pro-log (PROM Programmer)

Jim: We had to return the PROM programmer device we have been
borrowing from the Electronics and Bioengineering Lab. (They
anticipate 80%-100% utilization over the next three to four days.)
This happens to come at a time when Don wants to do some more PROM
programming for the Line Processor. To this end Dirk will request a
no-charge purchase order be issued to Pro-Log Corporation (attention:
Mr. Lee) to cover loan of one of their model M810 PROM programmer
devices. If SRI commits itself to purchase this unit by Jan 30,
Pro-Log will loan this unit till then at no charge. If not they will
expect us to pay a rental fee.   1

Digital Development Group has recently placed an order to purchase
a model M810 unit form Pro-Log. I have discussed this with Bruce
Clark of DDG and we have concluded we could share this device with
minimum of conflict.   2

Bob Wing has Digital Developments Group's requisition (12-19-73)
and is waiting for a memo from us of our intended usage to facilitate
justification to purchase with capital funds. He further would like
to wait till after the first of the year, thus the request for a
no-charge Purchase Order.   3

Justification:
This device is needed by ARC as soon as possible to facilitate
project efforts associated with the Line Processor. Our projected
needs are about 20% over the next two months with diminishing
usage forcasted after that, at least no greater than 20% usage. --
We do expect to do some PROM programming on a continual basis, but
it will probably warrant and be to our best interests to contract
out for this service.   3a

pro-log (PROM Programmer)

(J21291) 4-JAN-74 15:42;   Title: Author(s): Martin E. Hardy/MEH;
Distribution: /JCN DVN RWW CHI DIA; Sub-Collections: SRI-ARC; Clerk:
JML;
Origin: <HARDY>PRO-LOG.NLS;16, 4-JAN-74 15:40 JML ;

Video Display, Hazeltine

Hazeltine will loan us a model 2000 video display for a couple of days next week.   1

This display costs $2995 + upper/lower case option. It leases for $150/mo minimum three months or $88/mo minimum one year. Deliveries are 60 days after receipt of order.   2

Upper/lower case option is a $200 additional one-time charge, lease or purchase.   3

Delays to perform any screen function (insert character, delete character, delete line, delete screen, etc) is claimed to be six milliseconds, this is good in comparision to other video displays.   4

Local representative is Bob Bauman San Mateo (415) 574-4800.   5

Video Display, Hazeltine

(J21292) 4-JAN-74 15:52;   Title: Author(s): Martin E. Hardy/MEH;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: JML;
Origin: <HARDY>HAZEL.NLS;5, 4-JAN-74 15:51 JML ;

Response to question in 21289 about 21287

In the insert and replace character commands I inserted only one
character. In most cases I did the simplest form (least typing) of
each command.   1

Response to question in 21289 about 21287

(J21293)   4-JAN-74 17:03;   Title: Author(s): Susan R. Lee/SRL;
Distribution: /CHI; Sub-Collections: SRI-ARC; Clerk: SRL;

Request for Means to Send Journal Items to Online Addressees Only

Jim White -
We have been remined that we still need a means of addressing Journal
iems to all ARPANET people who receive online delivery. In the
meantime, Marcia is being asked to make a Group for all those who get
online delivery, so that messages can be addressed to them.
                    -Jeanne   1

Request for Means to Send Journal Items to Online Addressees Only

(J21294)   4-JAN-74 17:06;   Title: Author(s): Jeanne B. North/JBN;
Distribution: /JEW RWW MDK MLK; Sub-Collections: SRIARC NIC ; Clerk:
JBN;

Suggestions

I think NIC/QUERY sould impliment ⊺W and <esc> and ⊺R (at least the
last) when typing the object of Show. I also think NLS sould
impliment ⊺Q as and ⊺S and ⊺R when entering text, more or less as in
SNDMSG, although some sort of accomodation for the fact that <cr>'s
are not normally put into statements would be necessary.   1

Suggestions

(J21295)   4-JAN-74 23:41;   Title: Author(s): A. D. (Buz) Owen/ADO;
Distribution: /NPS I JI(Sent this to NPS instead of your list because
its easier to remember.); Keywords: NLS,NIC/QUERY; Sub-Collections: NIC;
Clerk: ADO;

Possible source of an experimental mini for NLS front end

Attention RWW CHI JCN

Possible source of an experimental mini for NLS front end

Dick, Charles, JCN et al: Travelling with Dave Brown, got talking about their PDP-11 situation. They expect a rise in production usage that would more than saturate their current machine, and are ordering a second machine. I suggested to Dave that if we were dollar-pinched out of getting one early, it would seem to me to be very useful to have some use of their machine so that we could get on with our software development and test our NLS-front-end notions.   1

It seems possible that ARC could get Capital Equipment money for interface equipment, to IMP and local terminals; then we get time slots to do our checkout and testing. I'd assume that we could move the special hardware we purchased to our own 11 later.   2

They are sure to get advantage from having the 11 tied to the Network, so it would be worth some trouble to them to cooperate. The issue is open; Dave Brown is very willing to go along with it.   3

Dick: I'd like to see an assessment of feasibility and cost.   4

Possible source of an experimental mini for NLS front end

(J21296) 5-JAN-74 12:27;   Title: Author(s): Douglas C. Engelbart/DCE
; Distribution: /jcn   rww   chi   drb   bc   ; Sub-Collections: SRI-ARC;
Clerk: DCE   ;

listings of sample ORBA copy, read in thru DEX

<KOLLEN>LARRYTAPE.NLS;1, 5-JAN-74 12:39 JHK2 ;   1

  W2524-398X   CONGRESSMEN OBJECT TO FREE   1a

                                                                        1b

               TV TIME FOR POLLUTION MESSAGE   1c

                                                                        1d

  Six US congressmen have urged the three major   1e

                                                                        1f

  US TV networks not to provide free air time   1g

                                                                        1h

  for an "approach to pollution" message by the   1i

                                                                        1j

  US Chamber of Commerce. The message advocates   1k

                                                                        1l

  balancing the need to clean up the air, land   1m

                                                                        1n

  and water against the cost in terms of the   1o

                                                                        1p

  food, housing, jobs and clothing that indus-   1q

                                                                        1r

  try provides. The congressmen, all Democrats,   1s

                                                                        1t

  contend that the message is intended to   1u

                                                                        1v

  weaken public support for strict environmental   1w

                                                                        1x

listings of sample ORBA copy, read in thru DEX

protection measures. K.   1y

1z

NEW YORK TIMES 21 AUG 73 p.55:1 8"   1a@

1aa

W2525-398   US ARMED FORCES TO GET   1ab

1ac

SATELLITE COMMUNICATIONS   1ad

W2524-398X   CONGRESSMEN OBJECT TO FREE TV TIME FOR POLLUTION
MESSAGE Six US congressmen have urged the three major US TV
networks not to provide free air time for an "approach to
pollution" message by the US Chamber of Commerce. The message
advocates balancing the need to clean up the air, land and water
against the cost in terms of the food, housing, jobs and clothing
that indus- try provides. The congressmen, all Democrats,
contend that the message is intended to weaken public support for
strict environmental protection measures. K. NEW YORK TIMES 21
AUG 73 p.55:1 8" W2525-398   US ARMED FORCES TO GET
SATELLITE COMMUNICATIONS The US Navy will buy 4 satellites to be
used in its FleetSatCom global communications net- work. The
Army, Air Force and Navy will be using the multipurpose system
for communica- tions and defense requirements. The satel- lites
will cost $64.2 million and the first will be launched in 1975,
with the entire system operational by mid-1976. M. AVIATION
WEEK & SPACE TECH. 20 AUG 73 p.21 2p. W2526-398X   US FIRM TO
MARKET COLOR TV'S IN JAPAN Motorola, Inc. of the US has
concluded an agreement with the Aiwa Co., Ltd. of Japan to
market US-made large-screen color TV sets in Japan. The first
sales of Quasar 25-inch sets are planned for this fall. The
move, which reverses the trend of Japanese penetra- tion of the
US consumer electronics market, has been made possible by recent
devaluations of the $US, the growing affluence of Japanese
consumers, and the limited number of large- screen TV's available
in Japan. K. NEW YORK TIMES 21 AUG 73 p.41:6 8" 7-398X
US WRITERS DEPLORE OBSCENITY RULING Robert Wright of the New
York Times has interviewed several well-known US authors
concening their views on the Supreme Court's recent obscenity
ruling. Kurt Vonnegut Jr., Irving Wallace, John Updike and
Truman Capote all deplore the new ruling. Some authors   1ae

say they will leave the US if the obscenity ruling affects their
works, while others feel that the regulation marks the end of
literature in the US. L. NEW YORK TIMES 21 AUG 73 p.38:1

listings of sample ORBA copy, read in thru DEX

1/4p.   2528-398   VIDEOTAPE COULD SPEED   UP COURT CASES   Judge
Frederick T. Williams of Columbus, Ohio,   suggests that the
backlog of criminal cases   facing courts in the US could be
cleared up   via the use of videotape. He gives examples   of three
separate cases in Ohio where video-   tape transcripts were used
successfully to   cut down trial time, in some cases by as much   as
66%.   The testimonies in these cases were   pre-taped and then
shown to juries in an   edited version which eliminated all
statements   to which an objection had been sustained. M.   EDUC.&
INDUSTRIAL TELEVISION   AUG 73p.20 2p.   29-398X   TV NETWORKS
SAID FACING   PRESSURE WITH COURAGE   John J. O'Connor of the New
York Times dis-   cusses the courage and fairness with which   the
US TV networks are responding to growing   pressure tactics.   He
particularly commends   CBS' refusal to cancel two repeat episodes
of the "Maude" series, in which the central   character becomes
pregnant and has an abor-   tion.   The US Catholic Conference
complained   that the shows "propagandized" for abortion,   and did
succeed in convincing about 40 CBS   affiliates to cancel the
reruns.   K.   NEW YORK TIMES   21 AUG 73   p.55:1   21"   0-398
FINLAND'S PRESS COUNCIL   ENCOMPASSES ALL NEWS MEDIA   Finland's
Council for Mass Media is the   world's first press organization to
include   all of a nation's news media in its member-   ship.
Established in 1969, the council is   concerned with consumer or
member complaints   about written or broadcast material, journal-
ists' information gathering methods and press   freedom.   Council
members include 10 national   dailies, 100 local papers, 126
weeklies,   about 1,500 periodicals and a state-operated   broadcast
network.   M.   EDITOR & PUBLISHER   11 AUG 73   p.26   1p.   1af

                                                                              1ag

The US Navy will buy 4 satellites to be used   1ah

                                                                              1ai

in its FleetSatCom global communications net-   1aj

                                                                              1ak

work.   The Army, Air Force and Navy will be   1al

                                                                              1am

using the multipurpose system for communica-   1an

                                                                              1ao

tions and defense requirements.   The satel-   1ap

3

listings of sample ORBA copy, read in thru DEX

1aq

lites will cost $64.2 million and the first   1ar

1as

will be launched in 1975, with the entire   1at

1au

system operational by mid-1976. M.   1av

1aw

AVIATION WEEK & SPACE TECH. 20 AUG 73 p.21 2p.   1ax

1ay

W2526-398X   US FIRM TO MARKET   1az

1b@

COLOR TV'S IN JAPAN   1ba

1bb

Motorola, Inc. of the US has concluded an   1bc

1bd

agreement with the Aiwa Co., Ltd. of Japan to   1be

1bf

market US-made large-screen color TV sets in   1bg

1bh

Japan. The first sales of Quasar 25-inch   1bi

1bj

sets are planned for this fall. The move,   1bk

1bl

which reverses the trend of Japanese penetra-   1bm

1bn

4

listings of sample ORBA copy, read in thru DEX

tion of the US consumer electronics market,   1bo

                                                                    1bp

has been made possible by recent devaluations   1bq

                                                                    1br

of the $US, the growing affluence of Japanese   1bs

                                                                    1bt

consumers, and the limited number of large-   1bu

                                                                    1bv

screen TV's available in Japan. K.   1bw

                                                                    1bx

NEW YORK TIMES 21 AUG 73 p.41:6 8"   1by

                                                                    1bz

7-398X   US WRITERS DEPLORE   1c@

                                                                    1ca

            OBSCENITY RULING   1cb

                                                                    1cc

Robert Wright of the New York Times has   1cd

                                                                    1ce

interviewed several well-known US authors   1cf

                                                                    1cg

concening their views on the Supreme Court's   1ch

                                                                    1ci

recent obscenity ruling. Kurt Vonnegut Jr.,   1cj

                                                                    1ck

Irving Wallace, John Updike and Truman Capote   1cl

listings of sample ORBA copy, read in thru DEX

1cm

all deplore the new ruling.   Some authors   1cn

1co

say they will leave the US if the obscenity   1cp

1cq

ruling affects their works, while others   1cr

1cs

feel that the regulation marks the end of   1ct

1cu

literature in the US.   L.   1cv

1cw

NEW YORK TIMES   21 AUG 73   p.38:1   1/4p.   1cx

1cy

2528-398   VIDEOTAPE COULD SPEED   1cz

1da

            UP COURT CASES   1da

1db

Judge Frederick T. Williams of Columbus, Ohio,   1dc

1dd

suggests that the backlog of criminal cases   1de

1df

facing courts in the US could be cleared up   1dg

1dh

via the use of videotape.   He gives examples   1di

1dj

listings of sample ORBA copy, read in thru DEX

of three separate cases in Ohio where video-   1dk

                                                                      1dl

tape transcripts were used successfully to   1dm

                                                                      1dn

cut down trial time, in some cases by as much   1do

                                                                      1dp

as 66%. The testimonies in these cases were   1dq

                                                                      1dr

pre-taped and then shown to juries in an   1ds

                                                                      1dt

edited version which eliminated all statements   1du

                                                                      1dv

to which an objection had been sustained. M.   1dw

                                                                      1dx

EDUC.& INDUSTRIAL TELEVISION   AUG 73p.20 2p.   1dy

                                                                      1dz

29-398X   TV NETWORKS SAID FACING   1ea@

                                                                      1ea

              PRESSURE WITH COURAGE   1eb

                                                                      1ec

John J. O'Connor of the New York Times dis-   1ed

                                                                      1ee

cusses the courage and fairness with which   1ef

                                                                      1eg

the US TV networks are responding to growing   1eh

listings of sample ORBA copy, read in thru DEX

1ei

pressure tactics. He particularly commends   1ej

1ek

CBS' refusal to cancel two repeat episodes   1el

1em

of the "Maude" series, in which the central   1en

1eo

character becomes pregnant and has an abor-   1ep

1eq

tion. The US Catholic Conference complained   1er

1es

that the shows "propagandized" for abortion,   1et

1eu

and did succeed in convincing about 40 CBS   1ev

1ew

affiliates to cancel the reruns.   K.   1ex

1ey

NEW YORK TIMES 21 AUG 73 p.55:1 21"   1ez

1f@

0-398   FINLAND'S PRESS COUNCIL   1fa

1fb

ENCOMPASSES ALL NEWS MEDIA   1fc

1fd

Finland's Council for Mass Media is the   1fe

1ff

listings of sample ORBA copy, read in thru DEX

world's first press organization to include   1fg

                                                             1fh

                                                             1fi

all of a nation's news media in its member-   1fj

                                                             1fk

ship.   Established in 1969, the council is   1fl

                                                             1fm

concerned with consumer or member complaints   1fn

                                                             1fo

about written or broadcast material, journal-   1fp

                                                             1fq

ists' information gathering methods and press   1fr

                                                             1fs

freedom.   Council members include 10 national   1ft

                                                             1fu

dailies, 100 local papers, 126 weeklies,   1fv

                                                             1fw

about 1,500 periodicals and a state-operated   1fx

                                                             1fy

broadcast network.   M.   1fz

                                                             1g@

EDITOR & PUBLISHER   11 AUG 73   p.26   1p.   1ga

                                                             1gb

listings of sample ORBA copy, read in thru DEX

(J21297) 5-JAN-74 13:04;   Title: Author(s): Michael T. Bedford/MIKE;
Distribution: /MIKE; Sub-Collections: NIC; Clerk: MIKE;

Bedford - Ryan Project : On-going

Hi, Penny how are you? If you'd like to take a look at what L-10
looks like, your can do it by printing the branch that is referred to
in the link in this statement
(userguides,l10-guide,4b:wn).......that's it right there, the link.
Just P[rint] B[ranch] [A:] .1   then gve a space and the up-arrow,
which indicates that you don't really want Branch #1, you want the
first (in this case the only) branch contained in a link in statement
#1
For the viewspecs ([V:])m, you can give a carriage return, since I
already put them in the link itself.   1

(journal) Journal Documents (jrnlrec)   2

(tor) NOTES FOR THE TORONTO TALK   3

   DurIng all of this talk, i am assuming that someone else, either
   yo or Don has explained the background of BPG, including: 3a

      location in company structure   3a1

      objectives   3a2

      mthods of operation   3a3

      etc.   3a4

   home ta   3b

      background   3b1

         initial delphi study on the home services... what services

   **looked most probable   3b1a

      purpose   3b2

         to determine what direction the technological emphasis was
         taking are there some real problems that must be
         overcome....what will the side-effects of some of these
         services be ?   3b2a

      methods (methodology = SPRITE   3b3

         what is sprite ?   3b3a

            sequential polling and review of interacting teams of
            experts   3b3a1

            identify groups or disciplines with a stake in the future
            of the these services (that is, their future development)

and get them to compare note re their assumption,
expectations, and fears re the development of the
services.   3b3a2

asking the groups to pool their knowledge and develop
some forecasts abot the future of a particular technology
(traditioally) or process   3b3a3

How is sprite different from Delphi ?   3b3b

who are the experts ?   Sprite recognizes that definitions
vary.   3b3b1

accent on identifying differences rather than on coming
to a conclusion   3b3b2

reliance on comments for developing subsequent round,
rather than on the statistical data   3b3b3

areas covered   3b4

privacy (with respect to other people)   3b4a

securtiy (with respect to data)   3b4b

interpersonal relations (expected changes in how we relate
to people)   3b4c

time (how much more free time, how will we spend it ?)   3b4d

trvl- comm'ns   3c

purpose   3c1

to develop a better understanding of what factors motivate
businessmen to travel rather than use comunications media,
and to understand what aspects of their travel could be
substituted for by these same media, or pedia that are bing
developed.   3c1a

methods   3c2

survey of some 40,000 business travelers, traveling between
Montreal and (Toronto, Ottawa, and Quebec City), and Toronto
and (Ottawa).   9000 replys expected.   3c2a

cooperation between many different groups, each with a
vested interest in the results was necessary. Some of
cooperating groups included: 3c2b

Air Canada, CP Air, CN Rail, Voyageur Bus, Gov't. of Quebec,   3c2b1

parameters around which the questionnaire was based   3c3

corridor being traveled (even the idea of a corridor is crucial)   3c3a

type of company or institution sponsori he trip, and h travelers situation in that company   3c3b

principle reason or purpose for making the trip   3c3c

secondary reasons for the trip (business and non:business)   3c3d

nature of communication process that will dominate the meeting, ie: 3c3e

bargaining   3c3e1

decision-making   3c3e2

courtesy or persoal relations   3c3e3

security or confidentiality required   3c3e4

duration of the trip   3c3f

types of face-to-face communication that might have been replaced by telecommunication.Examples: 3c3g

showing visual material   3c3g1

talking to a number of people at one time   3c3g2

talking to a number of different groups in the course of the day.   3c3g3

areas for further work.....where has it lead us   3c4

intra-city transportation elements   3c4a

energy consumption :   travel vs. communications   3c4b

visual   3d

conference T.V.   3d1

computer conferencing   3e

3

Bedford - Ryan Project : On-going

general idea ..... new form of interaction   3e1

asynchronous comm'n. with sophisticated retrieval
capabilities   3e1a

personal touches possible like anonymous messages,
confidential messages, etc.   3e1b

input management routines: don't enter this comment until
Larry has already read the text once; don't enter this
comment until Nov. 28, etc.   3e1c

some specifice examples of how it can improve communi8cations   3e2

able to hold conferences "out of time", "out of place"   3e2a

the fact that it is a formal conference tends o keep
everyone on the right subject....not much jumping
around.....chairman can control direction of he conference.   3e2b

it's democratic...everyone gets a voice   3e2c

even though everyone is speaking, you do't have to listen to
you can be selective   3e2d

  saves listeners' time   3e2d1

  encorages speakers to be concise   3e2d2

continus_ally updated written record of proceedings is
available   3e2e

to go back in the conference to confirm anything without
disrupting proceedngs   3e2f

some examples of conf'g. systems we're using   3e3

BNR - used mainly as a message service ad project
documentation aid. Very little interactive, simulataneous
communication. very easy to retrieve past messages.....by
number, by date, by author, or by content   3e3a

Institute for the F - used mainly as a project development
and coordination aid   3e3b

Englebart's ARC - not as useful for cofeencing as the above
two, but it has a host of information management rotines
that let yo get right into another planner's work and

4

Bedford - Ryan Project : On-going

        observe what he is doing, how he operates, wat his style is,
        what his priorities are, etc.   3e3c

   more detail on the Englebart system.   3e4

     Initial reactions to a lot of the people we talk to are
     skeptical.....they wonder how anybody could work in that
     sort of environment, ie, with someone peering over their
     shoulder all the tme   3e4a

     actually the reverse is true. the wrker becomes more
     productive, rather than less productive... the increased
     productivity stems, we believe, from the improved
     communications within his community of related planners or
     researchers. He has access to the ideas, thoughts,
     schedules, procedures, etc. of the community.   3e4b

       how to give credit for work done   3e4b1

       synergy at work   3e4b2

       comunity's structuring of heir own informato must be of
       key importance.
                                  3e4b3

(ideas) IDEAS FOR PAPERS TO BE WRITTEN SOME DAY
(any contributions to this space would be welcomed)   4

   my personal learning curve experience while learning how to use
   this friggin' system   4a

   a paper on SPRITE as a Hegelian research methodology, in the best
   Turovian sense of the word   4b

   possible paper on the role of comp. conf'g. as a component in an
   integrated approach to message handling   4c

   paper on the actual hands-on experiences of the BPG in using the
   three different versions of computer-augmented information
   processors.   4d

   a paper that explains what "Engelbart" is, how we use it, how we
   evaluate it, and what possible future we see in services of this
   sort.   4e

(letters)LETTERS WRITTEN   5

   to r.j. Lafleur of A.T.A. re their reference to educ'n delphi   5a

Bedford - Ryan Project : On-going

Mr. R.J. LaFleur
Administrative Assistant
The Alberta Teachers' Association
11010 - 142 Street
Edmonton, Alberta   5a1

Dear Mr. LaFleur   5a2

In reply to your letter of November 30 to Mr. D. M. Atkinson, I
am pleased to inform you that there will be no problem with
your plans to document the Business Planning Delphi Study, "An
Exploration of the Future in Educational Technology" in The ATA
Magazine.   5a3

As I mentioned on the phone last week, we would like to have
the source of the study referenced as H.Q. Planning, Bell
Canada, Montreal. The authors Doyle and Goodwill, although no
longer in this department, would appreciate the traditional
references found in most footnotes.   5a4

Good luck with your plans to condense the artwork in the study
into a more compressed format. I understand that you are
severely space-constrained, and I hope everything works out
alright.   5a5

We would appreciate receiving a few of the issues of The ATA
Magazine containing the article. Would it be possible to send
them to us when they become available ?   5a6

Yours Sincerely,

Michael T. Bedford
Supervisor - Business Planning   5a7

cc: D.M. Atkinson
      W.H. Cruickshank   5a8

To Mike Lutze, Following Meeting Of Dec. 4/73   5b

On Behalf Of Bell Canada Headquarters And Bell-Northern
Research, I Would Like To Thank You For Spending Yesterday With
Mssrs. Moffat (H.Q. Management Science), Sanyal And Licker
(Bnr) And Myself. We Came Away From The Meeting With A Much
Better Understanding Of Your Objectives For The Sears Automated
Order Service Trial, And Of Your Particular Role In That Trial.   5b1

We understand that your main concern with the trial at this
stage involves investigating alternatives for reducing the cost
of taking catalogue orders. Since one method of reducing the

6

unit cost of each order would be to increase the number of
orders that are being processed with a given investment in
equipment, I think that you will be interested in talking
further with our people at BNR. Our initial discussion with
Mr. Sanyal indicated that there may be some areas of their
research program that will fit in nicely with your apparent
needs. I am thinking specifically of the work on multiplexing
of analog signals, and the on developing a device for receiving
data from a rotary dial phone and processing it in the same way
as your current Touch-Tone input signals. Availability of
these two technological capabilities would enable you to
receive and process more calls per hour with your existing
equipment, and would permit you to offer the A.O.S. service to
a much broader section of your catalogue customers.   5b2

In addition to your desire to reduce the short-term costs
associated with the order-taking process, we also recognize
that you have a great opportunity to gain information about the
longer-term viability of this type of service, and its effects
on customer purchasing patterns. I realize that your group
does not have a direct and immediate responsibility in this
area, and that Ms. Doreen Medicker of your Market Research
Department is more directly involved in researching this trial.
With this in mind, I would propose that Ms. Medicker and Mr.
Moffat of our Management Sciences group get together to discuss
some of the research that we would like to conduct in this
area. Mr. Moffat's experience in conducting surveys into uses
of all types of telecommunications services should prove
valuable to Ms. Medicker, and I am sure that the data base
which she has collected to date would prove useful to him in
developing his researdch proposal.   5b3

I mentioned on Tuesday that the Business Planning Group was
most interested in Sears' plans for developing a "work from
home" capability for some of your phone order takers. If your
central order taking office were able to reroute incoming calls
to the home phones of some of your employees, you would be able
to make better use of your employees' time, eliminate the need
to over-staff your order-taking offices for the greater part of
four hours, in able to ensure meeting the peak demand during
that period, and contribute to the community's well-being by
taking advantage of a valuable labour pool that is handicapped
by not being able to leave the house for ay extended period;
physically handicapped individuals, mothers of young families,
and elderly citizens would be very appreciative of a service of
this type. The Business Planning Group would be very
interested in cooperating with Sears on this project. One of
the prerequisites for the service will be a programmable call
forwarding device that could sit in your order taking office

Bedford - Ryan Project : On-going

and direct incoming calls to different numbers, as needed.   I
will undertake some of the initial enquiries in this area for
you, and I hope we will be able to get together a t a later
date to discuss the possible implementation of such a service
on a trial basis.   5b4

Once again, let me express our thanks for spending the day with
us on Tuesday.   I think we are all looking forward to a
mutually rewarding relationship.   5b5

Yours sincerely,   5b6

Michael T. Bedford
Supervisor - Business Planning   5b7

from K.S.H. attached tto C.A.C. report   5c

the letter that was sent had slightly different wording than
this   5c1

The attached report, "Computer-Augmented Conferencing - Its
Impact on Bell Canada", was prepared last summer by the
Business Planning Group, H.Q. Planning.   It is being
distributed at this time to keep you aware of the developments
in the field of computer-augmented conferencing.   Some of the
recent developments in this field are outlined below.   5c2

A number of the report's recommendations have been implemented
since it was written.   The Business Planning Group is now
making extensive use of the computer-augmented conferencing
systems developed by Stanford Research Institute and Institute
for the Future (described in the report).   Additional funding
has been extended by the group to the Systems Engineering Group
at Bell-Northern Researchh to carry out their work on
computer-augmented conferencing.   Perhaps most important, the
popularity of the computer-augmented conferencing concept is
spreading rapidly.   In addition to research interest now
developing within TCTS, a number of outside organizations have
expressed an interest in BNR's research.   Some of these
organizations represent government or university groups, but
others represent companies that might conceivably offer some
sort of conferencing capability to the general public as a
commercial venture.   Since Bell Canada may wish to enter this
market as well, these outside groups shold be regarded as
potential competitors for a potential new service offering.   5c3

Develpments in tis field are taking place rapidly.   H.Q.
Planning will keep you informed of the status of this project
as it evolves.   5c4

8

Bedford - Ryan Project : On-going

to John Gilliand - Dep't. of Environment : Nov. 22/73   5d

Mr. John Gilliand
Inland Wates Directorate
Department of the Environment
Place Vincent Massey
St. Joseph Boulevard
Hull, Quebec   5d1

Dear Mr. Gilliand: 5d2

I understand that the Department of the Environment is becoming
increasingly interestted in technological forecasting and
technology assessment, and that the Inland Waters Directorate
is currently researching some methodologies that have received
substantial use in this department.   5d3

<BELL>PHIL.NLS;1, 22-NOV-73 11:12 MIKE ;   5d4

   FVenture Management Distribution LetterUTURES INFORMATION
   SYSTEM, PHASE TWO   5d4a

      EXTENSION TO OTHER DEPARTMENTS   5d4a1

      IMPROVEMENTS TO EXISTING SYSTEM   5d4a2

         GREATER FLEXIBILITY IN THE USAGE OF KEY WORDS TO
         RETRIEVE TEXT   5d4a2a

         PdirARTICIPATION OF PLANNERS IN THE SELECTION OF
         FORECASTS   5d4a2b

         SELECTION OF PERSONNEL TO CONTINUE ABSTRACTING   5d4a2c

I have enclosed a number of documents which I believe will be
of interest to you and your group. We refer to the documents
loosely as "the Delphi package", because it summarizes in a few
volumes our experiences to date with the technique. In
addition to the reports that were written to document four of
the studies we have conducted, there is "Delphi - The Bell
Canada Experience" (a collection of papers on the use of the
technique), and "A Technology Assessment of Future Home
Communications Services - A Study Proposal" (which outlines
some of our reservations about Delphi and proposes an
alternative methodology developed within this group).   5d5

We have distributed a number of copies of these papers, and
there is never any charge to the recipient. We ask recipients

Bedford - Ryan Project : On-going

to share their similar experiences with us, however, in the
hope that a community of planners will develop in this area.   5d6

We are looking forward to hearing from you; I hope the enclosed
literature is useful.   5d7

Yours sincerely,

Michael T. Bedford
Supervisor - Business Planning   5d8

to Arnold Curry re Inez' transfer - Nov. 22/73   5e

Mr. Arnold Curry
Staff Supervisor - Labour Relations - General
Room 729
1050 Beaver Hall Hill
Montreal   5e1

Dear Mr. Curry: 5e2

The Business Planning Group is pleased that Mrs. Inez Mattiuz,
Analyst - Wages in your department, will be able to join us
effective December 31, 1973. She will be a valuable addition
to our group in the position of Assistant - Environment Study.   5e3

I understand that Mrs. Mattiuz may be needed by your department
for a few periods in the new year to assist with training her
replacement. This will not present any problems for us. As you
know, we expect that we will be have to borrow her services in
much the same fashion prior to the end of the year. There is a
training course that we would like her to attend early in
December, and we are pleased that you will able to spare her
for a few days at that time.   5e4

I am sure you regret losing such a valuable member of your
staff; we will be most happy to welcome her to the group.

                                                                     5e5

Yours sincerely,

L.H. Day
Staff Supervisor - Business Planning   5e6

letter accompanying round one questionnaire   5f

Dear Participant: 5f1

Bedford - Ryan Project : On-going

Enclosed is the first questionnaire of the two-part study on
the impact of future communications services in the home.   5f2

I am sorry that it reaches you so late in the year. My
original plans called for it to reach you in early October, but
my conflicting duties here in Bell Canada prevented me from
devoting as much time as I would have liked. I have been
sidetracked by the responsibilities surrounding the
introduction of a new computer software package for our use in
the Business Planning Group.   5f3

I am sure that you are more interested in this present
questionnaire than in my problems in the office, however. I
have included some introductory comments in the questionnaire
itself; I think they are self-explanatory. I expect that most
of you will spend a little over one hour completing the
questions. The subject matter is interesting, and I hope that
I have provided you with enough leeway in the questions so that
you will enjoy answering them.   5f4

There is a stamped addressed envelope for your use in returning
the questionnaire. I hope to start compiling the result within
two weeks; I would like you to return the questionnaire by that
time. The second questionnaire, summarizing all the results in
this first round, should be in your hands by mid-January.   5f5

Yours sincerely,

Michael T. Bedford
Supervisor -Business Planning   5f6

(delphi-yes)   5g

(date) November 6, 1973   5g1

                                                                   5g2

(add) Mr. Paul Oeltjen
H.Q. Management Science
Montreal   5g3

                                                                   5g4

(dear)Dr. Mr. Oeltjen   5g5

Thank you very much for your interest in our Delphi research.

Bedford - Ryan Project : On-going

We were pleased to hear about your work and I hope you will
find the enclosed report useful.   5g6

I would like to point out to you that the Delphi studies
conducted by the Business Planning Group are not normally
released outside the company. We like to make exceptions in
cases such as yours in which original research or applications
are being carried out. I hope you will appreciate our position
and keep this report within your own immediate group.   5g7

Thank you once again for your interest in the study. If I can
be of any further assistance, please do not hesitate to write
or give me a call at (514) 870-5902 (collect).   5g8

                                                                       5g9

Yours sincerely,   5g10

Michael T. Bedford   5g11

Supervisor-   5g12

Business Planning   5g13

(delphi-no)   5h

(date)   5h1

                                                                       5h2

(add)   5h3

                                                                       5h4

(dear)   5h5

(jrnlrec) Journal items received..... for reference only   6

JCN 9-DEC-73 14:00   20821
Another Bell Ident
Location: (MJOURNAL, 20821, 1:w)

                                                                        6a

JCN 9-DEC-73 10:21   20818
Bell Canada Initial Idents: Request for Mike Bedford to Review
Location: (MJOURNAL, 20818, 1:w)

                                                                        6b

(author) Journal documents authored   7

Bedford - Ryan Project : On-going

MIKE 4-JAN-74 07:13   21281
will it be hard to retrieve this journal message ?
Message: this is just a n example of journal mail....
*****Note: Author Copy*****

7a

MIKE 10-DEC-73 09:13   20831
this is the much talked abot toronto talk how does it look
Location: (MJOURNAL, 20831, 1:w)
*****Note: Author Copy*****

7b

(links) USEFUL LINKS IN TNLS   8

TRANSCRIPTION DEX PRIMER
(userguides, dex-primer, 1:w)   8a

TRANSCRIPTION DEX USER GUIDE
(userguides, dex-transcription, 1:w)   8b

(extbib)EXTERNAL BIBLIOGRAPHY (biblio,1a:mywE)   8c

(intbib)INTERNAL BIBLIOGRAPHY (biblio,1b:mywE)   8d

(op) OUTPUT PROCESSOR DIRECTIVES (userguides,tnls-directives,0:xm)   8e

CONTENT ANALYZER PRIMER (userguides, l10-guide, 3a:xbbm)   8f

L10 USERS' GUIDE (userguides, l10-guide, 0:xmh)   8g

(progs-guide) USER PROGRAMS USER GUIDE (user-progs, -userguide,
1:xm)   8h

(progs-content) LIST OF AVAILABLE USER PROGRAMS (user-progs,
-contents,0:xm)   8i

(usg)USERGUIDES (userguides,arclocator,:xm)   8j

VIEWSPEC DESCRIPTORS (userguides,summary,26:wn)   8k

TNLS USERS' GUIDES (userguides,arclocator,2d:mxbb)   8l

TEXT EDITING GUIDE (userguides,tnls-editing,0:xm)   8m

TNLS CHARACTER CODES (userguides,tnls-charcodes,0:xm)   8n

INDIRECT ADDRESSING - LINKS (userguides,tnls-address,1d:xmzbb)   8o

JOURNAL USERS GUIDE (userguides,journal-guide,0:xzm)   8p

(ji) JOURNAL INDEXES (userguides, arclocator, 5:xmb)   8q

TENEX FILE SYSTEM DESIGNATORS (userguides,tenex,9b:xmbbb)   8r

(memos) MEMOS   9

to Geoff Weeks re meeting with Anderson: Nov. 29/73   9a

Thanks very much for your assistance in setting up yesterday's
meeting with Maurice Anderson of Sears.   9a1

I think the meeting went very well and I am confident that my
follow-up meeting with Mike Lutze of Anderson's group will
proceed equally smoothly. Since Mike has been designated by
Anderson as the formal contact for future planning of our
proposed joint venture, I expect to be meeting with him next
week to present our resources and capabilities to him. He will
be able to talk first hand with the people who will be working
with me in our efforts to assist Sears with their analysis of
the current trial.   9a2

I expect to bring Shankar Sanyal(Subscriber Systems, BNR) and
Paul Oeltjne (Staff Supervisor - Mgt. Science) with me to
assist in the presentation. These two individuals will be
responsible for the work that their groups may be doing for
Sears. As such they will be reporting to me as the official
interface for this particular venture.   9a3

As I mentioned yesterday, I will keep you fully informed of our
plans with the Sears people. I understand your interest in
keeping on top of this situation, and I will make sure that you
are notified in advance of any meetings that our people have
with any Sears representatives.   9a4

Thank you once again for your help yesterday. You should be
proud of your relationship with Mr. Anderson.   9a5

to L.H.D. re interesting experiences on conf'g. systems   9b

I have outlined below some of the more interesting and unusual
experiences that we have had in our use of computer-based
conferencing systems. These systems are all similar in that
they allow many people to participate in a conference from
remote locations, using a teletype - type keyboard or a
keyboard connected to a T.V. -like screen. All the messages in
the conference are stored by the computer, and it is usually
quite easy for the conferees to go back to retrieve different
messages as necessary   9b1

Bedford - Ryan Project : On-going

It is impossible for a person to both receive and send a
message at he same time. Often two people will sign on to a
conference at the same time and ask if anyone else is on; If
the timing is not perfect, there migt be a long delay before
they got each other's queries. In some cases, they might
think no one else was on, ad they would log off.   9b1a

It is extremely difficult to convey emotions or subtle
differences in meaning. Also, the context of many comments
is lost to those who read a message in isolation at a later
date. Consequently, use of such literary techniques as
irony, hyperbole, euphemism, sarcasm, etc. must be exercised
cautiously, to say the least.   9b1b

Many systems are capable of operating at several different
levels, and each level has its own command language. If a
user accidently slips from one level to another, and doesn't
realize the change, his mis-applied commands can create
havoc with some systems. He might find himself sending
nonsense messages to strangers in other conferences,
printing completely irrelevant messages on his terminal (and
not being able tc stop them), or perhaps he would sign
himself right out of the conference.   9b1c

All the information contained in the conference is stored by
the computer for possible use later. But there must be some
way of deleting accidental entries from the record, and most
systems have a "delete" function. Unfortuneately, if this
is used incorrectly, users can find themselves deleting
valuable messages and other information. In most cases, it
is possible to resort to complicated retrieval routines to
get some of these lost files back, but in a few crucial,
unpredictable cases, the information is gone for good.   9b1d

We are using three different systems currently. These were
all developed independently by outside groups, and there are
very few similarities between the command language for the
systems. Functions such as backspacing, deleting characters
and words, retrieving previous messages, and even logging
out of the conference are different for each system. If a
users starts using the wrong command language in a
conference, he is quickly made aware fot the fat, often with
discouraging or maddening consequences.   9b1e

Line noise or computer problems will often interrupt a user
as he is putting a message in a conference, forcing him to
start the message over. If this happens repeatedly on the
same message, the user will gradually shorten the message he
is trying to put into the conference, out of frustration.

Bedford - Ryan Project : On-going

Long, cumbersome requests for precisely defined information
often become point-blank demands for certain reports, period

9b1f

Many of the conferences take place between people who have
never met before. It is often interesting to watch the
behavior of an individual in a conference and compare it
with his behaviour when dealing with individuals in a
face-to-face mode. Tame pussycats can become tigers when
shielded by the array of computer hardware and software
between them their fellows on the conference. Also, the
loud-mouth who dominates face-to-face meetings may find
himself retiring to the pussycat mode in a conference when
he realizes that no one is paying any attention to his
messages.

9b1g

Michael T. Bedford
Supervisor - Business Planning

9b2

November 22, 1973

9b3

ATTACHMENT TO LHD MEMO (jjournal,16952,15:nw)

9c

to JHK re novice users of Forum system : Nov. 21/73

9d

The Forum system resides on the U.C.L.A ISI computer.
Different users will be accessing this computer in different
ways. It is possible to phone the number of the local ARPA tip
in your area, or it is possible to phone directly to Los
Angeles. The instructions below are intended for user who has
already contacted the computer.

9d1

You will know that you have reached the computer when you hear
a high-pitched whistle or tone over the telephone. Connect
your terminal to the computer by either inserting the telephone
handset into the receiver cups on the terminal or by pressing
the red data button on the telephone set. You are now ready to
join the Forum system.

9d2

Since the Forum system is just one of the many systems on the
computer, you must give the computer a number of codes so that
it will know which system to connect you to.

9d3

-type   @D C E

9d3a

-type   @L 86

9d3b

The computer will give you a few messages before it prints

the (@) sign, which is your cue to type in some more
information: 9d3c

-type   LOG FUTURE AWARE 2   9d3d

note that the word "aware" will not print on your
terminal; nevertheless, you must be sure to put in the
proper space after the word "future" and the word
"aware".   9d3d1

The computer will give you another message before typing the
(@) sign, which again is your cue to type in more
information: 9d3e

-type   FORUM   9d3f

You are now in the Forum system. The computer will guide you
through the discussion.   9d4

If you wish to leave the conference at any time, just hang up
the telephone.   9d5

If you are accidently cut off from the conference, you should
be able to contact the computer again and be returned to your
place in the conference without all the usual sign-on
procedures.   9d6

Michael T. Bedford
Supervisor-
Business Planning

November 21, 1973   9d7

to A.M.McM. from K.S.H re BPG and Sears: Nov. 1/73   9e

As you are aware, Mr. Michael Bedford (Supervisor- Business
Planning) of our group and Mr. George Newman (Sales Manager -
CC Toronto) have beencommunicating with each other for a number
of weeks. Mr. Bedford is currently monitoring one of our
research projects being conducted at Bell-Northern Research and
Mr. Newman has been most helpful in providing some of the
background information on the Simpson-Sears account,
concentrating on the equipment they are using for their
Automated Order Service Trial.   9e1

Mr. Bedford's is interested in monitoring the progress of these

Bedford - Ryan Project : On-going

DIVA-based services being offered by our customers. He
believes that whether or not this type of service becomes a
major revenue producer for the company, its growth and
development should be watched closely.   9e2

Through   9e3

the contacts supplied by Mr. Newman, Mr. Bedford was invited to
visit Mr. Michael Lutze (Manager - Distribution and Operating
Systems Group) and Mr. Maurice Anderson (General Manager -
Methods Planning and Development) of Sears. A meeting of these
three gentlemen was held in Toronto on Octobe 18, 1973.   9e4

Mr. Bedford came away from the meeting with the impression that
Sears would like to cooperate with Bell Canada in their on-goin
trial. (The original three month trial has been extended for
an additional three months.) Mr. Bedford learned that Sears
is collecting a great deal of data that relates directly to one
of his main areas on interest in this department's planning
operations. He is encouraged that Sears and Bell Canada may be
able to cooperate by sharing the data bases that both groups
have been assembling independently up to this point.   9e5

Bell Canada is in a position to offer Sears the Following
resources, all of chich would be greatly appreciated by
Anaderson: 9e6

    advice on analysis of their data, drawing on previous
    research done in H.Q. Planning and BNR   9e6a

    advice on system design alternatives, drawing on BNR's
    contacts with varuous North American designers and producers
    of equipment   9e6b

    advice on how thier system could be made more efficient and
    productive from a user's point of view   9e6c

    introduction to cther groups in Bell Canada who may be able
    to help them (ie. a simple liason capacity)   9e6d

    research funds to offset some of their out-of-pocket
    expenses   9e6e

In return for this assistance, Bell Canada could gain access to
the data being collected by Sears on the performance of the
system and on the purchasing habits of the users of the
service: 9e7

    Information on the system perofrmance   9e7a

error rates by users   9e7a1

number of times operators had to intervene   9e7a2

average duration of calls (connect time)   9e7a3

number of calls per minute   9e7a4

Information on Customer Purchasing Habits   9e7b

average dollar value of orders   9e7b1

number of items ordered per call   9e7b2

types of items, broken down by department   9e7b3

comparisons of all types with ordinary catalogue
purchases and with in-store purchases   9e7b4

analysis of purchasers' habits broken down by distance
from store, by income level (aggregate, not for
particular individuals), by other customer profiles   9e7b5

This cooperation and pooling of information will have immediate
and direct benefits to Mr. Bedford's current research
activities, but more importantly, the research relationship
established between Bell Canada and Sears could have even
larger pay-offs when some of Sears other research interests are
taken into consideration. Some of Sears' other interests which
tie in quite closely wth work being done in H.Q. Planning
include the following: 9e8

work from home   9e8a

It would be possible for Sears to employ, part-time order
takers in their homes if their main switchboard number
had an addressable call-forwarder on it.   9e8a1

intra-city transportation   9e8b

Substantial reductions in transportation equipment would
be realized if a unified merchandise or parcel delivery
system were developed by the Post Cffice   9e8b1

distribution of catalogues   9e8c

Sears costs for updating, printing and distributing
catalogues are rising to the point where electronic
substitutes may be attractive   9e8c1

Bedford - Ryan Project : On-going

I hope that our two departments will be able to cooperate with
the Sears people to facilitate this exchange of information
between the two companies. We recognize that our negociations
with Sears will be of a delicate nature, and I would appreciate
any guidance that your group may provide.   9e9

to K.S.H re rev. pot'l. of different U.S.P. services: Oct. 25/73   9f

                                                                    9f1

                                                                    9f2

                                                                    9f3

                                                                    9f4

To K.S. Hoyle   9f5

re different services having unique revenue possibilities with
usage sensitive pricing policies in force   9f6

                                                                    9f7

from Michael T. Bedford   9f8

October 25, 1973   9f9

The company's planners are currently looking at usage sensitive
pricing. It appears that our company may have to move to a
usage-sensitive rating scheme if it is to keep up with the
rising and constantly evolving demands of telecommunication
customers and political pressures from regulators.   9f10

If one assumes for the minute that Bell Canada were currently
operating under a usage sensitive tariff structure, one
realizes that a whole new range of revenue producing services
could be offered to the public with little or no additional
capital expenditure.   9f11

A partial list of some of these service includes the following
services, broken into four distinct catagories: 9f12

    mass calling services - recorded announcements providing
    information on the following: 9f12a

        time of day, weather, loto-quebec results, etc.   9f12a1

        sports scores for Montreal teams, for Toronto teams, for
        all baseball teams, etc.   9f12a2

Bedford - Ryan Project : On-going

recipes, household hints for the day, movie information
for local theaters, etc.   9f12a3

weather reports for resort areas or for typical locations
of out-of-town business meetings, road conditions, etc.   9f12a4

plane and train status - on time or delayed ?   9f12a5

emergency numbers for all-night drug stores, emergency
departments, gas stations open all night or on holidays,
etc.   9f12a6

information for travelers from out of town - what to do,
what to see, etc.   9f12a7

dial input - voice answer back systems - offering
information on particular requests keyed in by customers
calling the DIVA number: 9f12b

flight information (departure times between cities, price
of tickets, etc)   9f12b1

stock quotations from a number of different exchanges   9f12b2

television listings, sports events on t.v., movies on
t.v., etc.   9f12b3

area codes for remote cities   9f12b4

ordering services incorporating DIVA technology -
information would be processed by the computer, a reply sent
(by voice) to the customer, and the order information
forwarded to a shipping or reservation system for
confirmation and billing: 9f12c

plane, train, bus reservations   9f12c1

ordering from catalogue stores   9f12c2

movie, theater, and concert reservations   9f12c3

requesting movies over a hotel closed circuit premier
movie channel   9f12c4

this particular application has obvious appeal when
considering the input mechanism of an AVRIL - type
service   9f12c4a

directory assistance charging   9f12d

Bedford - Ryan Project : On-going

The issue of charging for directory assistance would not
appear so controversial or unwarranted to the phone
company subscribers if it were viewed by them as part of
the total information utility package offered by the
phone company.   9f12d1

                                                                 9f12d2

to K.S.H. re opp's for new type services based on AOS: Oct.23/73   9g

Memo to K.S. Hoyle   9g1

    from Mike Bedford   9g2

October 23, 1973   9g3

re the potential for new business oportunities reflected in the
current Sears Automated Ordering Service Trial   9g4

                                                                    9g5

Basic Objectives of the Automated Order Service   9g6

    Sears had two main objectives when they introduced the trial
    for the automated order service: 9g6a

        reduce the cost of receiving and processing the orders
        from the catalogue order store (currently, abot 75% of
        the catalogue orders are placed over the phone, rather
        than mailed).   9g6a1

        provide their customers with a more efficient ordering
        process, thus saving the customers both time and money.   9g6a2

    Non-telephone Components of the System   9g7

    Sears has combined a number of their tried and proven
    merchandising methods with new technological capabilities
    provided by computer and communications companies. The
    result is a new communications capability that will permit
    the average householder to communicate with a computer from
    her home. For the first time, the computer will be vewed by
    the housewife as a useful tool, rather than as an
    error-prone bill processor.   9g7a

    There are four non-telephone aspects of the service: 9g7b

        a printed catalogue in the customer's home;   9g7b1

a computer capable of interpretting touch-tone input,
processing the input (by sorting throgh its memory of the
catalogue and confirming the input), and responding to
the customer in a voice mode;   9g7b2

a logic routine that helps the customer whenever he or
she makes one of a number of anticipated errors while
using the system;   9g7b3

the capability of recognizing when a customer has had too
many problems; in this case a system monitor can join the
customer on the line, ask for her phone number, and have
a sales desk operator phone her back and take her order
conventionally.   9g7b4

Basic Telecommunications Aspects of the System   9g8

The role of telecommunications equipment in the present
configuration of the service is essential but the specific
technologies involved are not all that revolutionary. One
of the important features of the service (in Sears' eyes) is
this very fact....there is no need for their customers to
purchase any new equipment in order to participate (assuming
they already have a Touch-Tone phone).   9g8a

The present system involves the use of these basic phone
services: 9g8b

basic Touch-Tone service in the customers' homes;   9g8b1

data sets connecting the incoming customer calls to the
computer.   9g8b2

Role of the Phone Company in an Expanded Version of This
Service   9g9

Many people within the phone company believe that revenues
from this sort of service will never amount to very much
because of the limited Touch-Tone revenue generated, and
because the market for the voice-answerback equipment and
datasets is not that large in Canada. This appears to be a
very narrow and short-sighted view of the telephone industry
in this country. The Sears trial is the tip of an iceberg
of potential service offerings that may permit the phone
company to increase its unregulated revenues while still
maintaining the role of a carrier rather than a processor of
information.   9g9a

Bedford - Ryan Project : On-going

One can imagine that this service could be expanded in scope
to provide the householder with these followng capabilities: 9g9b

Using the Touch-Tone phone as input device, she could
view the Sears catalogue on her home t.v. set, turning
from "page" to "page" with the use of the Touch-Tone pad;   9g9b1

The housewife could phone her local Sears order number
and be connected to the national Sears automated order
service which would process her order, bill her account,
and sendthe shipping order to the warehouse nearest her
home.   9g9b2

The housewife could phone the number of her local
"shop-from-home" catalogue directory and be put in touch
with any one of a great number of catalogue
merchandisers; the phone company's role in this service
would be that of providing a directory of all the
participating merchandisers and a switching program that
would route the customer's call to the proper electronic
catalogue;   9g9b3

Once the idea of phoning a single number to obtain
information from a variety of sources became popular, it
would not be difficult to expand the service to include
information on a variety of non-catalogue type services: 9g9c

airline ticket schedules (and reservation service);   9g9c1

weather forecasts, road conditions, school closings;   9g9c2

"grocery store" type purchases   9g9c3

These different services would provide the company with
opportunities for generating additional revenue in these
areas: 9g9d

increased number of Touch-Tone sets placed in homes;   9g9d1

increased premium for each Touch-Tone set, since they
become more than mere substitutes for rotary-dial
sets.....the become true data entry terminals;   9g9d2

increased long distance revenues from business custmers
as they extend their service from a central computer to
remote locations throughot their territory;   9g9d3

new revenues from the operation that would switch a

24

Bedford - Ryan Project : On-going

householder's equiry to the proper store's catalogue
ordering servce.   9g9d4

To K.S. Hoyle re the Sears Auto. Order Trial; October 19, 1973   9h

Geoff said he'd talk to Anderscn to arrange an appointmet for
Larry and myself on either he 26 or 29 of November, hopefully
in he morning (10:00 ?).   9h1

Geoff said he didn't think it would serve ay purpose to have
either himself of scmebody from his grop their, as long as we
kept him informed.   9h2

445 touch-tone subscribers with a record of previous catalogue
purchases are participating   This was originally a three month
trial, now extended to six months.   9h3

IBM Canada is cooperting with Sears by making equipment and
processing available at no cost toSears: 9h4

    Ibm 360/50 available for one hour per day, in addition to
    the 2770 voice-response unit and eight computer porst   9h4a

Bell Canada (CC Sales in Toronto) is charging Sears the full
rate for using our equipment: 9h5

    about $1000 per month in return for: 9h5a

        5 equivialant Toronto FX lines   9h5a1

        5 403E2 data sets (required for audi response)   9h5a2

        1 Code-a-phone (for recorded announcements)   9h5a3

        1 103A2 data set (for the monitoring terminal)   9h5a4

Bell Canada charged Sears $6000 for indicatint which of Sears'
customers had touch-tone phones   9h6

Sears is surprised at Bell Canada's reluctance to participate
during the early planning stages of the trial, and is offended
that we now want to share in the results with them and IBM,
although we have contributed othing.   9h7

H.Q. Planning has take the initiative in trying to restore
communications (at the planning level) with Sears.   9h8

Mike Bedford (supervisor-Business Planning) and Mike Lutze
(Manager-Distribution and Operating Systems Group -Sears) met

Bedford — Ryan Project : On-going

the Mr. Maurice Andefson (Gemeral Manager — Methods Planning
and Development — Sears) on October 18, 1973. Anderson reports
to Sears' Vice President — Operation; it is Anderson who
covinced Sears to conduct the trial and hwo is responsible for
the trial operations and results.   9h9

Anderson reiterated Sears postion that the results fo the trial
were confidential to Sears and IBM. He is keenly aware of the
fact that Bell Canada is interested in the results, and he
would like to work with us. Before this happens, however, Bell
must make a commitment to help him redude Sears' costs in the
trial and subsequent analysis.   9h10

Anderson has been continually frustrated in his dealings with
Bell; he has met with many different groups (T.A. Marketing, CC
Sales in Toronto, BNR Systems Engineering), one of whom were in
a position to say, "Yes, we will cooperate with you."   9h11

Bell Canada is in a position to offer Sears the Following
resources, all of chich would be greatly appreciated by
Anaderson: 9h12

    advice on analysis of their data, drawing on previous
    research done in H.Q. Planning and BNR   9h12a

    advice on system design alternatives, drawing on BNR's
    contacts with varuous North American designers and producers
    of equipment   9h12b

    advice on how thier system could be made more efficient and
    productive from a user's point of view   9h12c

    introduction to other groups in Bell Canada who may be able
    to help them (ie. a simple liason capacity)   9h12d

    research funds to offset some of their out-of-pocket
    expenses   9h12e

In return for this assistance, Bell Canada could gain access to
the data being collected by Sears on the performance of the
system and on the purchasing habits of the users of the
service: 9h13

    Information on the system perofrmance   9h13a

        error rates by users   9h13a1

        number of times operators had to intervene   9h13a2

average duration of calls (connect time)   9h13a3

number of calls per minute   9h13a4

Information on Customer Purchasing Habits   9h13b

average dollar value of orders   9h13b1

number of items ordered per call   9h13b2

types of items, broken down by department   9h13b3

comparisons of all types with ordinary catalogue
purchases and with in-store purchases   9h13b4

analysis of purchasers' habits broken down by distance
from store, by income level (aggregate, not for
particular individuals), by other customer profiles   9h13b5

As the situation now stands, Seras is optimistic about our
interest in the project. They expets we will return with an
offer to input funs and manpower, in return for whcih we will
have access to their data from the trial.   9h14

Sears (through Anderson) is interested in a number of other
projects haveing direct links with some of the research in H.Q.
Planning: 9h15

work from home   9h15a

It would be possible for Sears to employ, part-time order
takers in their homes if their main switchboard number
had an addressable call-forwarder on it.   9h15a1

intra-city transportation   9h15b

Substantial reductions in transportation equipment would
be realized if a unified merchandise or parcel delivery
system were developed by the Post Office   9h15b1

distribution of catalogues   9h15c

Sears costs for updating, printing and distributing
catalogues are rising to the point where electronic
substitutes may be attractive   9h15c1

(mins) MINUTES OF IMPORTANT PHONE CALLS AND MEETINGS   10

conversation wth Elaine Meagher : Nov. 27/73   10a

Bedford - Ryan Project : On-going

now news, her paper wll be ready in January, she leaves there
for he holidays on Dec. 20   10a1

phone call with Geoff Weeks, Nov. 20, later   10b

apparently Anderson is all excited that we're going to finally
ofer him "something for nothing". Geoff set up a meetg for
10:30 on Thursday the 29th. I'll meet Geoff at hs office
first, about 10:00, and we'll go over together.   10b1

Phone call with Geoff Weeks - CC Sales in Tor. : Nov. 19/73   10c

He had just finished talking with Andy McMann re the KSH memo.   10c1

They both see no problem with our talking with the Sears people
and with Anderson in particular.   10c2

Andy, Geoff, and Anderson are great buddies, it seems, talking
to each other at least once or twice a week.   10c3

Geoff cautioned me that Anderson is "different". It seems that
he is a very temperamental sort....given to rapid changes in
attitude and often embarasing displays of contempt and
derision. Apparently I should not be to discouraged if he says
I'm full of shit and don't come back.....he'll get over it
soon.   10c4

Geoff said he wold talk to Anderson and try to arrange a
meeting for larry ad myself on either he 26 or 29 of Nov. He
didn't think it wold serve any purpose to have arep. from his
department their.   10c5

conversation with Goldenberg at Dorval; Oct 25/73   10d

informed me of his reservations abt the Delta Data   10d1

circuit boards are too closed, almost touching   10d1a

warping due to heat build-up leads to short circuits   10d1a1

service from Data is expected to be poor, based on initial
impressios of Goldberg   10d1b

Ed Marsico (?), staff superivsor, systems development and
programming has had some bad experiences with the Delta Data   10d1c

Marsico: 870-3388   10d1c1

Bedford - Ryan Project : On-going

he felt that the Techtronic (?) might be another alternative,
not considered by SRI   10d2

he wanted to know which of the terminal specifications we
supplied were flexible, and which could be ammended   10d3

    addressable cursor.....essential   10d3a

    unlimited scrolling.....not essential, but extremely
    desirable.   10d3b

K.S.H. re the Sears Trial and CC Toronto; Oct. 24/73   10e

Ken talked with McBrearty who had talked with Andy McMann about
the sears trialand cc's involvement.   10e1

McMann wanted to have a cc rep. at the next meeting with
anderson.   10e2

mcmann sort of warned ken about anderson (sears' anderson, not
ours) indicatng that he was very strong-willed and also that he
was a disciple of the divide ad conquer technique.   10e3

McMann was a little upset that we hadn't cleared or ;nitial
approach to anderson, but in fact we had.....   10e4

....we talked with george newman and he apparently mentoned
it to his boss, jeff weeks.   10e5

ths just emphasizes the lack of upward communication from the
field level to the decision-makers' level.   10e6

Ed Drake and Bob Pelletier - Can. Post Cffice Oct. 11/73   10f

We met in Ottawa at Ed's suggestion. He felt that we had a lot
of areas of mutual interest and that we might be able to
eliminate some duplication of effort if we were able to input
into each others research.   10f1

We talked about several areas in the SPRITE questionnaire that
could be reworked tc dgive the Post Office some info*   10f2

    -ask how the use of a proposed service might change if the
    post office were to change their delivery or porcessing
    style (eg. by going to a schedule with two deliveries a
    week, etc.)   10f2a

    ask how the service might change if the legal aspects

Bedford - Ryan Project : On-going

surrounding such things as facsimile were changed to one
extreme or the other   10f2b

-ask how the panelists view the development of the
government sector in their private lives (this approaches
the concept of the local post office being the government
arm in each community ----very popular in Quebec)   10f2c

Mark Davies Phone Call - October 2, 1973   10g

This call arrived in the afternoon, after Turoff's call of the
same day.   10g1

With a bit of prodding, Mark outlined the general details of
the tentative arrangement with Murray.   10g2

Possible contract from TCTS General Engineers to offer CMI on a
TCTS basis   10g3

METS didnt want to go the whole whot on CMI and they must
have convinced the General Engineers to at least look at the
possibility of offereing a cotract to Mark and the boys.
Mark thought the contract would be in the $100,000 - 150,000
range, which would cover the cost of providing a
conferencing service to TCTS on whatever basis the contract
called for (ie. the demand would have to be forecast in
advance - good luck) as well as doing evaluations of the
system.   10g3a

The whole tone of Mark's comments was in his usually
over-optimistic vein.   10g4

Murray Turoff Phone Call - October 2,1973   10h

Outline of some of the research that Murray and his new group
can do   10h1

General research on the existing system $25,000   10h1a

general improvements to the system, involving the changes
and modification that mark and we have requsted. This
would involve bringing in someon like Tom Hall from
Wachington who would do a complete revamp of the 1108
package.   10h1a1

develop an operating system for supporting conferencing
only. (develop package for $5,000; develop operating
system for $10,000   10h1a2

Bedford - Ryan Project : On-going

evaluations of the system's capacity; how many conferees
one each conference, how many conferences on the system.   10h1a3

Background on the "Interdata" mini that they think would be
especially suited to conferencing applications.   10h1b

reflections on the mini itself, which is expected to cost
in the neighborhood of $75,000 with delivery in
summer/fall '74.   10h1b1

If BNR were to get the same type of mini, then Murray
would be prepared to hand over the software free of
charge; BNR could be up and running in no time.   10h1b2

Develop a conference compiler that would be ble to look
after several conferencing systems at once with the
advantages that a conferencing coordinator would be able to
mix and match conferencing options to suit the individuals
involved in the particular conference.   10h1c

Murray estimates that the total consulting package that Mark
proposed to him would come out in the neighborhood of $40,000   10h2

Murray thinks he finally got it through Mark's head that the
major costs that would be born by anyone using a conferencing
service would be the transmission costs, not the cost of the
conference program itself. He hypothesized that the phone
co's. might want to make the conferencing available at no cost
, in order to stimulate DDD revenues.   10h3

Concerning the SPRITE questionnaire, Murray hoped that he would
be with us on a consulting basis before he received the first
questionnaire; he objects on general principle to the idea of
industry borrowing the skills of academics without compensating
them. (Same bitch as Prof. Robinson9   10h4

(Phone) Phone Numbers And Addresses   11

Bedford - Ryan Project : On-going

(J21298) 5-JAN-74 13:08;   Title: Author(s): Michael T. Bedford/MIKE;
Distribution: /MIKE; Sub-Collections: NIC; Clerk: MIKE;
Origin: <BEDFORD>MIKE.NLS;1, 5-JAN-74 13:03 MIKE ;

Introduction   1

    One of the problems of learning about a new computer facility
    is that of getting access to relevant documentation at the
    right level. For a network of computer systems, such as the
    ARPA Network, the problem is magnified enormously as soon as
    work is attempted on more than one machine.   1a

    In an attempt to provide documentation for UK users of the
    Arpanet, when, and preferably before they need it, we have
    spent some time looking into the problems of retrieval,
    duplication and distribution. The remainder of this brief
    note describes our present procedures, based on co-operation
    from the British Library, Lending Section.   1b

Volume of Documentation   2

    In an earlier document[1], I presented some figures for an
    estimate of the volume of documentation which we expect to
    handle in the course of a year. At this early stage it is
    impossible to say whether the estimates have any meaning, but
    the present trend seems to be much as predicted.   2a

    The number of documents going into our collection is estimated
    to be around 10 per month, with an initial collection of some
    30 documents. This results in an accumulation of about 150
    documents per year.   2b

    All of these documents are manuals, at present, and are
    between 20 and 100 pages in length. The average size is
    around 40 to 50 pages.   2c

    The current number of active users is about 15, with a number
    more in prospect. If all users were to get copies of all
    documentation in the collection, this would amount to over
    100,000 pages per year   2d

Retrieval of Documents   3

    Where documentation exists, much of it is available on-line.
    This makes it accessible to us within a reasonable time-scale.
    Documents only available in hardcopy form take some time to
    cross the Atlantic, and additional delays may be occur because
    of the inability to directly contact the people involved in
    forwarding the material.   3a

    Some hardcopy documents bear copyright, and we are at present
    exploring the best way to deal with these. To get two copies

by airmail is ideal, provided we can get permission to
duplicate them; if this is not granted we would have to order
10 to 20 copies which would invariably mean surface mail being
used, with attendant delays.   3b

Duplication of Documents   4

After looking at methods of duplication available at the
British Library and elsewhere, the most practicable method
appears to be Xeroxing. This amounts to between .5p and 1p
per page. It also has the advantage that the BL are well used
to handling this process in a production environment.   4a

Microfiche master production and duplication, at first sight
appears very attractive, both for duplicating costs and
mailing costs. However, the BL are not able to offer a
regular service for microfiche master production, and using an
outside agency would incur a delay of some weeks.   4b

Emphasis is placed on the time taken in getting the
documentation from its origin to the user. This is because
much of the material in the collection has a lifetime of
around six months. Moreover, researchers in this country are
generally working to a tight schedule. If they have to wait
for 6 to 8 weeks for a manual, they may not do full justice to
their projects in the time remaining.   4c

Distribution   5

At present, a representative from each site receives a copy of
each document from the BL. This means an excessive amount of
redundant Xeroxing of documents which are probably not widely
needed.   5a

Before long, users will be circulated with a list of
categories of documents so that this redundancy can be
reduced, and they will thence forward only receive
documentation relevant to themselves.   5b

Catalogue   6

The catalogue for the collection is maintained on-line at the
Network Information Centre (NIC). Once monthly, updates are
sent to all users and periodically a complete catalogue sorted
by category will be produced.   6a

Comments   7

At present, the documents being distributed are of general
interest. The circulation will be restricted somewhat in the
future, as documentation becomes more specific and especially
if funding is restricted.   7a

Reference   8

1. SR Wilbur   8a
   Arpa Documents at the British Library, INDRA Note 324, NIC
   20592, University College, London

ARPA Network Document Procedures

at the

British Library

Stephen R Wilbur

Dept. of Statistics and Computer Science

University College, London

Abstract

The present scheme adopted by UCL, in collaboration with the British Library, for distributing manuals and other documentation relevant to ARPA Network usage is presented.

(J21299) 6-JAN-74 08:24;   Title: Author(s): Stephen R. Wilbur/SRW;
Distribution: /PK; Sub-Collections: NIC; Clerk: SRW;
Origin: <UK-ICS>INDRA331.NLS;2, 6-JAN-74 04:30 SRW ;
.SNFShow<=2;

GOTO TENEX and pseudo-interrupts

i have fixed GOTO TENEX (in xnls) so that pseudo-interrupts work
properly   will be available after next running of tasks.   1

GOTO TENEX and pseudo-interrupts

(J21300)   6-JAN-74 13:54;   Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /NPG; Sub-Collections: SRI-ARC NPG; Clerk:
KEV;

xnls loads

the following undefines can be ignored for the time being:
        xpkill
        xprunt

1

xnls loads

(J21301)   6-JAN-74 21:52;   Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /NPG; Sub-Collections: SRI-ARC NPG; Clerk:
KEV;

xnls loads

the following undefined can be ignored: gptxst   1

**KEV 6-JAN-74 22:02   21302
xnls loads

(J21302)   6-JAN-74 22:02;   Title: Author(s): Kenneth E. (Ken)
Victor/KEV; Distribution: /NPG; Sub-Collections: SRI-ARC NPG; Clerk:
KEV;

why cant i do a groupstat with out logging in ? it is more relevant
than a sysstat and shorter.   1

(J21304)   7-JAN-74 08:47;   Title: Author(s): Jonathan B. Postel/JBP;
Distribution: /BUGS; Sub-Collections: NIC BUGS; Clerk: JBP;

TEJOURNAL extensions	1
submission	1a
NLP deferred number	1a1
NLR other machine (w/number)	1a2
NLN number already assigned or secondary distribution	1a3
during delivery	1b
NLD	1b1
NLQ - FTP stuff?	1b2
After	1c
NLn processing finished. Last digit = date	1c1
End of test of message group system!	2

BIG MESSAGE

(J21305) 7-JAN-74 10:29;   Title: Author(s): Diane S. Kaye/DSK;
Distribution: /DSK; Sub-Collections: SRI-ARC; Clerk: DSK;
Origin: <KAYE>SUBMISSION.NLS;2, 4-JAN-74 14:54 DSK ;

Visitlog, 7 Dec 73, Hanneman and Knight from Annenberg

This is being submitted as is since no revisions were suggested.

Visitlog, 7 Dec 73, Hanneman and Knight from Annenberg

Visitors, Dec 7, 73   1

   See JCN's letter: (IJOURNAL, 19913, 1:w)   1a

   KNIGHT, PAMELA
   (PK3) AFF-14
    Computer Scientist and   1b

   HANNEMAN, GERHARD J.
   (GJH) AFF-14
   Faculty, Specialist in Human Communication
       both at:
   Annenberg School of Communication
   University of Southern California
   915 West 37th Place
   Los Angeles, California 90007
   Delivery: Hardcopy;   1c

   Description of Visit   1d

       They are working on a "Computer Assisted Communication System"
       with ISI (involves Carlyle and Martin). They are interested in
       the impact of such technology on the human communication
       process, and are planning a report on this area. They are not
       involved with CAI as coordinated by APRA's O'Sullivan, although
       this may be of interest, particularly since they are now aware
       of the implications of AKW for the collaboration of of the CBI
       community. They are awaiting word on a proposal submitted to
       ARPA (Kahn) that will fund either the particular study they
       want to do, OR the ISI "office support system" may include
       funds for them....not sure which.   1d1

   Events: 1d2

       They began their day long visit with a meeting with JCN,
       RWW, and JHB. A subsequent demonstration illustrated the
       concepts introduced, and was followed by a luncheon with DCE
       and RWW.   PR inspired them in a post-luncheon meeting in
       which some of the more abstract implications and issues of
       analysis were dealt with. The remainder of the afternoon
       was spent discussing the psychological methodology and
       results of pychometric investigation with JHB. JHB noted
       that Dr. Hanneman was most interested in the human factors
       of our terminal rather than the communication tools
       offerred. Much of his experience with computers is from a
       human factors perspective although his education is in the
       area of human communicative behavior.   1d2a

       Of note was the coincidence that Hanneman and JHB are

professional acquaintances, sharing an active interest in the
International Communication Association. His interest in human
information processing brought him to a session to hear JHB at
a conference in 1971.   1d3

There were no specific commitments made, although a good bit of
interest was expressed in collaboration. Pam requested and
received the specific procedure for logging into to ARC as a
guest and, with Jake's help, was shown the NIC Query system.
Otherwise, they both felt "overwhelmed" and seemed very pleased
with the attention they received.   1d4

Documentation they were given:
AFOSR-3223, SRI-ARC 3954, SRI-ARC 19250, SRI-ARC 18368, and The
Analysis/Evaluation of an AKW (Bair)   1e

Visitlog, 7 Dec 73, Hanneman and Knight from Annenberg

(J21306) 7-JAN-74 10:44;   Title: Author(s): James H. Bair/JHB;
Distribution: /JCN DCE RWW PR; Sub-Collections: SRI-ARC; Clerk: JHB;
Origin: <BAIR>VISIT.NLS;1, 7-JAN-74 10:35 JHB ;

Status of the Utility, Office-1, 7 Jan.

For your information: the Utility will probably not be up this week
due to the continuing failure of the BBN Pager. Due to the extreme
nature of the difficulty with this vital piece of hardware, the top
BBN expert is flying to Cupertino now (Mac McKinly). We all share
the disappointment that this continued delay brings, and everything
possible is being done to rectify the situation as soon as possible.   1

Status of the Utility, Office-1, 7 Jan.

(J21307)   7-JAN-74 12:43;   Title: Author(s): James H. Bair/JHB;
Distribution: /JCN RADC LHD MIKE PF IMM JHK2 PIW WRF JDH;
Sub-Collections: SRI-ARC RADC; Clerk: JHB;

Scheduled IMP Software Release

This is a reminder that Network Software Maintenance is scheduled
between the hours of 0700 and 0900 (Eastern Time) on Tuesday, 8
January 1974. Although software releases are checked out as much as
possible in the BBN test cell, there are sometimes problems of scale
which are not detected until after a release; hence there is a small
but finite possibility that the software will be troublesome for a
few hours after the scheduled release.
Sincerely,
Alex McKenzie (for the Network Control Center)

1

Scheduled IMP Software Release

(J21308)   7-JAN-74 12:55;   Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /RADC; Sub-Collections: NIC RADC; Clerk: AAM;

Comments on the File Transfer Protocol

Jon--
    Here (finally) is that list of complaints I have about FTP that
we talked about when you were here. Any of them that you can work
out with Nancy et al would be muchly appreciated.
                                        --Mark

Comments on the File Transfer Protocol

NIC #
RFC #
references: RFC #542

Mark Krilanovich
George Gregg
UCSB
Jan 7, 1974

Comments on the File Transfer Protocol

There are several aspects of the File Transfer Protocol that constitute serious drawbacks. Some of these are quite basic in nature, and imply substantial design changes; these will be discussed in a later RFC. Others could be remedied with very litle effort, and this should be done as soon as possible.

Following is a list of those problems that can be easily solved, together with their proposed solutions:

1. Once a server has been told to be "passive" with regard to establishment of data connections, there is no way for the user to make him "active" again. SOLUTION: define a new command, with a command verb of "ACTV", to mean that the server is to issue a CONNECT rather than a LISTEN on the data socket. If the server is already "active", the command is a no op. "ACTV" is to have the same reply codes as "PASV".

2. Design of an FTP server would be simpler if all command verbs were the same length, and design of an FTP user would be simpler if either all command verbs were the same length, or if multiple blanks were allowed following the verb. SOLUTION: replace the only three-letter verb, "BYE", with a four-letter one, such as "QUIT", and constrain future command verbs to be four letters long.

3. The order of the handshaking elements following a file transfer command is left unspecified. After sending a STOR command, for example, a user process has no way of knowing which to wait for first, the "250 FILE TRANSFER STARTED" reply, or establishment of the data connection. SOLUTION: specify that the server is to send a "250" reply before attempting to establish the data connection. If it is desired to check if the user is logged in, if the file exists, or if the user is to be allowed access to the file, these checks must be made before any reply is sent. The text of the "250" reply would perhaps be more appropriate as "250 OPENING DATA CONNECTION", since it comes before actual data transfer begins. If the server wishes to send an error reply in the event that the data connection cannot be opened, it is to be sent in lieu of the "252 TRANSFER COMPLETE" reply.

4. Some hosts currently send an error reply on receipt of a
command that is unimplemented because it is not needed (e.g.,
"ACCT" or "ALLO"). Even though the text of the reply indicates
that the command has been ignored, it is obviously impossible for
a user process to know that there is no real "error". SOLUTION:
require that any server that does not support a particular command
because it is not needed in that system must return a success
reply.

5. There is no specified maximum length of a TELNET line, user
name, password, account, or pathname. It is true that every
system implementing an FTP server likely has different maxima for
its own parameters, but t IS NEARLY IMPOSSIBLE FOR THE WRITER OF
AN FTP user (which must converse with many FTP servers) to
construct an indefinite length buffer. Typically some arbitrary
maximum must be chosen. SOLUTION: specify a maximum length for
TELNET lines, user names, passwords, account numbers, and
pathnames. This is to be done after conducting a poll of serving
sites concerning their individual maxima.

6. The notion of allowing continuation lines to start with
arbitrary text solves a minor problem for a few server FTP
implementers at the expense of creating a major problem for all
user FTP implementers. The logic needed to decode a multi-line
reply is unneccessarily complex, and made an order of magnitude
more so by the fact that multi-line replies are allowed to be
nested. SOLUTION: assign a unique (numeric) reply code, such as
"009", to be used on all lines of a multi-line reply after the
first.

7. Given that multi-line replies are allowed to be nested, the
fact that the maximum allowed level of nesting is left unspecified
creates a hardship for implementers of user FTPs. This hardship
is somewhat easily solved on a machine that has hardware stacks,
but not so for other machines. SOLUTION: specify a maximum level
of nesting of multi-line replies.

8. In blocked mode, the protocol states that "all end-of-record
markers (EOR) are explicit, including the final one." This
prohibits sending data between the final end of record and the end
of file, but does not specify what the receiver of data is to do
if this rule is broken. That is, should the intervening data be
discarded or treated as a new (final) record? SOLUTION: specify
that if an end-of-file marker is not immediately preceded by an
end-of-record marker, the intervening data is to be discarded.

A major complaint about the protocol concerns the fact that the
writer of an FTP user process must handle a considerable number of
special cases merely to determine whether or not the last command

sent was successful. It is admitted that the protocol is
well-defined in all the following areas, but it is important to
realize that the characteristic "well-defined" is necessary, but not
sufficient; for many reasons, it is very desirable to employ the
simplest mechanism that satisfies all the needs. Following is a list
of those drawbacks that unduly complicate the flow chart of an FTP
user process:

9. Different commands have different success reply codes. A
successful "USER" command, for example, returns a "230", whereas a
successful "BYTE" command returns a "200". The concept that
success replies should have an even first digit and failure
replies an odd first digit does not apply, as "100" means success
for "STAT", and "402" means failure for "BYTE". SOLUTION:
specify that any command must return a reply code beginning with
some unique digit, such as "2", if successful, and anything other
than that digit if not successful.

10. Some commands have multiple possible success reply codes,
e.g., "USER", "REIN", and "BYE". It is undesirable for an FTP
user to be required to keep a list of reply codes for each
command, all of which mean "command accepted, continue".
SOLUTION: same as for (9.) above. The desire to communicate more
specific information than simply "yes" or "no", such as the
difficulty in the login procedure that some sites do not need all
the parameters, may be solved by having, for example, "236" mean
"PASSWORD ACCEPTED, YOU ARE NOW LOGGED IN", and "237" mean
"PASSWORD ACCEPTED, ACCOUNT NOW NEEDED". The important point is
that the idea of "command accepted" is conveyed by the initial
"2", and that finer gradations of meaning can be deduced by the
user process, if desired.

11. There are several types of replies that are extraneous from
the point of view of a user FTP process, and their reply codes
have no characteristic that makes them easily distinguishable.
For example, "010 message from operator" and "050 FTP commentary"
are superfluous to a user process, and "000 announcing FTP" (in
place of "300" greeting) is not. SOLUTION: specify that any
reply that has meaning only to a human user and not to a user
process must have a reply code beginning with a unique digit, such
as "0". The continuation line reply code proposed in (6.) above
falls into this catagory, and therefore must start with the same
unique digit.

12. The notion of a server sending a "000 announcing FTP" or a
"020 expected delay" immediately after completion of the ICP if
input cannot be accepted right away is another instance of
multiple reply codes having the same meaning to a user process.
SOLUTION: require that the server send a reply with a "020" reply

code in the situation cited. If it is desired to communicate more detailed information, the text of the reply may used for this purpose.

In addition to the above mentioned weaknesses in the protocol, the following is believed to be a typographical error:

13. Reply code "331" is cited as a possible success reply code for the commands "BYTE", "SOCK", "PASV", "TYPE", "STRU", "MODE", "ALLO", "REST", "SITE", AND "STAT". This reply code means "ENTER ACCOUNT" (if required as part of login sequence), and perhaps should be "332 LOGIN FIRST, PLEASE". This is especially indicated by the fact that "332" is not listed anywhere in the command-reply correspondance table.

Comments on the File Transfer Protocol

(J21309) 7-JAN-74 13:43;   Title: Author(s): Mark C. Krilanovich/MCK;
Distribution: /JBP JEW; Sub-Collections: NIC; Clerk: MCK;
Origin: <UCSB>FTPCOMM.NLS;7, 6-JAN-74 12:47 MCK ;

Service Committee

Hi fellow Service site committee members.

I have put some intial thoughts into (ucla-nmc,dhcservice,). Who else
wants to build a file on it? Alan said he would...anyone else?
Dave.   1

(J21311)   7-JAN-74 17:44;   Title: Author(s): David H. Crocker/DHC;
Distribution: /ARH DAY MDK; Sub-Collections: NIC; Clerk: DHC;

intrcp.sav

- - - -

INTRCP has been bombing for about a week with the message   1

    ILLEG INSTRUCTION TRAP IN EXEC.   1a

DHC said that this might interest you.   2

Thank you---David Switzer (Ident=DKS)   3

--------   4

intrcp.sav
- - - -

(J21312) 7-JAN-74 18:19;   Title: Author(s): David Kirk Switzer/DKS ;
Distribution: /DHC ; Sub-Collections: NIC; Clerk: DKS;

FFTP Mail input to Journal
cc: White, DHC/JEW;H at NIC
- - - -

I am betting that you only get the upper-case addressed journal mail,
in addition to the White sndmsg. I believe that your process is
making a distinction between cases. The lower
case idents and input parameters (h) are not generally getting
rejected outright, but are getting timed-out and then never
successfully sent.   1

Well, here goes (Dave)...
-------   2

FFTP Mail input to Journal
cc: white, DHC/JEW;H at NIC
- - - -

(J21313) 7-JAN-74 18:24;   Title: Author(s): David H. Crocker/DHC ;
Distribution: /JEW ; Sub-Collections: NIC; Clerk: DHC;

FFTP Mail input to Journal
cc: White, dhc/jew;h at NIC
- - - -

I am betting that you only get the upper-case addressed journal mail,
in addition to the White sndmsg. I believe that your process is
making a distinction between cases. The lower
case idents and input parameters (h) are not generally getting
rejected outright, but are getting timed-out and then never
successfully sent.   1

Well, here goes (Dave)...
-------   2

FFTP Mail input to Journal
cc: white, dhc/jew;h at NIC
- - - -

(J21314) 7-JAN-74 18:24;   Title: Author(s): David H. Crocker/DHC ;
Distribution: /JEW ; Sub-Collections: NIC; Clerk: DHC;

Introduction   1

In accessing any remote machine, with few or no manuals to
hand, it is essential that some on-line help be available.   My
own feelings are that this should be hierarchically layered,
so that the user can first see what "goodies" are available,
and then look at some or all of these. My own practice tends
to be to look at everything the first time I go on to a new
system, but to want quick reference on subsequent occasions.   1a

The PDP-9/IBM 360 setup is such that the PDP-9 appears to the
360 as an 1130 workstation, with the exception that this can
support up to four interactive terminals in addition to the
usual card readers and line printers. The terminals go into
the RHEL Electric system to provide an on-line service, where
Electric provides editing and remote job submission
facilities.   1b

Implementation   2

It appears that there is enough spare directory space on the
PDP-9 drum to allow up to about four help files to be kept
there, and Sinan Yilmaz has written a utility which allows the
user to selectively access the information within these files.   2a

The reason for choosing the PDP-9 for this feature, rather
than the 360, is two-fold. First, if the 360 is down, users
can still busy themselves finding out about the system.
Secondly, although it requires little in the way of
interactive facilities to provide such help, Electric does not
allow user initiated interactive jobs, so that the help driver
program would need to be incorporated into the Electric
system.   2b

In fact, even in the PDP-9 implementation, the help driver
becomes part of the system, but our access to the innards of
this system is easier.   2c

Basically, Sinan's software allows one of a number of files to
be selected. At this point all lines within that file which
start flush with the left hand margin are printed out
immediately. These words form the keywords/headings in the
file, and the user can then cite any of these for the
appropriate blurb to be output. The only exception is the
word ALL which causes the whole file to be typed.
(Unfortunately, at the moment, network users have no way of
stopping this deluge once started)   2d

In practice, only the first three characters of a subsection heading or file name are matched, but this matching must be case independent for alphabetic characters. A further restriction is that as little information on each user as possible should be kept within the PDP-9, thus each command must be fully self contained, hence a '%H file, subsection' construct must be used, for getting at individual subsections. For just such a reason it is not possible to provide the user with a 'More' feature, allowing him to continue from where he left off; each subsection must be asked for explicitly, or ALL asked for.   2e

Scenario   3

I would personally prefer that a question mark, rather than the %H, cause the initial brief help instructions to be displayed, but I realise that the PDP-9 is primed to look for lines beginning with %. As a compromise I would NOT like to see %?   3a

Thus, assuming %H or ? gets at the top level help message, the other help files are then listed. %H followed by one of the files mentioned in the top level message gives the blurb subsections of that file. Finally, %H followed by a filename and one of these headings or ALL gives part or all of the file.   3b

    INDRA COMPUTING SERVICE
    TYPE ?<CR> FOR HELP

    ?   [ask for help]

    .   .   .   .
    For specific help type one of:
     %H PDP
     %H 360
     %H ELECTRIC
     %H EDITING
    .   .   .   .

    %H 360   [tell me about the 360]

    Type %H 360, followed by one of the following.
    Only the first three characters need be typed

    ALL
    GENeral
    HARdware

```
OPErating system
ELEctric
ACCounts
DOCumentation
STAndard procedures
LANguages
PACkages
```

%H 360,ELE   [what is Electric?]

Electric is a multi-access system which ...

Help Files   4

It is proposed that four files be set up dealing with the
PDP-9 front-end, the main 360, the Electric system and
commands, and the Electric editing sub-commands. Obviously,
other areas are worthy of consideration but I think that these
provide a good overall view of the combined system.   4a

The proposed items to be included in each file are listed
below. The full list of Electric and Electric editing
commands is not given, but all the fundamental ones will be
included and, I hope, a variety of common parameters. If
anyone has any comments on areas of omission I would be
pleased to hear of them. I have put initials after certain
sections, being the names of people I think most able to
provide the required material.   4b

PDP-9   4c

General	- deals with local editing conventions, upper/lower case, full/half duplex questions.
Hardware	- brief description of the hardware. (PLH)
%LOGIN	-
%LOGOUT	-
%STATUS	-
Bugs	- known bugs, and who to contact if suspected bugs arise. (PLH)
Queries	- who to mail and where.

360/195   4d

General	- brief outline of 360/PDP-9 relationship.
Hardware	- just that. (AVS)

```
Accounts            - how to get them. (PTK)
Documentation       - where to find it.
Operating System    - what it is, what mods. (AVS)
Electric            - overview. (AVS)
Languages           - the common ones. (AVS)
Packages            - summary. (AVS)
Procedures          - those which should be known to
                      browsers. (AVS)
Queries             - who to mail and where.
```

Electric   4e

```
Files               - Text and edit files
$Enter              -
$Modify             -
$Exec               - etc.
Graphics            - brief summary of graphics files and
                      operations.
Queries             - who to mail and where.
```

Electric Editing   4f

```
Text Files          - effect of editing them.
Edit Files          - effect of editing them.
$L                  -
$E                  -
$$                  - etc.
$S                  - Supply: brief but detailed.
$P                  - Plant: brief but detailed.
Queries             - who to mail and where.
```

Conclusions   5

I do not expect the above to be a comprehensive and complete
on-line guide to the 360, or even part of it. We just have
not the file space for such ventures. However, I would like
to see it whet the appetites of a variety of users, while at
the same time providing the information they are most likely
to need. Each file includes a Queries section which would
tell the user where to mail his specific queries, if he cannot
contact UCL staff while he is on-line. By virtue of these
responses and queries, no doubt the volume and type of
information proposed here will be greatly changed.   5a

It is hoped that some more comprehensive files will eventually
be built up within the 360, with an associated retrieval
utility. The current text editor on that machine is not in my
view an adequate tool for such retrieval.   5b

Initial 360/195 Help Structure

Stephen R Wilbur

Abstract

This note describes the proposed initial help facility for the
UK 360 node of the ARPA Network. The broad contents of the
help files are mentioned.

(J21315) 9-JAN-74 00:59;   Title: Author(s): Stephen R. Wilbur/SRW;
Distribution: /AVS PLH PK; Sub-Collections: NIC; Clerk: SRW;
Origin: <UK-ICS>INDRA337.NLS;3, 9-JAN-74 00:56 SRW ;

21315 Distribution
      Adrian V. Stokes, Peter L. Higginson, Peter Kirstein,

Mel:

I would like to invite you to consider writting a brief status report
on ILLIAC IV for the ARPANET News. We are continually asked about the
status of ILLIAC and have little available news. Your consideration
of this request would be greatly appreciated by the network
community.

Thank you for your consideration. Please forward to iseli@isi or to
help@nic, or to JI through the NLS Journal system. A response by 20
January would be most helpful.V   1

Illiac IV News request

(J21316)   7-JAN-74 23:47;   Title: Author(s): Jean Iseli/JI;
Distribution: /MWP MEJ; Keywords: illiac-iv-news-request;
Sub-Collections: NIC MITRE-TIP; Clerk: JI;

intrcp again
- - - -

INTRCP has been bombing for about a week with the message   1

ILLEG INSTRUCTION TRAP IN EXEC.   1a

DHC said that this might interest you.   2

Thank you---David Switzer (Ident=DKS)   3

--------   4

                                                                   5

intrep again

- - - -

(J21317) 8-JAN-74 00:09;   Title: Author(s): David Kirk Switzer/DKS ;
Distribution: /DHC ; Sub-Collections: NIC; Clerk: DKS;

Info

Capt Johnson represented RADC/IS in an AFSC held networking workshop at Hq AFSC. The result of the workshop was a preliminary plan for interfacing selected AFSC computer resources to the ARPA network. The plan will be implemented in two phases. Phase I involves interfacing Control Data Corporation (CDC) 6600 computers at three sites (ASD, ADTC, and AFWL) to the ARPANET using the ARPA Network Terminal System (ANTS) developed by the University of Illinois under ARPA sponsorship. The three sites will serve as a testbed for evaluating the resource sharing capabilities introduced by networking. If Phase I proves successful, additional computer facilities (13 currently identified) will be interfaced as a second phase effort. RADC's forthcoming HIS 6180 computer has been identified as one of the Phase II candidate sites. (Reference letter to Commander, subj: AFSC Networking Workshop, dated 12 Dec 73.)

1

Info

(J21318) 8-JAN-74 06:58;   Title: Author(s): Roberta J. Carrier/RJC;
Distribution: /RHT RJC; Sub-Collections: NIC; Clerk: RJC;
Origin: <CARRIER>ITEM.NLS;1, 8-JAN-74 06:55 RJC ;

ARCHITECTS' INTENSIVE SEMINAR AT ARC JANUARY 10 THROUGH JAN 15

As the Workshop Utility is starting operations, we at ARC are
addressing ourselves to the task of aiding in the the development of
several key people who will perform in the role of Workshop
Architect for each user organization.   1

    This role was discussed as a key part of our strategy in:
    the RADC proposal: (15263,3c2c),
    the ARPA proposal: (14946,3c2c), and
    the Bell proposal: (19250,3c2c).   1a

    The role of the Workshop Architect was described along the
    following lines in those documents: 1b

    We would like to give particular emphasis to the requirement
    that each coherent group planning to integrate the proposed
    Workshop Utility services into its working life should have at
    least one member serving as a "Workshop Architect" or "group
    coordinator."   1b1

    The function of this person is to be familiar in detail
    with both the needs of his (or her) organization and the
    capabilities we will provide. This person, knowing his
    group's needs and our capabilities, will help introduce a
    workshop system meeting these needs into his organization
    in the appropriate evolutionary stages.   1b1a

     ARC personnel will work closely with the Workshop
    Architect--in training him, in giving him significant help
    in his role, and in a continuing exchange of technical
    information.   1b1b

    The labor-funding levels underlying our proposals were
    based on the assumption that when a client group is
    allocated a portion of the Utility Computer Services, the
    corresponding allocation of direct technical support will
    go primarily to and through its Workshop Architect. We
    assume that much of the responsibility for integrating the
    Workshop service into his (or her) organization or
    community will be handled by this person.   1b1c

 In line with these objectives, we are planning a week of
"intensive" discussions and training at ARC starting Thursday
January 10th and running through Tuesday January 15. We hope to
continue our discussions and use of the system through some parts of
the weekend (the 12th and 13th) when system availability will be
highest.   2

 The initial Workshop Architects are: 3

ARCHITECTS' INTENSIVE SEMINAR AT ARC JANUARY 10 THROUGH JAN 15

for ARPA: Connie McLindon (ckm)   3a

for RADC: Duane Stone (dls)   3b

   and possibly a second person for another group   3b1

for BELL CANADA: Inez Mattiuz (imm)   3c

for SRI: Tom Humphrey (tlh)   3d

We have discussed the attendence at the January session at ARC with
each architect and/or their organization's management
representative.   4

   In addition to the above people, we also anticipate at least sme
   participation from Col. John S. Perry (jsp) of the ARPA
   Information Processing Techniques Office.   4a

We are now in the process of preparing an agenda and the substance
of the week's activities. Doug engelbart, Dick watson, Jim Bair, and
Jim Norton are involved in this task.   5

We are looking forward with great anticipation to the event. It
will be actually somewhat of a milestone for our program. We've
talked for a long time about really getting capable, interested
people "out there" in our workshop-using organizations--people who
will develop the capability that will permit us to transfer what we
have built and what we have learned in the past years to new users
and organizations. To us, it will not be "just another meeting", but
it is the start of an exciting new phase.   6

FOR Making AE's Available without the Option Character

Jump to address or item should take an address without the need for typing an option character. Making addresses available only after an option character cuts down the usefulness of putting AE's in DNLS by a substantial fraction.
I have heard that some one resists making addresses available without an option character "for the sake of consistency". Consistency like that is like making a rule that you have to start walking on your right foot no matter where you start from.   1

FOR Making AE's Available without the Option Character

(J21321) 8-JAN-74 10:34; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /NEWNLS KIRK CHI; Sub-Collections: SRI-ARC NEWNLS; Clerk: DVN;

On-Line Distribution Group

Jeanne ... I see little advantage in making a group of those
individuals getting on-line delivery, as you discussed in (21294,).
The group will almost certainly quickly become out of date, as new
members around the net modify their delivery status. If we're to
have such a group, then the only way it should happen is for the
ident system to keep it continuously up-to-date. What is the real
need? What other alternatives are there ? ... Mike   1

On-Line Distribution Group

(J21322) 8-JAN-74 11:26; Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /JBN JEW RWW MLK; Sub-Collections: SRI-ARC; Clerk: MDK;

Service Site Criteria

I have put together an initial outline of factors that we might
consider in setting criteria for Service Sites. The list is in
(kudlick,service,). It overlaps Dave's list somewhat; apologies for
that, but it was done before I got Dave's msg. You're welcome to
read it, of course. I'd appreciate your comments. ... Mike Kudlick   1

Service Site Criteria

(J21323)   8-JAN-74 12:06;   Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /DHC ARH DAY; Sub-Collections: SRI-ARC; Clerk: MDK;

Welcome party for Architects --all ARC invited.

Immediate attention

Welcome party for Architects --all ARC invited.

There will be a welcome party for the four architects who are coming
to ARC this Thurs. for a week long Architect's seminar. It will be
at 5:30 at Doug's place (Jan. 10), replete with pizza and beer.
All ARCers are invited. It is hoped that the architects will get to
meet the ARC staff and vice versa,
Please let Jeanne Leavitt know as soon as you can whether or not you
are attending so we can plan on quantities of food.   1

Welcome party for Architects --all ARC invited.

(J21324)   8-JAN-74 12:20;   Title: Author(s): James H. Bair/JHB;
Distribution: /SRI-ARC DLS TLH IMM CKM; Sub-Collections: SRI-ARC
SRI-ARC; Clerk: JHB;

HOW TO USE THIS DIRECTORY

1

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
---   2

ATTENTION:

This Directory is the property of the Network Information Center, and
is to be used for ARPA Network business only. Its use for making
distribution lists or for any other unauthorized purposes is strictly
prohibited.   3

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
---   4

INDIVIDUALS: Individuals who have been assigned an IDENT at the
NIC are listed alphabetically by last name. The format is   4a

    INDIVIDUAL'S NAME   IDENT   NETWORK-MAIL-ADDR
    HARDCOPY-MAIL-ADDR   PHONE NUMBER   4a1

where   4b

    IDENT =   unique code (usually one's initials) by which the
    NIC's Journal mail system identifies and locates the individual   4b1

    NETWORK-MAIL-ADDR is in the form   USER@HOSTNAME. The HOSTNAME
    portion identifies a Host system that the individual uses for
    his Network mail. The USER portion of the Network Mail Address
    is the character sequence by which that Host identifies the
    user's incoming mail.   4b2

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
---   5

GROUPS: Network special-interest Groups established with the
NIC for purposes of conducting dialogue through the NIC Journal,
are listed alphabetically by Group Ident, as follows   5a

    Ident   Group Name   Coordinator   5a1

where   5b

    Coordinator = the individual responsible for that Group   5b1

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
---   6

ORGANIZATIONS: Official Network-related organizations which
have been registered at the NIC are listed alphabetically by name,
in the format   6a

    ORGANIZATION NAME   OFFICIAL-HOST-NAME
    ORGANIZATION ADDRESS
                                                                           6a1

where   6b

    OFFICIAL HOST NAME = unique code, obtained through negotiation
    with the NIC, by which a Host is known.   6b1

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
---   7

NETWORK RESOURCES: Other information contained in this Directory
pertains to HOST identification and resources. This information
is contained in several brief tables: 7a

    HOST NAMES   7a1

        This table lists all Network hosts, alphabetically by Host
        Name. The table includes Host Address (decimal), Liaison at
        that Host, and Host status.   7a1a

    HOST ADDRESSES   7a2

        This table lists all Network Hosts, numerically by Host
        Address, both in Decimal and in Octal, and specifies the
        number of Hosts attached to each Imp.   7a2a

    SERVERS   7a3

        This table lists those Hosts which are currently
        self-designated as "Servers". A Server Host is one that
        provides computer resources to users through the Network.
        The conditions under which the resources are provided are
        determined by the Server Host. You may obtain information
        about this through the "accounts contact" listed in the
        table for each Server Host. (Information about the
        resources may be obtained from the Host Liaison listed in
        the Host Name table, and from the Resource Notebook provided
        by the Network Information Center.)   7a3a

    COMPUTER SYSTEMS   7a4

        This table is a list of Hosts, organized by computer type.   7a4a

PROGRAMS   7a5

This table lists programs accessible on Network Host
systems.   7a5a

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
---   8

How to Use Arpanet Directory

(J21326) 8-JAN-74 14:17; Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /MDK; Sub-Collections: SRI-ARC; Clerk: MDK;
Origin: <KUDLICK>DIR.NLS;11, 14-DEC-73 13:12 MDK ;

HOW TO USE THE NETWORK INFORMATION CENTER   1

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
---   2

1. To update or add to data in this Directory, contact the NIC by
any of these methods: 2a

    via Network Mail, to   NIC @ SRI-ARC   2a1

    via NIC Journal, to   NIC   2a2

    via phone, to   Ms. Marcia Keeney
                               (415) 329-0740   2a3

    via U.S. Mail, to   Ms. Marcia Keeney
                               ARPA Network Information Center
                               Stanford Research Institute
                               Menlo Park, California 94025   2a4

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
---   3

2.   To use the NIC's on-line computer services: 3a

    a. Connect to Host "OFFICE-1"   [Host # 43 decimal]   3a1

    b. LOGIN, using this scenario
        [NOTE: "<cr>" means "carriage return";
               the first line is typed in response to the "@";
               subsequent lines are typed in response to system
               prompting, which is not shown here.]   3a2

        @LOG <cr>   ... log-in command
         GUEST <cr>   ... username field
         ARPA <cr>   ... password for username "guest"
         <cr>   ... account number for "guest" is defaulted   3a2a

    c. Get HELP in using the NIC's on-line services, with this
        command: 3a3

        @HELP <cr>   3a3a

            [The HELP mechanism is self-instructional after you type
            "HELP <cr>".   3a3a1

            [It provides information about how to open an account at
            the NIC, how to access the Resource Notebook and the

ARPANET News on-line, and how to use the NIC Journal and
other on-line NIC services.]   3a3a2

--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
---   4

3. To use other NIC services, such as   4a

    RFC distribution
    Delivery of NIC Journal mail
    Delivery of NIC Publications
        (for example, this Directory, the Resource Notebook,
        the ARPANET News, and the Network Protocols Notebook)   4a1

please contact the NIC by any of these methods: 4a2

    via Network Mail, to   NIC @ SRI-ARC   4a2a

    via NIC Journal, to   NIC   4a2b

    via phone, to   Ms. Marcia Keeney
                      (415) 329-0740   4a2c

    via U.S. Mail, to   Ms. Marcia Keeney
                      ARPA Network Information Center
                      Stanford Research Institute
                      Menlo Park, California 94025   4a2d

How to Use the NIC

(J21327) 8-JAN-74 14:24;   Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /MDK; Sub-Collections: SRI-ARC; Clerk: MDK;
Origin: <KUDLICK>NICBLURB.NLS;8, 14-DEC-73 13:14 MDK ;

Having received no response to my request (MJOURNAL,21157,1:w) for a
user program to modify the on-line delivery status of NIC users (from
Host = SRI-ARC to Host = OFFICE-1), I am curious: What are the plans
for doing something about this problem ?   1

(J21328)   8-JAN-74 14:30;   Title: Author(s): Michael D. Kudlick/MDK;
Distribution: /RWW JDH CHI; Sub-Collections: SRI-ARC; Clerk: MDK;