is necessary to identify problems in general and leave the security determination up to the installation.

The underlying philosophy of the project recognizes the similarities in design among the various O/S. It follows that integrity flaws must have similarities which are applicable across the various systems.

The work proceeds along three major lines:

1. A set of programs has been constructed which aid in the examination of O/S. The tools are semi-automatic requiring programmer interaction. The tools operate on a data base which is constructed and maintained for each O/S. The data base elements are:

- a. The output edit from the assembly of the O/S.
- b. The Parsed Data Structure (PDS) is a fixed assembly format in which all O/S edits are placed.
- c. The Total Source Listing (TSL) is identical to the assembly edit with the addition of the sequence numbers from the PDS.
- d. The Master Cross Reference (MCR) is an inverted file of all symbols in an O/S.

The tools themselves consist of:

PI-Write-up, Abbott

- a. The Source Program Alteration Module searches a module of PDS or TSL according to a Boolean list containing opcodes, operands, and labels. User comments may be inserted at each match point. 8a
- b. A Statistical Analysis program operates on the modules in the Parsed Data Structure. 8b
- c. A Cross Reference Interface and Search Program operates on MCR according to a Boolean string encompassing multiple instruction lines. 8c
- d. The External Reference Program produces a listing of all external references. 8d
- e. Compare - capable of comparing two system releases identifying differences, additions, deletions, etc. 8e
2. A modeling effort to produce a graph model of a given O/S in which nodes represent parts of that system - procedures or data structures - and edges show either synchronizing operations between shared components or changes in the use of capability controlled resources. Flaw suspects are to be uncovered at those places where resources are unexpectedly acquired or released, or where the synchronization of shared information is inadequate. 9
3. The development of a TENEX "exerciser" program consisting of a set of programs designed to drive the TENEX monitor through all possible exits of conditional instructions and to note any fault situations that occur. 10
- The tools have been applied to TENEX; GECOS-3; EXEC-8; IBM - VM, OS/MVT. The data base includes multiple copies of some of these systems. It is currently around three times ten to the ninth bits. All programs and the data base are on the LLL Octopus system, but plans are under way to transfer the tools to our PDP-11 system for greater utility to ARPA and DOD. 11
- A taxonomy of generic error classifications is being constructed. The taxonomy is based on our experiences with the various O/S and reflects an analysis of the RISOS file of reported and confirmed errors found in each manufacturer's product. 12

PI-Write-up, Abbott

(J25489) 23-FEB-75 23:36;;; Title: Author(s): Elizabeth J. (Jake)
Feinler/JAKE; Distribution: /ACM([INFO-ONLY]); Sub-Collections:
SRI-ARC; Clerk: JAKE; Origin: < PI, ABBOTT,NLS;2, >, 23-FEB-75
15:46 JAKE ;;;; #####;

PI-Write-up, Abramson

ALOHA SYSTEM RESEARCH
1974 ARPA Project Summary

Prepared for: ARPA IPT Principal Investigators Conference
San Diego, Mar, 12-14, 1975

Prepared by: Norman Abramson
THE ALOHA System
University of Hawaii
Honolulu, Hawaii 96822

1. ALOHA REPEATERS - ALAN OKINAKA

THREE ALOHA REPEATERS HAVE BEEN SUCCESSFULLY BUILT AND TESTED FOR USE IN THE ALOHANET. BY MEANS OF THE REPEATER THE REACH OF THE ALOHANET CAN BE EXTENDED BEYOND THE 50 TO 100 MILE RANGE OF A SINGLE RADIO TRANSMITTER, THE NETWORK CAN BE EXTENDED OVER OR AROUND OBSTACLES AND THE GEOGRAPHICAL COVERAGE OF THE SYSTEM CAN BE SHAPED TO CONFORM TO OTHER REQUIREMENTS. THE REPEATERS HAVE MADE POSSIBLE THE STUDY OF TRAFFIC WHICH ACCESSES THE MENEHUNE THRU SINGLE AND MULTIPLE REPEATER HOPS (SEE ITEM 3). SINCE THE REPEATERS BUILT SO FAR DO NOT INCLUDE PROGRAMMABLE UNITS, WORK ON PROVIDING THIS CAPABILITY IS CONTINUING. AS SOON AS PROGRAMMABLE CAPABILITY IS AVAILABLE, WE PLAN TO USE THE ALOHA REPEATERS IN SUPPORT OF OUR THEORETICAL WORK ON SPATIAL CHANNEL CAPACITY.

2. ALOHA CHANNEL PROTOCOL AND PCU'S - CHRISTOPHER HARRISON

DURING THE PAST YEAR THE FIRST ALOHA PROGRAMMABLE CONTROL UNITS (PCU'S) WERE COMPLETED AND PUT INTO SERVICE. THE PCU'S ARE BUILT AROUND AN INTEL 8080 MICROCOMPUTER CHIP AND PROVIDE IMPORTANT EXPERIMENTAL SUPPORT TO THE THEORETICAL STUDY OF PACKET BROADCASTING CHANNELS AND TO THE STUDY OF PROTOCOLS FOR SUCH CHANNELS (SEE ITEM 3). BY MEANS OF PCU'S WE ARE NOW ABLE TO INTEGRATE CHARACTER-BY-CHARACTER TRANSMISSION, VARIABLE LENGTH PACKETS AND FILE TRANSFERS WITHIN THE EXISTING ALOHA CHANNEL. AN UNEXPECTED BYPRODUCT OF THIS WORK IS THE DEMONSTRATION OF THE FLEXIBILITY OF PACKET BROADCASTING CHANNELS IN PERMITTING A WIDE VARIETY OF SYSTEM AND PROTOCOL CHANGES WITHIN AN ESTABLISHED SYSTEM WITHOUT REQUIRING ANY CHANGES IN THE OPERATION OF EXISTING USERS.

3. STATISTICS COLLECTION SYSTEM - RICHARD BINDER, MICHAEL FERGUSON

AN INITIAL STATISTICS COLLECTION SYSTEM WHICH MONITORS THE PERFORMANCE OF THE ALOHANET HAS BEEN PUT INTO OPERATION AND HAS PROVIDED THE FIRST SET OF STATISTICS AVAILABLE ON ALOHANET TRAFFIC.

PI-Write-up, Abramson

THE SYSTEM MEASURES ALOHANET DOWNTIME, USER PACKETS ON THE RANDOM ACCESS CHANNEL, PACKET LENGTHS, INTERPACKET TIMES, THE NUMBER OF PACKET REPETITIONS AND OTHER QUANTITIES. THE SYSTEM NOW MONITORS ONLY THE RANDOM ACCESS CHANNEL BUT WORK ON UPGRADING THE EXISTING SYSTEM TO ALLOW STATISTICS COLLECTION ON THE BROADCAST CHANNEL FROM THE MENEHUNE TO THE USERS IS IN PROGRESS. THE STATISTICS COLLECTION SYSTEM HAS ALREADY PROVIDED DATA FOR GUIDANCE IN THE USE OF THE ALOHA SIMULATION FACILITY (ITEM 4).

10

4. ALOHA SIMULATION FACILITY - RICHARD BINDER, MICHAEL FERGUSON

11

A SIMULATION FACILITY FOR THE ANALYSIS OF PACKET BROADCASTING CHANNELS HAS BEEN COMPLETED. THE FACILITY CAN ACCOMODATE A VARIETY OF CHANNEL PROTOCOLS AND OF USER CHARACTERISITICS TO ALLOW THE STUDY OF PACKET BROADCASTING SYSTEMS. THE OUTPUT OF THE STATISTICS COLLECTION SYSTEM (ITEM 3) HAS BEEN USED AS A GUIDE IN THE SELECTION OF USER

CHARACTERISTICS FOR THE SIMULATION FACILITY. THE OUTPUT OF THE SIMULATION FACILITY IN TURN HAS BEEN USED TO SUGGEST NEW THEORETICAL RESULTS WHICH WILL BE REPORTED IN EARLY 1975.

12

5. SATELLITE PACKET BROADCASTING - DAVID WAX

13

THE FIRST USE OF A SATELLITE TRANSPONDER IN A PACKET BROADCASTING MODE AMONG MORE THAN TWO USERS WAS SUCCESSFULLY DEMONSTRATED IN 1974. THE TRANSPONDER USED WAS THE ATS-1 VHF TRANSPONDER AND THE EARTH STATIONS IN THIS EXPERIMENT WERE NASA/ARC, THE UNIVERSITY OF ALASKA AND THE ALOHA SYSTEM. THE EARTH STATIONS EMPLOYED WERE SMALL VHF STATIONS SUPPLIED BY NASA; NEW FAST ACQUISITION ALOHA MODEMS WERE LATER EMPLOYED TO IMPROVE ERROR RATES THRU THE ATS-1 TRANSPONDER. IN ADDITION, A NEW TECHNIQUE WHICH ALLOWS THE TRANSMISSION OF SHORT DATA PACKETS AT THE SAME TIME AS A CONVENTIONAL VOICE SIGNAL ON A SINGLE VOICE CHANNEL HAS BEEN TESTED ON THE ATS-1 SATELLITE.

14

6. THEORY OF ALOHA DYNAMICS - THOMAS GAARDER

15

A MATHEMATICAL MODEL OF AN ALOHA CHANNEL WITH BLOCKING AND CARRIER SENSE HAS BEEN CONSTRUCTED TO DESCRIBE THE DYNAMIC BEHAVIOR OF THE CHANNEL. IN THIS MODEL NEW PACKETS AND BLOCKED PACKETS ARE EACH SENT AT TIMES WHICH FORM A POISSON POINT PROCESS. FROM THE SOLUTIONS OBTAINED IT HAS BEEN FOUND THAT THE THRUPTUT MAY APPROACH $1/E$, BUT IN THE SATURATED CONDITION THE AVERAGE DELAY IS PROPORTIONAL TO THE NUMBER OF USERS AND THE USERS ARE BLOCKED MOST OF THE TIME. BY REDUCING THRUPTUT BELOW THE CHANNEL CAPACITY, THE AVERAGE DELAY AND THE AVERAGE NUMBER OF BLOCKED USERS CAN BE REDUCED.

16

PI-Write-up, Abramson

7. VARIABLE LENGTH PACKETS - RICHARD BINDER, MICHAEL FERGUSON 17

THE BEHAVIOR OF AN ALOHA CHANNEL USING VARIABLE LENGTH PACKETS WITH A GEOMETRIC DISTRIBUTION OF PACKET LENGTHS HAS BEEN INVESTIGATED USING THE ALOHA SIMULATION FACILITY AND A MARKOV MODELLING TECHNIQUE. AVERAGE CHANNEL THRUPT AND USER DELAY DISTRIBUTIONS WERE OBTAINED UNDER A VARIETY OF CONDITIONS. RESULTS SHOWING THE EFFECTS OF CHANNEL DATA RATE ON RANDOM ACCESS CHANNEL STABILITY WERE ALSO OBTAINED.

18

8. THEORY OF MULTIPLE USER CHANNELS - SHU LIN 19

WE HAVE OBTAINED NEW CODING RESULTS FOR TWO CHANNEL MODELS. THE FIRST CHANNEL MODEL IS REFERRED TO AS A NOISELESS MULTIPLE ACCESS BINARY ERASURE CHANNEL. IN THIS MODEL, IF THE TWO TRANSMITTED BITS FROM THE TWO USERS ARE BOTH ZEROS (ONES), A ZERO (ONE) IS TRANSMITTED OVER THE CHANNEL TO THE RECEIVER; IF THE TWO TRANSMITTED BITS ARE DIFFERENT, AN ERASED SYMBOL X IS TRANSMITTED TO THE RECEIVER. IN THE SECOND CHANNEL MODEL, NOISE IS INTRODUCED. FOR BOTH CHANNEL MODELS, THE INPUT TO THE DECODER IS A VECTOR WITH SYMBOLS FROM (0,1,X). THE DECODER PROCESSES THE RECEIVED VECTOR AND DECODES IT INTO TWO CODE WORDS, ONE FOR EACH OF THE DATA SINKS.

20

PI-Write-up, Abramson

(J25490) 23-FEB-75 23:37;;; Title: Author(s): Elizabeth J. (Jake)
Feinler/JAKE; Distribution: /ACM([INFO-ONLY]) ; Sub=Collections:
SRI-ARC; Clerk: JAKE; Origin: < PI, ABRAMSON,NLS;3, >, 23-FEB-75
17:35 JAKE ;;;; #####

RLL's trip east,

I am planning a trip East the week of the 10th March. Will speak to you on it. At the moment DCA, OSHA, NIOSH , and AMC are on my list,What about NSF?

RLL's trip east.

(J25491) 26-FEB-75 12:29;;; Title: Author(s): Robert N.
Lieberman/RLL; Distribution: /DCE([ACTION]) ARC=LOG([INFO-ONLY])
JCN([INFO-ONLY]) ; Sub-Collections: SRI=ARC ARC=LOG; Clerk: RLL;

DCE 26-FEB-75 12:30 25492

To DPCS re NAS interest

Dirk, please send documents to Perry

To DPCS re NAS interest

I've had two phone talks his month (10 Feb and 26 Feb) with Dr. John Perry, in the Atmospheric Sciences (Department??) of the National Academy of Sciences -- (202) 389-6619. John (as an AF Colonel) was a program director in ARPA's IPTO for some years, became a skilled TNLS user, and continues his interest. 1

We discussed SRI's recent two proposals to NSF's OSIS, the Editorial Process Center, and the Special Studies Center (24758,); both of them cover areas of great activity and interest in NAS. John had (since the first phone call) phoned Dr. Harold Bamford of NSF's OSIS to mention his interest, and NAS's potential for participating as users. 2

About the EPC stuff in particular: Richard Belknap heads NAS's Printing and Publishing Office. He tells John that at any one time they have some 600 reports in process; they often have distributed-committee authors and reviewers. Belknap apparently already is exploring automated word-processing help from commercial sources. 3

John asks that we send to him (John) a copy of our EPC proposal and any other relevant support material that he could show Belknap. Seems that any comments on existing and declared DPCS activities would also be of interest. An OP Users Guide, too. 4

Note: NAS has an operating revenue of about \$48 million/yr; underlying this is a substantial amount of high-grade professional activity donated by the home organizations of its various study-panel members. John and I both feel that NAS would be an extremely good organization with whom ARC and OSIS could collaborate in a fairly heavy way to explore the applications of a Special-Studies System. 5

To DPCS re NAS interest

(J25492) 26-FEB-75 12:30;;; Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /DVN([ACTION]) DPCS([INFO-ONLY])
RLL([INFO-ONLY]) ; Sub-Collections: SRI-ARC DPCS; Clerk: DCE;

New group Ident = ARC=APP for applications group.

There is a new group ident called ARC=APP (double P) for everyone in applications. USE IT as you like. Everyone who works under JCN is in it and DCE JML are also. There is also ARC=DEV for RWW's group (DCE also in it). SRI=ARC = ARC=APP + ARC=DEV. IF there is a missing name let me know (or better let Kenney know) Thanks.

1

New group Ident = ARC-APP for applications group.

(J25493) 26-FEB-75 12:42;;; Title: Author(s): Robert N.
Lieberman/RLL; Distribution: /ARC-APP([ACTION]) ; Sub-Collections:
SRI-ARC ARC-APP; Clerk: RLL;

To DPCS re Foreign Area Studies group

Dirk to follow up, Robert to coordinate

To DPCS re Foreign Area Studies group

John perry told me today on the phone, as learned by him from a friend of his who is on the editorial staff there, that at the American University there has been for fifteen years a Foreign Areas Studies group for whom our DPCS exploration might be highly appropriate. They are funded by the State Department to turn out a steady stream of reference documents, for every country, that is sort of the U.S. Government standard reference works (for the like of Foreign Service Officers, and in fact for a wide usage).

1

He says that they have sections covering climate, educational system, agriculture, etc, etc. He thinks that they have mostly textual material. They employ a wide array of researchers that generate (very) rough raw material; the resident, professional-editorial staff does a huge amount of re-shaping and polishing, and they employ quite heavy reviewing methods. John says that their methodology must be fairly well established, mentioning that Draft n will be typed with black type where it corresponds to Draft n-1, and red type where it differs.

2

He points out that it is a highly experienced group, that is stable and has a centralized DPCS staff with a large and disparate research staff. Constant production going on. Lots of references to keep track of.

3

I seemed to have overlooked getting the name of a contact there. John's phone number is (202) 389-6619, at the National Academy of Science. Seems worth learning more about.

4

To DPCS re Foreign Area Studies group

(J25494) 26-FEB-75 12:46;;; Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /DVN([ACTION]) DPCS([INFO-ONLY])
RLL([INFO-ONLY]) JCN([INFO-ONLY]) ; Sub-Collections: SRI-ARC
DPCS; Clerk: DCE;

STANDARD NSW FRONTEND CONTROL FUNCTIONS

STANDARD NSW FRONTEND CONTROL FUNCTIONS

INTRODUCTION

One of the goals of the NSW is to provide a more consistent user interface to a network marketplace of tools. This goal is implemented in functions and services provided by the Works Manager (file system, resource control etc.) and the Frontend (command language discipline, help, information portrayal services etc.). There are a number of functions that are frequently used such as deleting the last character input or returning to base command state (the subsystem herald), or getting help that one wants to try and standardize across tools.

Another goal of the NSW is to allow tools built outside the NSW framework to be fairly easily inserted into the NSW. These tools generally have been built to assume that they must provide the above types of functions or assume their provision by their local operating system. These tools as a set have evolved command language and interaction disciplines that utilize the full ASCII code set. Further, some of these tools require single character interaction while others are line or command oriented. Some single character interaction tools such as the QED editor utilize all the control characters for one or more functions.

Discussions on how to handle these tools within the NSW Frontend have gone around a complete circle from "they must be insertable into the NSW with absolute minimal effort", to "they must be modified at least to the extent of not conflicting in character or function use with functions to be standardized across NSW." The latter position seems to have been agreed to at the November NSW meeting, the former at the December meeting, and the latter again at the February meeting.

The purpose of this memo is to restate the problem, indicate that we presently plan to adopt the latest decision in our implementation, and indicate the implications that this decision has for NSW tool installation and use.

If after reading this document, the NSW steering committee wishes the decision changed, they should communicate this quickly to us through Bill Carlson.

The commands to the Frontend and the Works Manager as a set represent an NSW Executive or Agent for the user and he should not have to be aware of where execution is taking place. We see this command set as containing two classes of commands:

- 1) UNIVERSAL COMMANDS - these commands are always available to

STANDARD NSW FRONTEND CONTROL FUNCTIONS

the user no matter which tool he is using. They come in several flavors as described below, 2f1

2) NSW EXECUTIVE COMMANDS - these commands are only available if the user explicitly commands that he be placed in the NSW Executive, probably with a standard control character. He can then later resume the tool he was previously in. 2f2

There are two classes of tools, Class I - tools built or modified to take full advantage of services offered by NSW; Class II - tools built outside NSW and installed with minimal changes (any better suggestions for names of these two classes?) 2f3

It is important that the Universal command set be kept small to minimize character code use conflicts (as can be seen below there seems to be required a fairly large number of standard functions). The functions below seem to be needed based on our experience. We are open to suggestions for fewer functions or additions that may have been overlooked. 2f4

UNIVERSAL FUNCTIONS 3

Set 1 Available at any point 3a

The functions defined below are most reasonably implemented as control characters. 3a1

ESCAPE TO NSW EXECUTIVE 3a2

Help type functions 3a3

CURRENT ALTERNATIVES (causes current alternatives available to user at this point in command specification to be printed out) 3a3a

(If ? is chosen for this function there is the question of interpretation if encountered as the first character in a literal field. One interpretation is to print alternatives; the other is to treat it as literal input. NLS takes the former approach. Any recommendations?) 3a3a1

SYNTAX (prints full syntax of commands legitimate from this point) 3a3b

HELP (takes user to position in a Help database determined by current parse state) 3a3c

If the work with the NLS SCHOLAR program of BBN in NSW

STANDARD NSW FRONTEND CONTROL FUNCTIONS

proves fruitful another level of active tutorial help will become available to NSW at some future point.	3a3d
LITERAL ESCAPE (allows input of characters normally interpreted by the Frontend to be sent to tools or Works Manager)	3a4
Command and Literal editing functions	3a5
BACKSPACE = CHARACTER, SELECTION, OR COMMAND WORD	3a5a
BACKSPACE WORD OR COMMAND FIELD	3a5b
ESCAPE TO EXTENDED INPUT EDITING	3a5c
During the second year of NSW development we are proposing to provide an extended editing facility available for use during command and literal input.	3a5c1
RETYPE SPECIFICATION OR LITERAL TO THIS POINT (this is required for hardcopy terminals)	3a6
COMMAND DELETE (returns user to base command state)	3a7
COMMAND ACCEPT (also being used as a field delimiter)	3a8
ACCEPT A MACRO NAME AND ARGUMENTS	3a9
A macro capability is being proposed for implementation for the second year.	3a9a
FORCE RECOGNITION (this function serves to force attempt at command word or filename recognition ala ESC in Tenex Telnet)	3a10
Set 2 Available only from base command state	3b
This set of commands is always immediately available to Class I tools described above, but only available to Class II tools by first returning to the NSW Executive. For Class I tools these commands would be second level (ie user would first hit character such as space before specifying them; this would allow use of the first command word character by the tools).	3b1
run tool	
quit tool	
resume tool	
execute command in tool and return	
; (comment)	
help	3b1a

STANDARD NSW FRONTEND CONTROL FUNCTIONS

FUNCTIONS TO BE PERFORMED TO INSTALL A TOOL, 4

1) Modifications of the tool's documentation where necessary, 4a

2) Preparation of a simple Grammar. This Grammar will convert new character codes as required to those preempted by the NSW Universal set. Special parse functions may have to be written in some cases, 4b

We would hope to work with tool installers to classify tools into a small number of classes that could be installed with a standard predefined Grammar or minor modification thereof, 4b1

3) Some tools might require some changes at their source code level to fit completely consistently into NSW (file system, character code use), 4c

In worst case tools could be provided a simple Grammar that passed all characters except the escape to NSW Exec character straight through to the tool. In this case standard NSW functions would not be available. QED is an example of a tool that would probably require this procedure, 4d

The "current alternatives" and "syntax" commands will only produce minimally useful information for these tools. The "help" function can get one to help information about the NSW generally, but Class II tools may or may not have an explicit help database, 4e

We would expect Class II tools to use the standard NSW "command accept" (CA) character (to terminate literals) and translate it to ESC as in TECO or whatever is used by these tools. This might require the tool installer to use a parse function for literal collection. See discussion of parse functions in documentation on CML, see Journal (25056,). 4f

FILE NAME RECOGNITION 5

One service we would like to see provided to the user in the NSW is file name recognition. We believe this has proved to be a very useful service to users in Tenex and other systems. At present the design of the Works Manager precludes as powerful a recognition service as in Tenex (the user will have to type in at least one complete field name). The force recognition function mentioned above would be used here, 5a

KEY REDEFINITION 6

The last topic requiring discussion is the possible effect of redefining which keyboard keys mean which functions in one's User

STANDARD NSW FRONTEND CONTROL FUNCTIONS

Profile. The effect is clearly that those codes could only get to the tool if preceded by the literal escape character. If the character must be frequently input to a tool, then the user will have to exercise care.

6a

STANDARD NSW FRONTEND CONTROL FUNCTIONS

(J25495) 26-FEB-75 12:47;;; Title: Author(s): Richard W.
Watson/RWW; Distribution: /SRI-ARC([INFO-ONLY]) LAC([INFO-ONLY])
WEC([INFO-ONLY]) DLS([INFO-ONLY]) MAW([INFO-ONLY]);
Sub-Collections: SRI-ARC; Clerk: RWW; Origin: < WATSON,
CHAR,NLS;11, >, 26-FEB-75 12:44 RWW ;;;;####;

Some NLS editing measurements

sent via sndmsg to tugender@isib and mandell@isib

Some NLS editing measurements

By patching in measurement code into NLS and performing a small number of edits (about 20), I was able to ascertain the following timing information for replace operations on statements:

1

On a reasonably large (500 statements) randomized file (had not been compacted for several months):

1a

The replace primitive CREPTEX took approximately 16 MS, with about 2 MS variance,

1a1

The higher level primitive XREPLACE took about 50 MS before dispatching to CREPTEX. We believe this is due to CLIST and DPSET (which saves away the pre-edited statement for later use by the formatter). Both of these calls are unnecessary for ISI usage and the calls to these functions should be conditional upon an additional parameter to XREPLACE. In addition, we must find out why these routines are taking so long and fix them!

1a2

On the same file, but just compacted:

1b

CREPTEX took about 24 MS for the first few edits.

1b1

The overhead in CLIST and DPSET was reduced to about 45 MS.

1b2

The previous measurements determined by use of DIA's TRACE facility was distorted somewhat by the page fault determination code and by its own collection overhead. The measurements outlined above were taken during the middle of an average day at ARC. Although the sample is small, the numbers should be at least somewhat representative. The amount of time did vary with the size of the statement (increasing with the size of the statement), but I think an average of 20 MS would be a good rule of thumb.

2

Some NLS editing measurements

(J25496) 26-FEB-75 13:14;;; Title: Author(s): Charles H. Irby/CHI;
Distribution: /NPG([INFO-ONLY]) RWW([INFO-ONLY]) JCN([
INFO-ONLY]) ; Sub-Collections: SRI-ARC NPG; Clerk: CHI;
Origin: < IRBY, NLS-MEASUREMYNTS,NLS;1, >, 26-FEB-75 13:10 CHI
;;;####;

Fix for LP=ADM2 PROM program

The (lp,lp,) source code should be changed so that ADM=2 programs say that the DITYPE=4. It is currently set to 2 (hazeltine). Also, NLS should have a complete table as per (lp,lpprotocol,) for padding based on DITYPE. I think CHI is putting/has put that in,

1

Fix for LP-ADM2 PROM program

(J25497) 26-FEB-75 15:46;;; Title: Author(s): Don I. Andrews/DIA;
Distribution: /RLB2([ACTION]) JDH([INFO-ONLY]) ;
Sub-Collections: SRI=ARC; Clerk: DIA;

How To Recreate the Display in L10

procedures for setting up parameters after editing content or structure or to jump a window

How To Recreate the Display in L10

To refresh the screen after editing a file: 1

The procedure "dpset" sets up parameters for refreshing the screen after a command. If "dpset" is properly used, the screen will automatically be refreshed after the command (i.e. CML will call "recred" if necessary). One should look for the most efficient way to make the proper changes. 1a

The procedure "dpset" must be called BEFORE any changes are made in the file. This is so that the display reformatter will have something to compare to in looking to see what has been changed. 1a1

The procedure call should look as follows: 1a2

```
dpset ( type, stid1, stid2, stopstid ) ; 1a2a
```

There are a number of globals which may be passed for "type": 1a3

```
dsprfmt == rewrite the content of one or two statements 1a3a
```

```
stid1 == the stid of the statement that has been changed 1a3a1
```

```
stid2 == the stid of another statement that has been changed, or "endfil" 1a3a2
```

```
stopstid == ignored, pass it "endfil" 1a3a3
```

```
dspstrc == if file restructuring occurred beginning at at one or two places; doesn't rewrite content of statements; will add new statements in a structure 1a3b
```

```
stid1 == the stid of the statement where a structural change begins 1a3b1
```

```
stid2 == the stid of where another structural change begins, or "endfil" 1a3b2
```

```
stopstid == the stid of the statement after which it can stop changing the screen (whether change began with stid1 or stid2); the procedure "dpstp" may be of service here; if you cannot figure out where it should stop, pass it "endfil" (go till end of window) 1a3b3
```

```
dsprfst == rewrites content of one or two statements, then looks for structural changes thereafter 1a3c
```

```
stid1 == the stid of the statement where a changes begin 1a3c1
```

How To Recreate the Display in L10

stid2 == the stid of where another set of changes begin, or "endfil"	1a3c2
stopstid == the stid of the statement after which it can stop changing the screen (whether change began with stid1 or stid2); the procedure "dpstp" may be of service here; if you cannot figure out where it should stop, pass it "endfil" (go till end of window)	1a3c3
dspjpf == jump command in one window only, no editing	1a3d
stid1 == the stid of the statement to be at the top of the screen; see below for other parameters which must be set	1a3d1
stid2 == "endfil"	1a3d2
stopstid == "endfil"	1a3d3
dspyes == completely refresh all windows holding one or either of two files specified	1a3e
stid1 == the stid of a statement in the file where changes will be made	1a3e1
stid2 == the stid of a statement in the file where another set of changes will be made, or "endfil"	1a3e2
stopstid == "endfil"	1a3e3
dspno == do no display refreshing	1a3f
stid1 == "endfil"	1a3f1
stid2 == "endfil"	1a3f2
stopstid == "endfil"	1a3f3
dspallf == refresh the entire screen	1a3g
stid1 == "endfil"	1a3g1
stid2 == "endfil"	1a3g2
stopstid == "endfil"	1a3g3

The procedure "dpstp", when passed an stid, returns the stid of the next statement in the file at the same or a higher level. This can be used as the stopstid in "dpset" if structural changes

How To Recreate the Display in L10

are occurring such that you don't know a priori what the last statement changed will be.

1b

To move a window (jump):

2

The global "curmkr" is a text pointer pointing to the statement at the top of a window in DNLS, or the CM in TNLS.

2a

The first word of "curmkr" should be set to the stid of the statement you want at the top of the screen (in TNLS the statement which you want to hold the CM).

2a1

The second word of "curmkr" should hold the character position for the CM. (In DNLS it is always 1.)

2a2

The global "cspupdate" should be set to the address of the display area descriptor for the window which you want changed.

2b

In TNLS, it is always the address contained in the global "tda".

2b1

If you wish to change the window which held the bug at the time of the last CONFIRM, you may use the statement:

2b2

```
cspupdate = lda();
```

2b2a

This also works for TNLS.

2b2b

The global "cspvs" is a two word array which should hold two viewspec words for the new view.

2c

If you have a REFed variable called "da", have not edited the file, and do not wish to change the viewspecs, you might use the following sequence of commands:

2d

```
curmkr = stid ;      %stid of stmt to be put at top of
window%
curmkr[1] = 1 ;
&da = cspupdate = lda(); %address of last display area%
cspvs = da,davspec;  %first current viewspec word%
cspvs[1] = da,davspec2; %second current viewspec word%
dpset(dspjpf, curmkr, endfil, endfil);
```

2d1

If you have edited the file, use the type "dspyes" instead of "dspjpf" in your call on "dpset".

2e

How To Recreate the Display in L10

(J25498) 26-FEB-75 18:14;;; Title: Author(s): N, Dean Meyer/NDM;
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Training Schedule... as of Jan 75(UD)

Susan, This may be useful to you in setting up your schedules. It does show the training given as of Dec 74. It was the neatest way of letting everybody know. Numbers in front of idents are the actual date of arrival. Jim

Training Schedule... as of Jan 75(UD)

(schedule) USER DEVELOPMENT TRAINING SCHEDULE - latest months first
(by week beginning)

Dec	Jan	Feb	
2 9 16 23 30	6 13 20 27	3 10 17 24	
AF Auditor.....		pending...?	1c
ARCHS.....	20...		1d
ARPA SRL9JMB.....	6JMB SRL?		1e
BRL 9-12JHB			1f
Bell JCN 13NDM			1g
ETS 17JHB			1h
Hudson 18JHB			1i
IBM Gaithersburg.....		pending...?	1j
MCA 19 20JHB			1k
MIT			1l
NSA 2-5SRL			1m
NSRDC 13JHB.....	20 SRL?		1n
RADC 23JHB			1o
SRI...3JHB.....	13?SRL		1p
Tymshare			1q
TRAINING TRAINERS,RJ,JMB.....		3?JHB	1r
FALL 74 == for the record:			1s
Aug74	Sept	Oct	NOV
19 26 2 9 16	23 30 7 14	21 28 4 11 18 25	
NSRDC 20&21SRL			1v
ARCHS 9-13			1w

Training Schedule... as of Jan 75(UD)

Hudson	16&17			1x
ETS	18&19			1y
Bell JCN		11		1z
MIT		14-15		1a@
Rome		16-18	11-18SRL	1aa
BRL		21-22		1ab
MCA		postponed		1ac
AF Auditor		pending...	Nov	1ad
IBM Gaithersburg		pending...	Nov	1ae
Tymshare				1af

Training schedule... as of Jan 75(UD)

(J25499) 26-FEB-75 19:52;;; Title: Author(s): James H. Bair/JHB;
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