The purpose of this document is to begin to explain how the FMS will
do all the things we want it to do (as explained in the Functional
Design which should be read first).

2 TRACKING OF INITIATED, COMMITTED, AND OBLIGATED DATES & AMOUNTS FOR
A PR (ICO).   2

  2a FMS Entities   2a

    2a1 Two types of entities are possible: an effort which
    denotes the sum total of a contractual or in-house unit of work
    and a PR which is one of the building blocks of a contractual
    effort, each contract consisting of one or more PRs.   2a1

    2a2 An effort is the highest level of data that the FMS is
    interested in, containing general data like title, engineer's
    name, job-order-number (jocas number), contrator, etc. Unique
    identification of an effort is determined by its assigned
    job-order-number.   2a2

    2a3 The next level of detail in the FMS is the PR level which
    gives specific details about a PR, PR-number,project number,
    fund source, Obligation amount, etc. A number of PRs may be
    related to a contract, but each PR may have only one contract.   2a3

    2a4 Although the logical design of the database has been worked
    out (see Database in the Functional Design document), its
    physical implementation has not yet been worked out. It is
    expected, though, that the effort information will be entered
    at level one of the database and PR information will be
    subsumed beneath that at level two.   2a4

  2b Entry into system   2b

    2b1 An effort can be entered into the FMS's Current Database at
    any point during its planning cycle as long as the necessary
    data items can be supplied in one form or another (i.e.
    job-order-number, PR-number, Contract Duration, Contract Face
    Value, Type of Buy, Est Start Date, PR Obligation Amount,
    Priority and Project Number). Without these items processing
    of an effort would not be worthwhile, and so its entry would be
    prohibited.   2b1

    2b2 An effort in the planning stage can be entered and then
    treated as if it were an actual effort (with certain
    reservations). Typically, PR-numbers and Job-order-numbers are
    not assigned during the planning stage and the Data Entry

Center must supply such numbers, prefaced with a 'P' so that
the system can recognize that these efforts are only in the
planning stage. Before a entry can be made into the FMS
database, a check must be made to ensure that if this effort
was entered previously as a planned item, the planned item must
be deleted in order to avoid duplication.   2b2

2b3 For a new start, paperwork begins with an RADC Form 77. A
Program Implementation Request, that shows the initial number
of Purchase Requests (PRs) that are being requested for an
effort to go out on contract. This form, if properly filled
out, furnishes all the essential items for entering an effort
into the database except for priority. (Note: a Form 77 must
also be submitted for an in-house effort if a job-order-number
is to be assigned). As the division moves toward putting all
its Form 77s under NLS, the FMS could provide an automatic
update program that would jump to the Form 77, strip off the
necesary data, message it and then enter it into the database.   2b3

2b4 Even after an effort has been entered in the database and
a contract has begun, PRs may still be added to a contractual
effort according to job-order-number. There are three cases
for this: (1) as a PR initiated for engineering changes (when
the scope of the contract is changed), (2) when a PR is
submitted as an Add Funds in the case when the original PR does
not provide all the funds ncessary for the effort and (3) when
a contract crosses over into another fiscal year.   2b4

2b5 Although contracts may run a number of years, a PR is good
only during the fiscal year it began in. So when a contract
crosses a fiscal year, a new PR must be instituted to replace
the one that is now finished and this new one is designated as
an O1R. The O1R is written before the title name on the Form
77 to show that the contract has not been changed but simply
that this PR was submitted to start a new fiscal year and the
purpose is to Add Funds Only. PRs that are designated as O1Rs
are obligated and funds must be set aside to pay for them
before anything new can be started. A prime question that will
be asked, and which the FMS must be able to answer, is 'how
much money is obligated in terms of O1Rs for the next fiscal
year?' (this is related to Form 30s which should be
duplicated).   2b5

2c Collection of data   2c

2c1 Data must be pulled off the Form 77 and collected from some

other sources in order to enter an effort into the FMS Current
Database.   Priority must be obtained from the section level
(this year there was a planning document that listed each new
effort by priority), Contract Face Value for a new effort can
be found by summing all the values from all the PRs being
applied to the effort (by having the same job-order-number)
with the follow-on funding which is also denoted on a Form 77.
Est Start Date can be computed from the Work Date on a Form 77
by a lead time depending on the type of procurement (see steps
below).   2c1

2c2 These items and the remaining data items can be collected
in a pretty straight-forward manner according to the directions
given in the Database Description.   2c2

2d PR Modifications   2d

2d1 An engineering change is an admendment to the contract to
add work or tasks not in the scope of the origial contract. A
new Form 77 must be submitted and a new PR is generated to
provide the money that covers the cost of this change. The
starting date for this PR will probably be when it is obligated
and it will last until the end of the fiscal year or till the
end of the contract, whichever comes first (Note: as a result
of this type of change, a contract might have a new completion
date if the contract was extended by the additional tasks). If
the PR has not been obiligatd yet (in other words these changes
were proposd before the initial contract was even signed), the
changes can be denoted just by adding a letter description to
the existing PR; Change A represents the fist such change,
Change B the second, and so on.   2d1

2e Relate PRs to contract   2e

2e1 As described before, PRs are linked to a contract on a many
to one basis. The key to this relationship is through
job-order-number; all PRs on a contract have the same
job-order-number even though different projects may be funding
them. The hierarchical filing system of NLS will be used to
reflect this arrangement. Information on the contract level of
an effort will be stored at level one (e.g. title, engiineer,
priority, job-order-number, technical completion, and other
contract data) while PR information e.g. (PR-number, project,
fund source, ICO, etc.) will be subsumed underneath that. For
example, if a job-order-number is at statement 1, then the PRs

related to that job-order-number will be at 1a, 1b, 1c,... so
it is necesary to know the job-order-number that a PR is being
applied against in order to enter it into the database.   2e1

2e2 Except in the special case of a Program Directive (PD), one
PR can be related to only one contract. The special case of a
PD will be handled by associating the PR with only one contract
number, the one that is submitted to MASIS (the MASIS system is
also not set up to handle more than one contract per PR).   2e2

2f Relate PRs to fiscal year   2f

2f1 Case I: 1 PR on a contract, completion within same fiscal
year   2f1

    2f1a This is obviously the simplest case; a single PR funds
    a contract that will be over before the end of the fiscal
    year. The expenditure rate developed for a PR shows the
    expenditures for the entire contract by itself and the
    amount of money the PR obligates is equal to the value of
    the contract. Naturally, there will be only one PR subsumed
    under the contract.   2f1a

    2f2 CASE II: A contract running over fiscal years   2f2

    2f2a When a contract crosses a fiscal year boundary, the
    original PR expires and another PR must be generated to take
    its place. A new Form 77 must be submitted that
    automatically gets approved as an O1R at the start of the
    new fiscal year, and it is this PR which furnishes the money
    to be spent during the follow-on fiscal year. In this case,
    the original PR obligates only a part of the total contract
    value - the amount that is expected to be used during the
    first fiscal year. Follow-on spending must be computed by
    subtracting the amount from the original PR from the total
    cost of the contract, thus, determining the remainding money
    that needs to be supplied. To show spending over the entire
    life of the contract, each PR must be saved and their
    funding must be combined. For example, a contract may be
    funded at $70,000 over two years. The original PR puts
    $45,000 toward this contract during the current fiscal year.
    A second PR, an O1R, must be submitted at the end of the
    fiscal year and is funded at $25,000 for the follow-on
    fiscal year. Information from both of them must be combined

to get a complete picture of what is happening on the
contract, The original PR would then be dead but it must be
saved for to present a complete picture of the contract,   2f2a

2f3 CASE III: Multiple PR's on a contract with completion in
the same fiscal year   2f3

2f3a Sometimes money applied toward a contract is submitted
via a number of PRs at the same time because the money for
the effort is obtained from many different sources,
Expenditure rates on each PR must then be combined to
determine a single projection for the entire contract,
Obligation dates for the PRs must be checked and used to
group together PRs from the same fiscal year,   2f3a

2f3b Invoices and vouchers, however, are made against the
contract independently of the PRs, Money charged is billed
against one PR at a time (oldest first) until that PR is
exhausted, This makes it impossible to map vouchers back
against PRs, When a discrepency occurs between what is
projected and what is actually occuring, there is no way of
saying that the expenditure rate for a particular PR is
wrong so that adjustments can be made with it,   2f3b

2f4 CASE IV: Multiple pRs on a contract running over fiscal
years   2f4

2f4a This situation is simply an extension of Cases II and
III, A number of different PRs are providing money in the
current fiscal year and more will be needed in the next,
All of these PRs, whether defunct or active, must be
combined to show the complete financial picture of the
contract,   2f4a

2g PR steps   2g

2g1 There are something like 21 steps that are used to track
the status of a PR through its life cycle, but the FMS is
concerned with only 3; ICO standing for Initiation, Commitment
and Obligation, Initiation is when a PR is sent out to
perspective bidders, Committment is when responses from these
bidders has been received and the best selected, and finally,
Obligation is when the contract is signed with this bidder

after negotiation. There are two values, a date and a money
amount, associated with each of these steps, and each value may
take two forms, an estimate or a fixed, actual value.   2g1

2g2 The FMS database will carry only one of these values, the
estimated Obligation amount. This value will be used to
calculate a monthly expenditure rate (MER) which in turn will
be used to predict estimated amounts for ICO. The MER will be
stored in the database after its calculation by the system. As
each step is reached, the actual amount for that step as
recorded in the PMS file will be entered into the database.   2g2

2g3 Values for dates will be handled in a similar manner with
no entries being entered into the database until the step is
actually reached. Working back from the Est Start Date of the
contract, estimates can be made for the ICO dates according to
the formula that it takes 210 days to go from from a SOW
package to contract (Obligation) on an open bid effort and 120
days on a sole source. This is broken down as follows: for an
Open Bid allow 1 1/2 months to go from SOW package to
Initiation, 4 months to go from Initiation to Commitment, and 1
1/2 months to go from Commitment to Obligation; for a Sole
Source allow 1 month to go from SOW package to Initiation, 2
months to go from Initiation to Commitment, and 1 month to go
from Commitment to Obligation. These intermediate values will
not be entered into the database but will be self-generated by
a program module.   2g3

2h ICO values   2h

2h1 The estimated ICO values in our system will not correspond
to those that are released by the PMS file. Based on the
engineer's estimated starting date, given when the effort is
submitted to the system, the dates for Initiation, Committment,
Obligation and even SOW due date can all be computed because
experience has shown that there is a fairly certain cycle that
must be run in every procurement. This cycle depends on the
value for Type of Buy: Open Bid or Sole Source. Similarly,
the early estimate for the cost of the effort will be used as
the basis for initiation amount.   2h1

2h2 As the complete SOW/PR package moves through the
procurement cycle, these dates can be predicted with greater
accuracy. The original estimates will be replaced with actual
values; i. e. as an effort gets Initialized, the FMS will
substitute its actual value for the early guesses. In fact,

the Initiation value will be used to predict committment and
obligation dates and dollar amounts. Likewise, an actual
Commitment date will be used to help generate an Obligation
date.   2h2

2h3 The initial algorithms for estimating ICO dates from Est
Start Date follows:
Open Bid:

            SOW package = Est Start Date - 210
            Initiation = Est Start Date - 165
            Commitment = Est Start Date - 45
            Obligation = Est Start Date

Sole Source:

            SOW package = Est Start Date - 120
            Initiation = Est Start Date - 90
            Commitment = Est Start Date - 30
            Obligation = Est Start Date   2h3

2h4 After an PR has actually become Initiated or Commited or
Obligation, the Est Start Date can be more clearly predicted by
reversing the above realtionships in the following manner:
Open Bid:

            Est Start Date = Initiation + 165
            Est Start Date = Commitment + 45
            Est Start Date = Obligation

Sole Source:

            Est Start Date = Initiation + 90
            Est Start Date = Commitment + 30
            Est Start Date = Obligation   2h4

21 Display ICO information   21

211 The Command Meta Language will be used to incorporate the
FMS as a subsystem under TENEX/NLS. When the Current Database
is validated, it will be available for queries of both an ad
hoc and an a priori nature. Ad hoc queries for beginners would
amount to Process Branch commands that will extract and display
certain information in a rigid way. More advanced users will
be able to utilize commands available through the FMS subsystem
to retrieve information in a more flexible manner. The view of
the data can be modified, of course, by typical NLS comands to
achieve the desired effect.   211

212 The FMS subsystem will allow a Purchase Request to be

specified by number. Any of the data in the PR record could
then be displayed, including both hard data items actually in
the Current Database and soft items that are really generated
by program from particular items in the database,   212

213 Contract information could also be obtained from the FMS.
A summing capability will compute totals of the selected
efforts for the projected expenditures and for the actual
expenditures. These also could be plotted over a fiscal year.
The number of entities that are selected would depend on the
view the user wished to see of the database; whether by
contract, by project or by division,   213

214 The FMS will be able to present ICO information that is
grouped by project or TPO areas. In addition, some graphics
capability is anticipated, patterned after the Superwatch plots
and/or the blocks of DIAGRAM.   214

2j Data Retrieval   2j

2j1 Queries logically fall into two types; when you want to
retrieve a specific, single item based on exact criteria or
when you need to have the entire database searched and have
data elements selected against criteria without knowing how
many items will meeet the retrieval specifications,   2j1

2j2 Single items that are requested can be retrieved by the
Jump to Name commnad since each statement in the FMS Current
Database will have a unique statement name. Statements at
level one, the effort or contract level, will have a
job-order-number while level two, the PR level, will be
prefaced by a PR-number. A user wanting to make this kind of
retrieval could be prompted to give the appropriate number
which will then be passed as a parameter to a Jump to Name
command,   2j2

2j3 The second type of query is more complicated since it would
involve checking each entity in the database according to a
Contnent Analyzer Pattern. Some of the more reasonable
requests might be pre-canned so that users can access them.
However, the others might best be left for users to do
themselves via their own Content Analyzer Patterns. The most
likely queries that should be included as part of the system
would be collecting and grouping PRs together on the basis of
their 'Project Number' and/or grouping contract efforts

together based on *TPO-IDs*. As an item is selected, it might
be sent to a temporary file to await further processing,   2j3

3 FORECAST EXPENDITURES   3

  3a Development of expenditure rates   3a

    3a1 To arrive at suitable expenditure rate predictions, we must
    first define two set functions, one to deal with the term of a
    PR in months and the other to handle the money that a PR
    authorizes.   3a1

    3a2 If we let D be the set representing the number of active
    months for a PR (i.e. its duration), remembering that a PR is
    finished either at the end of the current fiscal year or at the
    end of the contract (whichever comes first), then we will
    define a function of D, t(D), such that D is broken down into
    subsets where the expenditure rate is constant for that subset.
    This gives us a linear rate to work with within that subset,
    and it also gives us a series of linear rates to work with over
    the whole set D, i.e. over the entire duration of the PR.   3a2

    3a3 Thus, we have   3a3

      3a3a $t(D) = t(1) + t(2) + \ldots + t(n)$ 3a3a

    3a4 where t(i) equals the number of months in the n-th term.   3a4

    3a5 In an similar fashion, letting M be a set representing the
    amount of money on a PR (its Obligated amount), then we will
    define a function of M, f(M), such that M is broken down into
    subsets corresponding to the terms where the expenditure rate
    is constant. This gives us, then, the amount of money that
    will be spent linearly over a subset of D.   3a5

    3a6 Thus, we have   3a6

      3a6a $f(M) = f(1) + f(2) + \ldots + f(n)$ 3a6a

    3a7 where f(i) equals the amount of money expected to be spent
    in the term t(i).   3a7

3a8 We can now apply these functions in the following three
cases.   3a8

3a9 Case (1) Off the shelf buys   3a9

  3a9a The government is obligated for the entire Face Value
  of the contract the month when the contract is signed,   3a9a

    3a9a1 $t(1) = 1$, and $t(2) = $ # months left in fiscal year
    or in contract (whichever comes first) and   3a9a1

    3a9a2 $f(1) = $ Obligated amount and $f(2) = 0$,   3a9a2

    3a9a3 Projection/mo $= f(1) / t(1) = $ Obligated Amount   3a9a3

      3a9a3a if mo $=1$; $=0$, elsewhere,   3a9a3a

3a10 Case (2) Linear   3a10

  3a10a This rate implies that expenditures will be made at a
  constant rate over the entire life of the PR, This is the
  case that will be used for planned efforts, Initially,
  then: 3a10a

    3a10a1 $t(1) = $ # months left in fiscal year or in contract
    (whichever comes first) and   3a10a1

    3a10a2 $f(1) = $ Obligated amount.   3a10a2

    3a10a3 Projection/mo $= f(1) / t(1)$ 3a10a3

3a11 Case (3) Series   3a11

  3a11a This expenditure rate covers the case where the
  projection of expenditures can't be done in a completely
  linear fashion, (Actually, Off the Shelf Buys and Linear
  expenditures are just special cases of this last, most
  general situation,) The projected expenditure for any
  particular month p can be computed as follows: 3a11a

    3a11a1 calculate that the month(p) belongs to the n-th
    term, then   3a11a1

    3a11a2 Projection / month(p) $= f(n) / t(n)$,   3a11a2

3b Project spending   3b

   3b1 At the beginning of the procurement cycle, all expenditures
   can be assumed to be LINEAR with little loss of accuracy. For
   each PR submitted under an effort, a monthly expenditure rate
   must be established (MER). This factor will be generated by
   the software, dependent upon the 'Est Start Date' of the PR and
   its value. The 'Duration' of the PR is computed to be the time
   from PR start (obligation date) to either the end of the fiscal
   year, or the end of the contract, whichever comes first.
      MER = PR Value / PR Duration
   & PR Exp for FY = Duration x MER
   & Exp for month m = (month m - Est Start Date) x MER.
   This item will be stored in the database and remain constant
   unless there is a modification to the PR or until Obligation
   occurs.   3b1

      3b1a The end of contract can be computed by adding the
      Contract Duration to the Oligation Date of the lead PR on
      the contract. The lead PR would have Type Buy equal to a
      New Start and would have the earliest obligation date for
      any PR on the contract.   3b1a

   3b2 Using the above data items, projections can now be made for
   any PR in the database, on a month by month basis, to the end
   of the fiscal year or completion of contract, whichever comes
   first. For example, if a PR begins in January and runs until
   June and its MER = $10K/month, then
      PR Exp for Jan = 1 month x $10K/month = $10K
   & PR Exp for Feb = 2 month x $10K/month = $20K
      ...
      PR Exp for June = 6 month x $10K/month = $60K.   3b2

3c Follow-on funding   3c

   3c1 Follow-on funding will be entirely program generated. By
   including the Contract Face Value as a data item under an
   effort, the FMS can add the money expended or due to be spent
   by all PRs, dead and active. Subtracting this sum from the
   contract's value gives the amount of money that remains to be
   spent on the contract. A finer breakout can be made by
   applying an expenditure rate function based on the duration of
   the contract to this money to give an estimate on how this
   money will be spread over the next fiscal years.   3c1

3c2 Active PRs belonging to the same Job-order-number can be
combined to show total spending on the contract for the fiscal
year. When this subtotal is subtracted from the 'Total Cost of
the Effort', the FMS can determine the amount of spending that
will show up as follow-ons. The remaining number of months on
the effort can be computed by subtracting the duration of the
earliest PR on the effort from the 'Duration' of the effort. A
follow-on monthly expenditure rate (FMER) can then be computed
for follow-on funding by
     FMER = Remainding Contract Value / Remaining Duration,
This FMER will then be used to project expenditures over future
fiscal years as needed and shall be able to help estimate funds
to be obligated in terms of OIRs for the next FY,   3c2

3d Exception reporting   3d

3d1 The FMS should have programs that routinely search the
database for due dates on a weekly or monthly basis. For
example, if a PR is due to become Initiated during the week
that the program is run, it should be flagged and two messages
should be sent out. One would go to the Data Entry Center
warning them to be on the look-out for this event and to make
sure that it is recorded when it happens. The other message
would remind the project engineer that the event is due, and in
this case, if it is missed, that he must revise his Est Start
Date.   3d1

3e Variance Analysis (early diagnosis)   3e

3e1 It will be possible to compare the actual expenditures
collected by contract with the projected expenditures summed
over all the PRs making up that contract. Variance analysis
can then be performed on that data and warning flags can be set
if the two figures begin differing by more than a set amount
(say 5%), and the engineer can be notified to check that things
are really proceeding according to plan. If they are, the
expenditure rate function needs to be updated or fine-tuned; if
not, action can be taken as early as possible to determine what
the trouble may be.   3e1

4 EFFORT SIMULATION - THE DYNAMIC SYSTEM   4

   4a Compute projections in a temporary (soft) mode   4a

      4a1 Any of the programs or commands in the system will be
      available for use, where appropriate, in the Dynamic System,
      The Dynamic System is intended to give management a way of
      testing theories agains real data and seeing the impact that a
      decision might have, The way that this will happen is to have
      a change in the database implemented in a temporary mode,
      Projections and calculations can then be generated to show the
      impact that a change in one or more efforts will have against
      other efforts (the rippling effect), All the time the programs
      will be working against a "doctored" database which will
      probably be just a partial copy of the Current Database and
      none of the results will be considered official, After reports
      have been generated and disseminated, the partial copy shall be
      deleted, Permanent changes can be incorporated only through
      offical forms,   4a1

   4b Adjust starting dates (forward or backward)   4b

      4b1 The 'Est Starting Date' from one or more efforts identified
      in the database can be changed, i.e, moved forward or slid
      backward, This change will temporarily replace the actual data
      values with a proposed simulation value, Any programs run
      against this particular item will use the new but temporary
      value rather than the permanent, official one,   4b1

   4c Change the rate of expenditure   4c

      4c1 A contract or PR may be adjusted so that the rate of
      expenditure can be slowed down or increased, To slow it down,
      the total length of the contract may be lengthened and this
      will automatically cause an adjustment in the expenditure
      rates, making it slower, Another way to accomplish a similar
      thing will be to juggle money so that most of it will be spent
      later in the contract instead of in the first months without
      changing the contract length, This will involve postponing
      when the money will be spent, If desired, these types of
      actions can be repeated in an opposite way to increase
      spending,   4c1

4d Delete or add new efforts   4d

    4d1 In the same way that an individual data item can be
    changed, an entire effort can be deleted from the system or a
    new one can be added. A deleted effort will be masked so that
    system programs ignore it; while at the same time, they might
    be including a new one.   4d1

4e Save computations in the journal   4e

    4e1 Once this view into the future has been accomplished, a
    record of the calculations made and results obtained could be
    saved for the record in the journal system. If the results are
    considered good, paperwork would need to be started to make the
    changes official and they will be incorporated into the
    database when the forms are processed. The Dynamic Subsystem
    could print special reports as an aid in starting paperwork.   4e1

(J32844) 27-JUN-75 12:56;;;; Title: Author(s): Joe P, Cavano/JPC;
Distribution: /NDM([ACTION]) JCN([ACTION]) DLS([ACTION])
RBP([ACTION]) JLM([ACTION]) EJK([INFO-ONLY]) ELF([
INFO-ONLY]) ; Sub-Collections: RADC; Clerk: JPC;   Origin: <
CAVANO, TEMP,NLS;6, >, 27-JUN-75 12:51 JPC ;;;;####;

1 Dave, the processing branch was designed for DNLS. In DNLS, the
command "Jump to Address" requires two addresses, If you used this
in TNLS, it goes bad. Let me think about how to change itt, It
should be simple, Do you think that the branch, if executed in TNLS,
should print out the active files or just let them sit there,   1

(J32845)   27-JUN-75 13:32;;;;   Title: Author(s): Raymond R.
Panko/RA3Y; Distribution: /DAP([ACTION]) ; Sub-Collections:
SRI-ARC; Clerk: RA3Y;

Can we try again for that meeting on Susan's proposed Viewgraphs
(32695,)??

1 Let's have that meeting on viewgraphs on Monday June 30 at 2 pm;
that's on the proposal in SGR's <HJOURNAL, 32695,> plus the issues
raised in POOH's <26007,> & JHB's <32783,>.   1

Can we try again for that meeting on Susan's proposed Viewgraphs
(32695,)??

(J32846)   27-JUN-75 14:49;;;;   Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /US([ACTION]) SGR([ACTION]) JHB([ACTION])
POOH([ACTION]) BEV([ACTION]) ; Sub-Collections: SRI-ARC US;
Clerk: JMB;

1 32846 Distribution
   1a Priscilla A. Wold, Jeanne M. Beck, Pamela K. Allen, Rita Hysmith,
   Sandy L. Johnson, Susan Gail Roetter, James H. Bair, Ann Weinberg,
   Beverly Boli,

1 How about announcing the availability of new printed editions of
NLS-8 documentation to all Office users (or, just staff +
architects)? I happened to be looking for something else in the
corner supply closet and noticed some pretty new booklets, etc., in
boxes; thus I discovered impressive new editions of the cue card and
Command Summary. Otherwise, I might have gone on for days or weeks
still muttering to myself about how long it takes for new
publications to come out... I wonder about other long-waiting users
who've been promised that a new document was due out"manana".   1

Finding out about new editions of documentation

(J32847)   27-JUN-75 15:02;;;;   Title: Author(s): Jeanne M, Beck/JMB;
Distribution: /DIRT([ACTION]) JHB([ACTION]) ; Sub-Collections:
SRI-ARC DIRT; Clerk: JMB;

1 32847 Distribution

1a Jonathan B. Postel, Priscilla A. Wold, Rita Hysmith, Pamela K. Allen, Delorse M. Brooks, Elizabeth F. Finney, Beverly Boli, Lawrence A. Crain, Kirk Sattley, Susan Gail Roetter, Robert N. Lieberman, Ann Weinberg, Kenneth E. (Ken) Victor, Douglas C. Engelbart, James H. Bair, Elizabeth K. Michael, Richard W. Watson, Elizabeth J. Feinler, Harvey G. Lehtman, Kirk E. Kelley, Laura E. Gould, Jeanne M. Beck, Dirk H. Van Nouhuys, James C. Norton, James H. Bair,

1 Is the command intended to eventually replace the sort keys? The
only (ARC-guaranteed) sort key not replaced is sortnmskp; do you
intend to add that eventually?   1

Re: NDM's <32832,> Experimental Sort Command

(J32848)   27-JUN-75 15:14;;;;   Title: Author(s): Jeanne M, Beck/JMB;
Distribution: /NDM([ACTION]) JHB([ACTION]) ; Sub-Collections:
SRI-ARC; Clerk: JMB;

Milestone

1 Today the CLI successfully invoked a procedure in the NLS Backend
via DPS,   1

Milestone

(J32851)   27-JUN-75 16:26;;;;   Title: Author(s): Charles H, Irby,
David S, Maynard, James E, (Jim) White/CHI DSM JEW; Distribution:
/SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JEW;

1 32851 Distribution

1a Harvey G. Lehtman, James C. Norton, Jeffrey C. Peters, Dirk H. Van Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson, Don I. Andrews, 1b Laura J. Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L. Garlick, Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks, Beverly Boli, Rita Hysmith, Log Augmentation, Joseph L. Ehardt, Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Rene C. Ochoa, Ann Weinberg, Joan Hamilton, Adrian C. McGinnis, Robert S. Ratner, David S. Maynard, Robert N. Lieberman, Sandy L. Johnson, James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel, Elizabeth J. Feinler, Kirk E. Kelley, N. Dean Meyer, James E. (Jim) White, Douglas C. Engelbart, Martin E. Hardy, J. D. Hopper, Charles H. Irby

Thanking JCN and BOBM for their help with MIKE's MAY15,NLS;12 problems,

1 When I last saw this file, it had 8 (eight) statements at the 5A1 level, with several pages of printed text "below" each statement,   1

2 The statements were labeled: 2

   2a Entertainment-on-Demand   2a

   2b Demand-Education Service   2b

   2c Household Information and Dedicated News   2c

   2d Shopping and Purchasing from the Home   2d

   2e Remote Banking Service   2e

   2f Remote Work Center   2f

   2g Remote Medical Diagnosis   2g

   2h Remote Political Participation   2h

3 The versions of the files that you (JCN, BOBM) have managed to restore or recompose are missing the last two branches, plus other information that I scattered throughout the file wile building those two branches (building them with original thought plus copied statements from a couple of other files),   3

4 I have looked for the contents of these branches in other files in my directory, and can't locate them,   4

5 I guess that they're gone for good; that is, I'm calling off the dogsearch party; no "real" damage done, since I had a hard copy of the file made the weekend before it "went bad", but in the future I will give a lot more credence to folks like Phil Weintraub of our group who complains from time to time that parts of his file "just disappeared",   5

6 Thank you both very much for your help in trying to piece this puzzle together, In 99 cases out of 100, I'm sure the results would have been completely successful,   6

Thanking JCN and BOBM for their help with MIKE's MAY15.NLS;12 problems,

(J32852) 27-JUN-75 19:03;;;;   Title: Author(s): Michael T. Bedford/MIKE; Distribution: /JCN([INFO-ONLY]) BOBM([INFO-ONLY]) LHD([INFO-ONLY]) IMM([INFO-ONLY]) PIW([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: MIKE;

1 32852 Distribution
    1a James C. Norton, Robert L. Martinez, Lawrence H. Day, Inez M.
    Mattiuz, Phil I. Weintraub,

Journal demo

1 This is a demonstration for our viewers illustrating prompts of the
Interrogate command in the Sendmail subsystem   1

Journal demo

(J32853)   28-JUN-75 12:53;;;;   Title: Author(s): Inez M, Mattiuz/IMM;
Distribution: /IMM([ACTION]) LHD([INFO-ONLY]) MTB([INFO-ONLY]
) ; Sub-Collections: BELL-CANADA; Clerk: IMM;

STALOG: The attached system should meet your needs, it consists of a
L10 user program template with a statement called USERPATTERN which
you replace with your desired contents analyzer pattern, Then a
Process commands branch which will compile and institute the filter
for you and return you to BASE, There is already a copy in your file
called PRINTFILTER for your use,
Dean: Sgt Zerwas asked me to thank you for theprogram you pointed him
at, but he apparantly didn't communicate exactly what he wanted,
andthe program you gave him didn't quitefill the bill. He also said
to hassle you a bit about 'Commenting liberally' which you didnt in
that one
Jim: This was my first L10 program, and believe it or not, it
compiled and ran right the first time, Iam now sold on the language,
I wish I couldsay te same for Process Commands, It took me almost an
hour to findout that a space betweenthe program name and the <CA> was
causing the Institute command to fail,

1 PROGRAM brnchmtch %Contents Analyzer, Prints Module header (2nd
level stmt) if contents match succeeds on its module description
(first 3rd level substatement). If viewspecs allow printing to the
third level, also shows module description. This program is actually
a template; to use it, replace the statement named USERPATTERN
(1c3c1a) with your desired contents analyzer pattern, then"<>PRocess
Statement 2<CR>", comments, problems to LAC%   1

    1a DECLARE switch = FALSE, level=0;   1a

    1b DECLARE TEXT POINTER   1b

        1b1 ptrhdr %points to module header%,   1b1

        1b2 ptrinfo %points to module description%;   1b2

    1c (brnchmtch) PROCEDURE;   1c

        1c1 FIND "ptrhdr "ptrinfo % initialize pointers%;   1c1

        1c2 level_getlev(ptrhdr) %find current level%;   1c2

        1c3 CASE level OF   1c3

            1c3a =0:RETURN(TRUE) %Prints origin statement if
            encountered%;   1c3a

            1c3b =1:RETURN(TRUE) %prints process titles if encountered%; 1c3b

            1c3c =2: IF (ptrinfo_getsub(ptrhdr))#ptrhdr %check for
            substatement, setting ptrinfo to it if so%   1c3c

                1c3c1 AND FIND ptrinfo %set scan into substatement%   1c3c1

                    1c3c1a USERPATTERN %replace this statement by your
                    desired contents analyzer patterm%   1c3c1a

                1c3c2 THEN BEGIN   1c3c2

                    1c3c2a switch_true %setting switch will cause
                    substatement to be printed if it is presented to the
                    filter%;   1c3c2a

                    1c3c2b FIND ptrhdr %return control pointer to the
                    header statement%;   1c3c2b

                    1c3c2c RETURN(TRUE) %and return a print indication%   1c3c2c

                    1c3c2d END   1c3c2d

1c3c3 ELSE %if the substatement did not match the desired
pattern %RETURN(switch_FALSE)%clear the switch and return
a dont print indication%;   1c3c3

1c3d =3: IF (switch:=FALSE) THEN RETURN(TRUE) ELSE
RETURN(FALSE) %teststhen resets switch, if it was set, the
header of this statement was printed, and the substatement
will be also. otherwise a non-printing return is initiated%;   1c3d

1c3e ENDCASE RETURN(FALSE) %on all other conditions%;   1c3e

  1d END, %of procedure and% FINISH%program%   1d

2 set viewspecs wj
go programs
compile 110 1
institute program brnchmtch Content
quit to base
del modifications
;the pattern you specified has now been compiled and instituted as
your current filter, Print your desired STRUCTURE(s) with viewspec
"i" to turn on the filter, "xsb"to see only headers, "xsbb"to see
module descriptions also   2

2

(J32867) 29-JUN-75 19:14;;;;   Title: Author(s): Lawrence A.
Crain/LAC; Distribution: /FFL([ACTION]) NDM([INFO-ONLY]) JHB([
INFO-ONLY]) JCN([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: LAC;
Origin: < AFDSDC, BRANCH-PRINTER.NLS;16, >, 29-JUN-75 18:43 LAC
;;;;####;

Connection for NCSL

1 Paul:
How are things out there?
We got the go ahead for you to connect to Eglin AFB rather then
RML.
Frank and I will be staying at the Holidday Inn in Monterrrey.
I go the position of NALCON coordintor.
See you soon
Regards
Larry.   1

Connection for NCSL

(J32868)   30-JUN-75 04:29;;;;   Title: Author(s): I. Larry
Avrunin/ILA; Distribution: /PCB([ACTION]) FGB([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: ILA;

Answer to j32845

1 Ray, if I understand your question correctly -- no, I don't think
it should print the files themselves; it should only list the needed
info about the files. My understanding of the branch is that it's a
short-cut to checking the status of your active files, a doohinkus to
be used instead of the show directory command plus a mess of commonly
needed options.
        Thanks for thinking about it...Don't use up a mess of time on
it, though; after all, we lazy slobs out in the boonies of the TNLS
world can still use the options with "show directory."   1

Answer to j32845

(J32871)   30-JUN-75 07:48;;;;   Title: Author(s): David A. Potter/DAP;
Distribution: /RA3Y([ACTION]) ; Sub-Collections: NIC; Clerk: DAP;

Times in the use statistics

1 Times are expressed in hours and decimal fractions of hours, not
hours and minutes. I'll take a closer look at the otherweek that you
suspect is off.   1

Times in the use statistics

(J32872)   30-JUN-75 08:31;;;;   Title: Author(s): Raymond R.
Panko/RA3Y; Distribution: /MEJ([INFO-ONLY]) ; Sub-Collections:
SRI-ARC; Clerk: RA3Y;

D and F status and funding

1 This file shows the status and funding for the d & f's for 5550 as
I see it here. The funding will be shown in $$K for fy76, fy7T, fy77
and fy78 in order.   1

2 76-1-5550 HOL Control Facility   2

   2a status: USAF review   2a

   2b funding: 340 230 505 125   2b

3 76-2-5550 Modern Programming Technology Demonstration   3

   3a status: USAF review   3a

   3b funding: 500 125 375   3b

4 76-3-5550 WWMCCS Programming Support Library   4

   4a status: approved   4a

   4b funding: 200 60 90   4b

5 JOVIAL/J-73 Compiler   5

   5a status: in preparation   5a

   5b funding: 150 150 600 200   5b

6 Software Data Repository   6

   6a status: in preparation   6a

   6b funding: 25 75 600 ?   6b

7 Presently estimated for fy77 D & F's: $1800k   7

8 Exempt from D & F: 2745 560 3030   8

   8a This includes $500k for the Army's AHCS program in fy77.   8a

9 Total: 3960 1200 7000   9

   9a These are the President's Budget figures and will probably
   change when congress gets through with us.   9a

D and F status and funding

(J32873)   30-JUN-75 08:31;;;;   Title: Author(s): William W.
Patterson/WWP2; Distribution: /RBP([ACTION]) ; Sub-Collections:
NIC; Clerk: WWP2;   Origin: < PATTERSON, DANDF,NLS;1, >, 30-JUN-75
08:27 WWP2 ;;;;####;

BRIEF GUIDE TO USER PROGRAMS AVAILABLE IN NLS-8

SRI-ARC

1 JUL 75

Applications Development

Augmentation Research Center
Stanford Research Institute
Menlo Park, California 94025

A BRIEF GUIDE TO USER PROGRAMS AVAILABLE IN NLS-8

A new user programs subsystem has been brought up at Office-1. It is
called LETTER and replaces the former runable program, Letter. A
description of the new LETTER and all other user attachable programs
is contained in this document which replaces the earlier document of
the same name. The new Guide will be available in hardcopy from
FEEDBACK and online in the directory USERGUIDES (as well as via the
Journal).

2   A BRIEF GUIDE TO USER PROGRAMS AVAILABLE IN NLS-8

2

3 The following is a brief description of generally available user
programs and their commands (intended for users at NLS course level
3--Intermediate). These are programs supported and maintained by ARC
staff; they are compiled files stored in directory PROGRAMS. Use the
Help command for command syntax, detailed descriptions of commands,
helpful hints for using various program features, and trouble
shooting. If you have difficulty with any of these programs, send a
message to FEEDBACK.

3

4 USER-SUBSYSTEMS

4

   4a Loading any of the programs listed below will add a
   user-subsystem to NLS; that is, each of these programs becomes a
   subsystem containing its own set of commands. You will first Load
   the program in the Programs subsystem, which will automatically
   attach the new subsystem; you will then Goto the new subsystem.
   Use these commands: Execute (command in) Programs, Load Program
   XXX, Goto (subsystem) XXX. After you once load the program for a
   subsystem during an NLS session, you need only Goto it each time
   you wish to use its commands.

4a

   4b Example of the sequence of commands:

4b

      4b1 Execute (command in) Programs
      Load Program MODIFY OK
      Goto (subsystem) Modify OK
      Delete Leading (spaces in) Branch (at) DESTINATION OK

      [To return to BASE:]
      Quit OK

      [After doing some commands in BASE, to return to MODIFY:]
      Goto (subsystem) Modify OK

4b1

   4c 1. Format:
   The user-subsystem "Format" provides tools to help you work with
   Output Processor directives. (See the "Output Processor Users
   Guide," available by request from FEEDBACK, for a complete listing
   of directives.) Format also enables you to quickly apply some
   predesigned formats to files without having to work with Output
   Processor directives themselves. To see samples of the results of
   Output Printing with the standard formats available, request the
   "Format Library" document from FEEDBACK. These are the commands
   available:

4c

1

4c1 > The Format command "Delete (Directives)" removes all of
the Output Processor directives in the STRUCTURE you specify.   4c1

4c2 > The Format command "Insert Format (in file)" adds to a
file the directives and any special characters necessary to
produce a given predesigned format. The available formats were
designed especially for Computer Output to Microfilm (COM),
though most of them will print sensibly on a non-COM printer.
The intent is to make it very easy for users less experienced
with the Output Processor to take advantage of COM's
capabilities. In the Insert command, you will first point to
the file. The choice of formats is then listed. You type the
number of the desired format (refer to the printed samples
listed in "Format Library"). You may also supply a title and
authors.   4c2

  4c2a   The program may insert directives in the origin
  statement, in every top-level statement, and in some cases
  in the statement back from every top-level statement. It
  also creates a title page as the last top-level branch in
  the file. The title, authors, and Journal number appear in
  the title page and in some cases in header or footer
  directives in the origin statement. To produce the
  formatted copy, you then need to use one of the Output
  commands in BASE.   4c2a

4c3 > The Format command "Set Directive (filter)" sets your
current content-analyzer filter to one which shows only
statements containing Output Processor directives. You may
then use viewspec i to turn the filter on, and viewspec j to
turn it off (show everything).   4c3

4c4 > The Format command "Reset Directive (filter)" sets your
current content-analyzer filter to what it was before the Set
Directive command. This only works for one window in DNLS (be
careful if you have inserted an edge).   4c4

4d 2. Message:
  The user-subsystem "Message" allows you to use NLS to handle
TENEX SNDMSGs. These are the commands available: 4d

  4d1 > The Message command "Copy Message (file)" will copy your
  MESSAGE.TXT file to the DESTINATION you indicate. It changes
  the format of the messages for easy handling in NLS.   4d1

  4d2 > The Message command "Move Message (file)" will copy your
  MESSAGE.TXT file to the DESTINATION you indicate, and then
  delete the MESSAGE.TXT file. It changes the format of the

messages for easy handling in NLS. A Tenex work file should
contain a copy of your messages in case something goes wrong.   4d2

4d3 > The Message command "Send Message" allows you to send a
TENEX SNDMSG while in NLS. Either the message can be typed in,
or a previously created STRUCTURE may be addressed. Either
idents or usernames may be used in the distribution list.   4d3

4d4 > The Message command "Sort Message (Plex)" orders a plex
of messages you've moved or copied into NLS by date--most
recent first.   4d4

4d5 > The Message command "Reformat (citations)" will reformat
your NLS Sendmail citations to correspond with the way
Message's "Copy" and "Move" commands reformat SNDMSGs,
including date of receipt and the distribution list if possible
(if a message has just been delivered, it may not yet be
catalogued so the distribution list won't be available).   4d5

4e 3. Modify:
  The commands in the user-subsystem "Modify" are extensions of
these editing commands in the BASE subsystem: Append, Delete,
Insert and Force. These are the commands available: 4e

4e1 > The Modify command "Append" will append all of the
highest-level statements in the Group or Plex you specify to
one another successively. If any of these statements have
sub-statements, the sub-statements will be placed together in
order under the new single statement. When the accumulated
statements reach the maximum size (2000 characters), a new
statement will begin.   4e1

4e2 > The Modify command "Delete Column" will delete the text
between the two points you specify in that line. It will
repeat this in the corresponding lines of all statements in the
plex of the same level as the statement pointed to; other lines
in those statements will not be edited.   4e2

4e3 > The Modify command "Delete Visible" will delete the text
between the two points you specify in that line, only if the
first character of the column begins a visible. It will repeat
this in the corresponding lines (where the condition is met) of
all statements in the plex of the same level as the statement
pointed to; other lines in those statements will not be edited.   4e3

4e4 > The Modify command "Delete Leading (spaces)" will delete
all the spaces that begin all statements in the STRUCTURE you
specify.   4e4

4e5 > The Modify command "Delete Names" will delete statement
names.   4e5

4e6 > The Modify command "Force (Sentence Case)" will change
statements currently all in uppercase to be in lowercase,
leaving uppercase characters at the beginning of the statement
and following the spaces after a period, questionmark, or
exclamation point (usually the first character of each
sentence).   4e6

4e7 > The Modify commands "Insert Front" and "Insert Back"
augment the BASE subsystem's Insert command. They add the
characters you specify to the beginning (Insert Front) or end
(Insert Back) of every statement in the STRUCTURE you specify.   4e7

4e8 > The Modify command "Insert Address" inserts the U.S.
Postal Address after the DESTINATION you point to for any IDENT
you specify.   4e8

4f 4. Publish:
  The user-subsystem "Publish" enables you to automatically
generate a Table of Contents, to generate References out of links
to Journal items found in the file, or to generate an Index keyed
to statement numbers. You can also count "words". These are the
commands available: 4f

  4f1 > The Publish command "Count (visibles)" will total the
  number of visibles in the STRUCTURE you specify.   4f1

  4f2 > The Publish command "Generate Table (of Contents)" asks
  you to specify a file and the number of levels of depth you
  wish included in the table that will be generated. The new
  table of contents branch is added as the first top-level
  branch. The table of contents does not cite pages, it cites
  statement numbers. Therefore, the body of the formatted
  version should have statement numbers printed for the table to
  be useful to the reader. You will not want the statement
  numbers printed in the table of contents section.   4f2

  4f3 > The Publish command "Generate References" asks you to
  specify a file and to specify the number of the reference
  format you wish to use. The file you specify is searched for
  links to journal items. When one is found, catalog indexes are
  searched for the reference information. Available formats of
  references are: 4f3

    4f3a 0 (Ref12345) Author, "Title", DATE. [Cited in
    1A2B:(JOURNAL, 12345,)]   4f3a

4f3b 1 (12345,) Author, Title, Augmentation Research
Center, Stanford Research Institute, Menlo Park, California
94025, DATE,   4f3b

4f3c 2 (1A2B) Author, Title, Augmentation Research
Center, Stanford Research Institute, Menlo Park, California
94025, DATE (JOURNAL, 12345,)   4f3c

4f4 > The Publish command "Index" invokes an experimental
program that creates a word index for a statement, branch,
group, or plex, It inserts the Index as a branch at the same
level at the end of a group or plex, down from a statement, or
at the end of the plex down from a branch, It filters
according to viewspecs (that is, only the statements that are
not clipped by level viewspecs or filtered by the content
analyzer are indexed), This program is slow, and creates a
large index, It will only work on very small chunks of files
(100 statements or so), The index may have to be hand edited
after creation to shorten it, It excludes all words ending
with "ly", all numbers, all words of one or two characters, and
all words in a list located at <programs,publish,a>, Send
candidates for the exclusion list to FEEDBACK,   4f4

4g 5. Letter: 4g

4g1 > The Letter user-subsystem command "Insert Format (in
file)" inserts directives to format your file as a business
letter, You must have written only the body of the letter as a
file, All other information should be entered only when
prompted for it, Any Output Processor directives you have in
the file may distort the outcome of those this command will
insert, In response to questions asked in this command, you
have the option of supplying a pre-assigned journal number or
of typing <CTRL-N> to omit the journal header; you have the
option of supplying a title or of typing <CTRL-N> to omit a
title header, To produce the formatted hardcopy, follow this
command with the Output Printer, Output Terminal, or Output
Remote command in BASE,   4g1

4h This brief guide will be updated in the near future to include
additional user program subsystems and improvements as they are
warrented,   4h

5 TITLE PAGE

A BRIEF GUIDE TO USER PROGRAMS AVAILABLE IN NLS-8

(J32874) 30-JUN-75 09:05;;;;   Title: Author(s): Stanford Research
Institute /&SRI-ARC; Distribution: /US([ACTION]) DIRT([INFO-ONLY]
) SRI-ARC([INFO-ONLY]) KWAC([INFO-ONLY] a copy will be mailed to
you for your site notebook) ; Sub-Collections: NIC US DIRT SRI-ARC
KWAC; Clerk: JHB;   Origin: < USERGUIDES,
USER-SUBSYSTEM-GUIDE,NLS;2, >, 30-JUN-75 08:41 JHB ;;;;####;

1 32874 Distribution
  1a Don I. Andrews, Glenn A. Sherwood, Kathey L. Mabrey, Jeanne M.
  Beck, David A. Potter, Robert N. Lieberman, Terry H. Proch, Ronald P.
  Uhlig, Susan Gail Roetter, Michael A. Placko, Stanley (Stan) M.
  Taylor, Elizabeth J. Feinler, Rudy L. Ruggles, Frank G. Brignoli,
  Robert M. Sheppard, Richard W. Watson, Douglas C. Engelbart, James C.
  Norton, James H. Bair, Duane L. Stone, Inez M. Mattiuz, Connie K.
  McLindon,
  1b Beverly Boli, Rita Hysmith, Log Augmentation, Joseph L. Ehardt,
  Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Rene
  C. Ochoa, Ann Weinberg, Joan Hamilton, Adrian C. McGinnis, Robert S.
  Ratner, David S. Maynard, Robert N. Lieberman, Sandy L. Johnson,
  James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M.
  Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel,
  Elizabeth J. Feinler, Kirk E. Kelley, N. Dean Meyer, James E. (Jim)
  White, Douglas C. Engelbart, Martin E. Hardy, J. D. Hopper, Charles
  H. Irby, Harvey G. Lehtman, James C. Norton, Jeffrey C. Peters, Dirk
  H. Van Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson
  1c Priscilla A. Wold, Jeanne M. Beck, Pamela K. Allen, Rita Hysmith,
  Sandy L. Johnson, Jonathan B. Postel, Priscilla A. Wold, Rita
  Hysmith, Pamela K. Allen, Delorse M. Brooks, Elizabeth F. Finney,
  Beverly Boli, Lawrence A. Crain, Kirk Sattley, Susan Gail Roetter,
  Robert N. Lieberman, Ann Weinberg, Kenneth E. (Ken) Victor, Douglas
  C. Engelbart, James H. Bair, Elizabeth K. Michael, Richard W. Watson,
  Elizabeth J. Feinler, Harvey G. Lehtman, Kirk E. Kelley, Laura E.
  Gould, Jeanne M. Beck, Dirk H. Van Nouhuys, James C. Norton, Laura J.
  Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L. Garlick,
  Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks

1

Announcement: Dirk van Nouhuys leaving ARC to become DDPCS Community
Nucleator

1 On 1 July, Dirk will leave ARC and move downstairs to the
Information Systems Group, headed by Norm Nielsen (in Dave Brown's
Information Science Lab). This heralds the long-awaited, explicit
launching of the first special-interest community (SIC) within the
larger AKW applications and development community. Dirk will join
forces with Tom Humphrey, Pat Whiting-O'Keefe, Jack Bialick, and
others in that group who have had extensive applied-systems
experience with computers and document production; Dirk's role will
be to promote the overlap of interests and capabilities of this group
with those of ARC toward building the AKW area of "Document
Development, Production and Control Systems" (DDPCS).   1

2 Dirk has worked long and productively in ARC, and we'll miss his
daily presence. If things progress as hoped, we'll be working
closely with him and his new colleagues; their efforts could
(hopefully) develop an active, many-participant community engaged in
serious evolution and application of DDPC systems.   2

3 This move represents a step in Dirk's professional development that
he and I have planned toward for several years. He was hired as a
technical writer, he has strong qualifications and continued interest
in technical documentation. I very much appreciate his sticking it
out with us until the opportunity developed to bring together what
we've gotten going in our AKW world with the DDPC needs of the user
world.   3

4 Good luck, Dirk.   4

Announcement: Dirk van Nouhuys leaving ARC to become DDPCS Community
Nucleator

(J32875) 30-JUN-75 16:42;;;;   Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /SRI-ARC([INFO-ONLY]) KWAC([INFO-ONLY
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INFO-ONLY]) MAW([INFO-ONLY]) JLM([INFO-ONLY]) EL2([INFO-ONLY
]) ; Sub-Collections: SRI-ARC KWAC DOCPLAN DIRT DPCS; Clerk: DCE;

1 32875 Distribution
1a Beverly Boli, Joseph L. Ehardt, James H. Bair, Robert N.
Lieberman, Pat Whiting O'Keefe, James H. Bair, Robert Louis
Belleville, Ann Weinberg, Thomas L. Humphrey, Jeanne M. Leavitt, Kirk
E. Kelley, Duane L. Stone, Elizabeth J. Feinler, N. Dean Meyer, Dirk
H. Van Nouhuys, Douglas C. Engelbart, James C. Norton, Richard W.
Watson, Charles H. Irby, David H. Crocker, Nancy J. Neigus, Mike A.
Wingfield, John L. McNamara, Elsie Leavitt,
1b Elizabeth K. Michael, Richard W. Watson, James C. Norton, Robert
N. Lieberman, Pat Whiting O'Keefe, Douglas C. Engelbart, Dirk H. Van
Nouhuys, Bonnar Cox, Joe P. Cavano, Jonathan B. Postel, Priscilla A.
Wold, Rita Hysmith, Pamela K. Allen, Delorse M. Brooks, Elizabeth F.
Finney, Beverly Boli, Lawrence A. Crain, Kirk Sattley, Susan Gail
Roetter, Robert N. Lieberman, Ann Weinberg, Kenneth E. (Ken) Victor,
Douglas C. Engelbart, James H. Bair, Elizabeth K. Michael, Richard W.
Watson, Elizabeth J. Feinler, Harvey G. Lehtman, Kirk E. Kelley,
Laura E. Gould, Jeanne M. Beck, Dirk H. Van Nouhuys, James C. Norton,
Delorse M. Brooks, Elizabeth F. Finney
1c Harvey G. Lehtman, James C. Norton, Jeffrey C. Peters, Dirk H. Van
Nouhuys, Kenneth E. (Ken) Victor, Richard W. Watson, Don I. Andrews,
Glenn A. Sherwood, Kathey L. Mabrey, Jeanne M. Beck, David A. Potter,
Robert N. Lieberman, Terry H. Proch, Ronald P. Uhlig, Susan Gail
Roetter, Michael A. Placko, Stanley (Stan) M. Taylor, Elizabeth J.
Feinler, Rudy L. Ruggles, Frank G. Brignoli, Robert M. Sheppard,
Richard W. Watson, Douglas C. Engelbart, James C. Norton, James H.
Bair, Duane L. Stone, Inez M. Mattiuz, Connie K. McLindon, David R.
Brown, Glenn A. Sherwood, N. Dean Meyer, Kathey L. Mabrey, Norman R.
Nielsen, Thomas L. Humphrey, Robert Louis Belleville
1d Laura J. Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L.
Garlick, Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks,
Beverly Boli, Rita Hysmith, Log Augmentation, Joseph L. Ehardt,
Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Rene
C. Ochoa, Ann Weinberg, Joan Hamilton, Adrian C. McGinnis, Robert S.
Ratner, David S. Maynard, Robert N. Lieberman, Sandy L. Johnson,
James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M.
Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel,
Elizabeth J. Feinler, Kirk E. Kelley, N. Dean Meyer, James E. (Jim)
White, Douglas C. Engelbart, Martin E. Hardy, J. D. Hopper, Charles
H. Irby

1 Background   1

  1a Technological Forecasting   1a

    1a1 early BPG Delphi studies determined what will be AVAILABLE   1a1

    1a2 Some quotes from internal and external Business Delphi
studies on communications technolgoy in the home, with
particular reference to Household information and dedicated
news: 1a2

      1a2a "This requires the development of data communications
facilities vastly superior to those available today. The
necessary technologies - digital transmission and packet
switching - are available but have not yet been exploited to
yield the necessary improved reliability and cost
reductions."   1a2a

      1a2b "The conservative nature of Canadians,plus the
relatively sparse poplulation will make this advancement
economically unfeasible in the near future. This requires
the mass development of easy access mini computers with
large capacity and links to large computers",   1a2b

      1a2c "There is a certain 'with it' group composed of many
kinds of technically sophisticated people who will provide
the initial 20% thrust quite rapidly. Also, they have the
income. Achieving the 55% figure will take a good deal
longer."   1a2c

      1a2d "This requires a very unified and systematic approach
to the redesign of many of these activities - the technology
will be of secondary importance. The primary developments
will be in the changing of our attitudes towareds these
'institutions' and justifying that changes in these areas
are valuable and worthwhile. These will not happen merely
because we thave the hardware to do it."   1a2d

      1a2e " I do not feel that these types of applicatons will
convince the consumers to part with a significant
expenditure of his resorces. All of the above type
applicatons have very cheap alternatives which will make
this a tough market to crack. Future technology in the home
wll depend upon applications development, not technological
concerns."   1a2e

      1a2f "On-line data files and economical terminals will
provide the means. Urban congestion and transportation
failures will produce the need,"   1a2f

1a3 Further comments from the Business Delphi, with reference
to remote work centers: 1a3

1a3a "If the movement to the suburbs continues, geographic
dispersal of employees is liable to become so great that the
neighborhood concept will be bypassed in favor of [home work
centers]. The short term trend of office movement to
suburbs, then personnel relocating close-by, extends the
preactical life of the office center concept."   1a3a

1a3b "There will always be high capital cost equipment which
can only be located in a work center and shared by many
people. At the present time we cannot forecast what this
equipment wll be, but if we learn anything from history, it
is that such equipment will be sufficiently desirable that
most people will prefer some variation on the centralized
work area concept. I am not ruling out increase mibility
(eg, ortable computer terminals) but I am saying the worker
will have a home base and it will be an office work center."   1a3b

1b Market Demand Analysis   1b

1b1 MTB thesis, plus info from external sources indicated what
would be desired, accepted by the market   1b1

1c Technology Assessment required to determine the impacts the
services would have if introduced on a widespread basis.   1c

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3 Methodology   3

   3a (most of this can be lifted from the study proposal)   3a

   3b summary of an early memo to PIW re SPRITE: 3b

      3b1 Background   3b1

         3b1a The Delphi technique has been around for over a decade
and has served a number of research institutions in this
period. It's original application was in technological
forecasting for the United States Department of Defense (in
a study conducted by the Rand Corporation). The Business
Planning Group's initial experience with the technique was
also in the field of technological forecasting. In 1970 it
became clear that in order to adequately forecast and
understand the demand for different types of communications
services in the future, we would have to become familiar
with the technological capabilities that would make those
services possible. Accordingly, we launched on a three year
program in tehcnological forecasting. Technologies included
were those relevant to the educational field, the medical
profession, and the field of business information
processing.   3b1a

         3b1b In addition to applying the Delphi technique to these
particular issues, we also spent a great deal of energy in
gathering material about the technique itself, and in
analyzing our use of the technique. We set up conrol groups
(internal panelists answering similar questionnaires, etc.)
to learn more about how the technique was actually
performing. This work was carried out at the saem time that
the original developers of the Delphi technique were
beginning to have doubts about its widespread applicability
to different situations. A cloud had indeed appeared on the
previously clear horizon of Delphi research.   3b1b

      3b2 Limitations of the Delphi technique   3b2

   3c The process of technology assessment attempts to determine what
the consequences (both favorable and unfavorable) of the
introduction of these types of services may be. There are a
number of different "impact areas" to be explored and developed,
and for this purpose, the SPRITE technique seems ideally suited.
The SPRITE teams participating in the current study include
representatives from these six groups: 3c

      3c1 housewives   3c1

3c2 students   3c2

3c3 consumerists   3c3

3c4 educators   3c4

3c5 welfare workers   3c5

3c6 communicatons researchers   3c6

3d comments from Round 2 about the different SPRITE groups in this
study: 3d

  3d1 (904-213-06) I don't understand the housewife reaction
  since the research shows the housewife has major concern over
  crime.   3d1

  3d2 (700-203-00) Students probably a healthier group because of
  lower age.   3d2

  3d3 (700-115-00) Judging from the comments, there appear to be
  serious difficulties in establishing a remote diagnosis service
  and make it work. There seem to be quite a gap between the
  researchers (or technologists) and the other groups.   3d3

  3d4 (006-109-00) (f) Researcher is "catching on" to the effects
  of media, whereas educator remains motivated somnambulist.   3d4

  3d5 (001-109-00) (a) Educators obssessed with "program content"
  fail to anticipate psychic effects of new mdium unconsciously
  recognized and indicated by consumer preference.   3d5

  3d6 (001-111-02) The educators are more middle-brow or lazy.   3d6

  3d7 (001-201-50) More selective demand by educators?   3d7

  3d8 (001-203-02) Perhaps your "educator" group is an ETO group
  predominantly?   3d8

  3d9 (001-203-03) Perhaps for "consumers" part of the fun in
  seeing a movie at a theatre is going out.   3d9

  3d10 (000-205-04) Also some groups seem to be "city (big!)
  oriented" (again Welfare workers and students).   3d10

4 USE of the Different Services   4

  4a Entertainment-on-Demand   4a

    4a1 1973 Demand Analysis:

                                                                                4a1

      4a1a rated "very important" to "moderately important" by
      over 75% of respondents in first study   4a1a

      4a1b the comments were both PRO (the researchers) and CON
      (housewives), with the housewives asking questions   4a1b

      4a1c over 50% saw is as a large improvement over current
      alternatives   4a1c

    4a2 It would naturally tend to substitute for a lot of other
    entertainment pasttimes: 4a2

      4a2a most heavy substitution for motion pictures (10% - 15%)
      and broadcast television (15%)   4a2a

      4a2b less than 5% substitution for recreational reading,
      spectator and participation sports (0%)   4a2b

      4a2c fairly wide range of answers for live entertainment
      (drama, ballet, opera,) and for movies (mentioned above).   4a2c

        4a2c1 clear trend is toward substitution in areas which
        wouldn't get the viewer out of the house anyway.   4a2c1

    4a3 Not too much agreement on the importance of "high quality"
    (what is it?) to the success of the service, ...   4a3

      4a3a Round 1 Consumerist: Given the fact that taste to date
      has virtually no relevance to what is programmed, the North
      American homo spaiens must be totally immune by now.   4a3a

      4a3b (002-110-00) Quality need not be higher but certainly
      more tailored to specific audiences for specific   4a3b

      4a3c (002-115-00) I presume you are referring to quality of
      content, in which case the degree of quality will be
      dictated eventually by the tastes of the buyers unless there
      is control from a regulatory body. Quality however is not
      necessarily uncompatible with mass audience.   4a3c

      4a3d (002-141-00) "Quality" is too emotional a phrase. I
      think that these systems will create a more experimental

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type of viewing. This will include both "X-rated trash" and
"high-brow" material, depending upon the current attitude of
the viewed. Hence, all forms of entertainment will gain
wider audience.   4a3d

4a4 ...But very strong agreement on the need for a wide variety
of programming (The comments echoed this point well.)   4a4

   4a4a (002-109-00) Variety is the spice of all media -
   unlimited variety of programs, and many modes of
   presentation, available upon demand at users convenience.   4a4a

   4a4b (002-305-00) I wonder if it really is a 2-edged
   problem. The description calls for wide variety. This should
   appeal to any taste. To have any market at all it will have
   to be an alternative to T.V. as now available. I n effect
   massiveness of the market is achieved by hitting users with
   a flexibility that TV cannot achieve, thus expanding
   numbers. The question of "trash" is probably more difficult
   in that many will object to the kids dialing up porno.   4a4b

4a5 Indications that it would be found in 25% - 75% of N.A.
homes by 1985.   4a5

4a6 Two opposite views of how service might cover costs of a
wide variety of programming: 4a6

   4a6a Will each individual piece of software programming have
   to pay its own way, or would popular (in a mass audience
   sense) programs subsidize the less popular items ?   4a6a

   4a6b (002-101-00) Main point is that a market mechanism will
   exist which will allow each user group to obtain what they
   want and are willing to pay for. So each group may define
   its own quality dimension.   4a6b

   4a6c (002-113-00) Accept the conept of cross-subsidy, just
   like libraries, where good books are stored for small
   numbers of readers whereas "popular" books may be on loan
   all the time, let popular programs subsidize the "high brow"
   programs.   4a6c

4a7 on the distinction between the medium and the content
itself: 4a7

   4a7a (000-109-00) The system designers and questionnaire
   participants alike are obssessed with the programs and
   ignore the effects of the media as such.   4a7a

7

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4a7b (001-109-00) (a) Educators obssessed with "program
content" fail to anticipate psychic effects of new mdium
unconsciously recognized and indicated by consumer
preference.   4a7b

4a7c (006-109-00) (f) Researcher is "catching on" to the
effects of media, whereas educator remains motivated
somnambulist.   4a7c

4b Demand Education   4b

   4b1 1973 Demand Analysis:

                                                         4b1

      4b1a over 50% saw it as extremely useful for ages 14-18,
      18-25,   4b1a

      4b1b about 75% saw it as "very" to "moderately" important   4b1b

      4b1c about 90% saw it as a major improvement to current
      alternatives   4b1c

   4b2 Pretty close aggreement that by 1985, between 25% and 50%
   of a student's out-of-school study time would be spent
   interacting with services of this kind,   4b2

   4b3 Less agreement with respect to the level of integration
   with lessons given in local schools (25% - 75% of services
   programming would be integrated),   4b3

   4b4 Strong agreement that this capability would help students
   cover more material faster, and would improve their abilty to
   assimilate or learn that material.   4b4

   4b5 Adult education and training was seen as essential by the
   group of educators; the students rated adult education lower in
   importance than did the other groups, but still gave it fairly
   high marks,   4b5

      4b5a Respondents indicated that 20%-30% of the total
      programming would be directed at the adult level.   4b5a

      4b5b most all comments concerned with adult education were
      positive: 4b5b

         4b5b1 Round 1 Researcher: My guess is that the best
         market would be the adult education market - as the home
         equivalent of a night school,   4b5b1

         4b5b2 Round 1 Housewife: As a housewife at present trying
         to further my education, it is difficult to spend time
         commuting and arranging schedules - this new concept
         would fit ideally into a normal housewife's workday,   4b5b2

         4b5b3 Round 1 Housewife: This service would be of more
         use to adults than to children, whose primary need is for
         a program of discovery,   4b5b3

4b5b4 (101-132-01) I agree with the commentary on adult
level programming being a principal basis - Adults have
surpirsing motivation for things that interest them,
quite often unrelated to the work environment.
    ** Serious adult service would be the principal basis.   4b5b4

4b5b5 (110-504-50) Education, in my opinion, is a
lifelong process; adult education has not truly been
provided for in our society, except at a great cost to
the adult. The present education conept is geared to the
young, therefore t.v. education should be geared to the
adult (especially of the poorer classes).   4b5b5

4b6 When the comments shifted to discussions of technical
training, off-the-job training, or second career development,
the tone was less enthusiastic: 4b6

4b6a Round 1 Researcher: Adults will not believe in it
unless they are participaing.   4b6a

4b6b Round 1 Educator: Perhaps a little too optimistic,
especially for the adult level, because of the motivation
problem.   4b6b

4b6c (c152-113-00) It may allow more "out of interest"
courses being taken, thus it is more recreational than
professional improvement courses.   4b6c

4b6d (c152-604-01) Certainly, most jobs require "experience"
after the basic education has been obtained, and that means
being going on-the-job to learn the machinery, the mode of
operation of given company, how to work with other branches
of company, variables that aren't in any textbooks or remote
education courses.
    ** Assumes ability for off-the-job training.   4b6d

4b6e (c152-616-00) There is a need for a changing role in
education - adult education. Again this service would have
to be on a face to face basis. What would help is a service
that would tell you what each course would teach - exactly
what you would learn - a system that could say - we will
instruct you in this and this, etc.   4b6e

4b6f (c052-207-00) I see countervailing trends! 1. Growth
centers now number about 2000 - which is as many colleges in
the U.S. 2. Hotels & motels in the U.S. now report some
200,000 "educational meetings" per year.   4b6f

4b6g The tone was not entirely negative: 4b6g

10

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4b6g1 (c152-115-00) If the service can provide off the
job training or if people can larn a new trade (and if
this training can be officially recognized), I think the
service has interesting potential; many people could use
it to get trained to do something they like for a living.   4b6g1

4b7 A number of the respondents brought up the increasing
importance of providing continuing education to senior
citizens: 4b7

4b7a (100-303-00) With an aging population meaningful
existence for people 60+ must, of necessity, employ
education.   4b7a

4b7b (110-203-40) Adult services will be important. Perhaps
the mixture will be most important - the audience should
range from very young to the senior citizen.   4b7b

4b7c (110-302-40) If adult continuing education grows as
fast in the future as it does now, there is no doubt that
adult programming will be important. Furthermore, the
population tree is such that in 1980's the adult population
will be more important than now.   4b7c

4b8 There was no agreement between the groups on where the
funding for this service should originate, although the
statistics did indicate a slight bias in favor of government
funding.   4b8

4b9 The Round 1 comments reflected a number of the benefits of
government playing a major role in sponsoring this type of
service: 4b9

4b9a Rond 1 Consumerist: If this is to be part of regular
schooling, education available to all requires heavy
government involvement.   4b9a

4b9b Round 1 Housewife: If available, should be available to
all, not just the rich.   4b9b

4b9c Round 1 Educator: Educational facilities and services
are already being substantially used on the "haves"; to put
a fee on homelearning for the "have-nots" is to put a
further barrier in the way of use.   4b9c

4b10 Some Round 2 respondents expanded on these themes: 4b10

4b10a (102-123-00) Gov't funding is essential. It is the
necessary catalyst.   4b10a

11

4b10b (102-130-00) Government Funding would clearly alter
the user make up, probably by laying the programs to the
"mass needs" or "lowest denominator".   4b10b

4b10c (102-208-00)Government funding probably would be
primarily directed to areas which are not currently
adequately covered, e.g., adult education (general),
vocational retraining.   4b10c

4b10d (102-135-03) Government spending will have to support
most of it but would think that educational type business
would also support without requiring commercials as we see
on regular T.V.
  ** If this is to be part of regular schooling, education
available to all requires heavy government involvement.   4b10d

4b11 But a majority of Round 2 comments pointed out apparent
disadvantages of relying on government funding too heavily: 4b11

4b11a (102-106-00) government funding frequently fails to
continue long enough for a new function to gain a foothold.
Government funding will tend to get involved in censhorship,
changing the mix of users.   4b11a

4b11b (102-119-00) If we have to wait for government funding
it will delay the introduction of these services because the
consensus is moving towards the government spends too much.   4b11b

4b11c (102-122-00) Will inhibit format - no controversy in
the programs - could stifle   4b11c

4b11d (102-130-00) Reliance on Government funding will delay
and delete the services, Problem - most governmental
jurisdictions do not coincide with "electric coverage"
areas.   4b11d

4b12 Whether or not a government should be expected to provide
this type of service in the first place was addressed by these
respndents: 4b12

4b12a (102-604-00) I think that the program could be begun
without such heavy government involement in funding, Let
those of us who would otherwise pay for night school, or job
training courses, start with the programs we want, and once
programs have proved their worth, then the government can
expand the programs to "have-nots". I feelthe government is
already expected to give too much to too many -
unjustifiable.   4b12a

4b12b (103-604-02) If a given employee wants training he,
and not his whole union, should pay. Governments/should
sponsor programs on what the community needs to know about
the community's own ecology, mass transit, population
crisis, housing, recreational opportunities, etc, so that
people could see how the local and national government is or
is not working in these vital areas. I don't think that
government should have to support "basic education" on this
"luxury" level.
     ** Private industry for employee training.   4b12b

4b12c (106-141-00) "Taxpayer's revolt will not permit this
much $ to be spent on "educational frills".   4b12c

4b13 The effects of private industry involvement in this area,
the threats such involvement might present, and the role of
government in regulating such involvement were all addressed in
Round 2:   4b13

     4b13a (102-109-00) In the Age of Information, only the
     hardware system can be owned - the question may still be: By
     whom? But "software" information knows no bounds; its
     "ownership" is already free - for - all via electric media;
     it can never be contained or detaned for long by "hardware". 4b13a

     4b13b (102-122-00) Probably be faster with "commercials". 4b13b

     4b13c (103-115-01) If each company decides to sponsor an
     educational program to promote its product, we will end up
     with unnecessary duplication which may become costly for the
     consumer. Perhaps the solution would be for industry
     associations or group of companies to sponsor these
     programs. e.g. car manufacturers sponsor a course on
     automobile mechanics.
          ** Industry trying to develop markets through education of
     potential buyers (?).   4b13c

     4b13d (103-118-00) It may be that with the coming of the
     "Information Society" (as Japan has called it) in the 21st
     century this service will indeed become an important part of
     our national leisure time activity. Much more research needs
     to be done on format - such as study of how educational T.V.
     operates in other countries. Perhaps a combination of
     government and private industry funding will be necessary to
     offset huge programming costs in the future. What will be
     required is firm government control of advertising (not
     present now) in the industry. A mix of public-private
     perhaps suits our system best. But our geography demands a

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high involvement in educational T.V. and more government
stimulus to support this growing sector.   4b13d

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4c Household Information and Dedicated News   4c

   4c1 Demand Analysis: 4c1

      4c1a over 60% said it was "moderately" to "very" important;   4c1a

      4c1b over 60% said it was a "moderate" to "large"
      improvement.   4c1b

   4c2 There was fair agreement that a service of this type would
   be consulted between 3 and 10 times a week, with the type of
   information best suited to this type of service received less
   agreement. There was agreement that medical treatment
   informaton and first-aid tips would be very well suited to this
   medium.   4c2

   4c3 This service is expected to substitute in varying degrees
   for a number of alternative sources of the same information
   (sources which are available and used today). There was a
   slight trend in the statistics that indicated that
   inter-personal sources (phoning someone, or a face-to-face
   visit) would be replaced by this service to a greater extent
   than would existing media sources (television, radio, books and
   magazines). This may be an indication that the type of
   information most suited to this service would be that which was
   needed quickly, on demand.   4c3

   4c4 These respondents apparently felt that the majority of
   respondents in Round 1 did not fully appreciate the type fo
   information that could be made available on a service of this
   kind: 4c4

      4c4a (201-213-00) Disagree with most statements - a data
      bank of information with random access to a whole host of
      general households info would be far more effective,
      efficient and complete than any of the current sources.   4c4a

      4c4b (201-208-01) I have a feeling that these respondents in
      the main do not understand the types of info service which
      ultimately will be available and what it would do with the
      way they will use information sources. I personally see a
      computer-augmented system providing a broader range of info
      more quickly and comprehensively than all the media can now
      provide, combined. The use of the word "replace" in the
      question is unfortunate, because I don't see any of them
      replaced for a good long time.
         ** This is one area where computer-augmented dialog,
      document production, query systems, access to special
      computing services would come in. In ten years powerful,

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relatively inexpensive systems will be available, Assuming
these capabilities my families' use is as indicated,   4c4b

4c4c (201-111-00) See Jencho recent book "Ad Hocism"   4c4c

4c5 These sentiments were reflected in these further comments
in the concept of evolution implicit in the introduction,
growth, and development of services of this type: 4c5

    4c5a (201-305-04) Could be something to this. Might improve
a requirement sor suitable variation over time,
** This service would go well for awhile, these people
would get tired of it and no longer use it,   4c5a

    4c5b (201-203-00) I think the type of service requested
would change over time, More detailed information may be
sought by users, One can spend many hours on a phone trying
to locate a replacement part for home equipment,   4c5b

    4c5c (201-106-00) As with any new media the particular usage
cannot be predicted before hand, It will have to evolve,
Every medium was used first in some non-optimist role before
its true usefullness to the public emerged, The benefits
will be great, but we don't know what they will be in detail
- any flexible, new way of communicating will be adopted and
will become very useful in time,   4c5c

4c6 Whether or not such a system would be too cumbersome to use
was addressed in this Round 1 comment: 4c6

    4c6a Round 1 Educator: To use a card index is more efficient
and easier,   4c6a

4c7 Some of the respondents in Round 2 saw the situation
differently: 4c7

    4c7a (201-201-02) Bullshit!
** To use a card index is more efficient and easier,   4c7a

    4c7b (201-203-02) This educator must be fairly old,
** To use a card index is more efficient and easier,   4c7b

    4c7c (201-122-02) If you have one convenient
** To use a card index is more efficient and easier,   4c7c

4c8 But others in the second round shared this concern: 4c8

    4c8a (202-201-00) Indexing and access will be a key factor
in limiting use by non-professional groups,   4c8a

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    4c8b (202-106-00) "Tuning in" will be unpleasant. It will
    require the use of manuals, knobs, fials, maybe light pens -
    messy. No one will enjoy this part,   4c8b

4c9 One of the advantages of a "card catalogue" approach to
this type of information is that it would provide the user with
the opportunity to browse. Some Round 2 respondents saw a
problem in this area if the information were to be available
over some electronic medium: 4c9

    4c9a (201-305-00) Could be, but browsing is usually done in
    situations where marginal cost (in almost any terms) is
    zero,   4c9a

    4c9b (201-130-00) Browsing is expensive, both in terms of
    costs in an electronic medium, and in terms of time, The
    beauty of the written word is its near zero storage and
    callup cost, so that "bowsing" can occur at essentially no
    add on cost, The "discovery" aspect is the real payoff, but
    this is "directed, or oriented" discovery if one is
    constrained to use a medium whose costs are proportional to
    time in use.   4c9b

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4d Shopping and Purchasing from the Home   4d

    4d1 1973 Demand Analysis:
                                                                                      4d1

        4d1a over 60% said it was "moderately" to "very" important;   4d1a

        4d1b over 60% said it was a "moderate" to "large"
        improvement.   4d1b

    4d2 It was expected that the social functions served by
    shopping would be mentioned by the respondents. This was
    confirmed; there were a number of comments in the following
    vein: 4d2

        4d2a (400-216-00) The elimination of the social,
        recreational and exercise values of shopping would be very
        undesirable in my opinion, unless they are replaced by other
        activities which contribute even more to mental and physical
        health.   4d2a

        4d2b (401-109-00) Need to dramatize current bargains and new
        products or services offered - only enough to arouse
        curiosity leading to requests for more specific information
        by those who need it. Ads would be the subplot of a quick
        tour around the shopping places.   4d2b

        4d2c (402-102-00) Communications media will be hard pressed
        to provide the intimate inspection opportunities customers
        expect at say the meat counter. The biggest objection to
        staying home is that it can be rather dull.   4d2c

        4d2d (402-303-00) Shopping, for housewives, is a way of
        maintaining contact with someone other than children, and
        the T.V.   4d2d

        4d2e (402-307-00) If shopping from home destroys store
        shopping it would be very sad for the dedicated "shoppers"
        who do it for fun.   4d2e

        4d2f (438-106-40) c) In big cities one doesn't "meet people"
        while shopping.   4d2f

        4d2g (440-205-40) Same as above for e) if the surprise is
        rape, its probably not going to increase the frequency of
        shopping trips except in a few cases!   4d2g

    4d3 It is interesting to note that none of the women in the
    housewives group commented on the above concerns. The fact

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that "women" and "housewives" were not synonomous was brought
out by more than one panelist.   4d3

    4d3a (201-305-00) Could be, but browsing is usually done in
situations where marginal cost (in almost any terms) is
zero.   4d3a

    4d3b (201-130-00) Browsing is expensive, both in terms of
costs in an electronic medium, and in terms of time. The
beauty of the written word is its near zero storage and
callup cost, so that "bowsing" can occur at essentially no
add on cost. The "discovery" aspect is the real payoff, but
this is "directed, or oriented" discovery if one is
constrained to use a medium whose costs are proportional to
time in use.   4d3b

4d4 Most of the other comments on the use of the
shopping-from-home service were dirceted to specific aspects of
the service's features or operation.   .   4d4

4d5 Many respondents commented on how the lack of human
interaction (with clerks and other sales personnel) would not
affect the degree of service as much as might be expected: 4d5

    4d5a (436-106-40) Can't get objective info. from clerk.   4d5a

    4d5b (436-120-50) So many stores are "self service"
operations.   4d5b

    4d5c (436-124-00) My assumption is that informed sales
clerks are as scarce as hen's teeth today and getting rarer,
thus the trend encourages the service.   4d5c

    4d5d (436-141-40) Most clerks seem to have little
information on their products today.   4d5d

    4d5e (436-203-40) Not very many knowledgeable clerks today.   4d5e

    4d5f (436-612-50) This won't have any effect because the
clerks on the phone will or should be able to give you any
information, etc. Delivery services should be increased so
you shouldn't have to worry there.   4d5f

4d6 The effect of an on-line, interactive service such as this
on impulse buying behaviour was discounted by most of the
commenting respondents: 4d6

    4d6a (401-118-00) You still assume that it will be
householders using this service exclusively. It seems to me

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it would be of far more use to working people who would shop
by phone from their place of work.   4d6a

4d6b (402-118-00) The increasing number of women in the
labour force (already 34%) will need this sort of service.
Also future work patterns will free both men and women to
work at home as well as at the office will encourage this.
Your assumptions that the family unit will continue to
operate as it has done in the past is short-sighted and
fails to take account of changing social needs.   4d6b

4d7 The impact of rising urban crime rates on the popularity or
success of services such as shopping-from-home was brought up
by several of the respondents. Most indicated that they
believed that where present, rising street crime rates would
tend to encourage the development of the service. These two
comments make the same point, with additional insight: 4d7

4d7a (435-124-00) Areas where this is the greatest problem
are the areas least able to afford an exotic service such as
this service.   4d7a

4d7b (435-201-20) Obviously a highly abusable selling point
for the "insulated society."   4d7b

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4e Remote Banking Service   4e

    4e1 1973 Demand Analysis:
                                                                     4e1

        4e1a over 75% said, yes, it would be used if available   4e1a

        4e1b cost to the user would be about the same as alternative
        status quo   4e1b

        4e1c most useful documentation in form of hard-copy
        statemnts, bills;   4e1c

        4e1d reference in Business Delphi study of availability on
        weekends, etc. (good reference, use it !)   4e1d

    4e2 indications that it would tend to substitute heavily for
    traditional paper-bound banking practices (10%-40%); most heavy
    substitution for payments to utitlity co,'s, and recurring
    payments for things like insurance, rent or mortgage, etc.)   4e2

    4e3 The panelists indicated that one of the main factors
    encouraging customers' use of services such as this was the
    time and inconvenience associated with traditional banking
    practices: 4e3

        4e3a (501-302-00) Banking chores are unattractive, tedious
        and time-consuming. Automatic systems will be adopted
        quickly at least in urban areas,   4e3a

        4e3b (501-118-00) The present banking system for the public
        is so out moded and restrictive that any change would be an
        improvement. The public (especially working people are badly
        served by inconvenient hours, long lines on pay day, rigid
        old-fashioned accounting. But remote banking will require
        public safeguards which banks themselves must not provide to
        protect users. One would not want to "send the fox to watch
        the chickens".   4e3b

    4e4 This last respondent's concern for safeguards in the system
    was one of the main topics that came out of the first round: 4e4

        4e4a Round 1 Researcher: We will need some foolproof method
        of remote verification of personal identification. I at
        must be quick, positively accurate, and have the legal
        binding of one's signature. Ultimately, we will need to
        know just who made this transaction. This requires positive
        proof on one's identity. Several successful incidents of
        masquerading to "rob the bank" will cause so much

consternation that highly foolproof procedures wll become
commonplace.   4e4a

4e4b Round 1 Researcher: The only bottleneck is a "cheap"
means of personal identification over the phone - a code
number is not going to be enough.   4e4b

4e4c Round 1 Researcher: Security is badly handled by banks
now - at least the privacy aspect - what's needed are
changeable encrypted passwords on accounts, audits, ways to
correct errors, consumer protection laws regarding illegal
misuse of the system.   4e4c

4e5 This researcher recognized and commented on the fact that
the question of protection of privacy was more than a hardware
or software concern: 4e5

4e5a Round 1 Researcher: Unfortunately people in general
would probably be hardpressed to describe such a system in
terms that are intelligible intelligible; banking security
is acquired by reputation and tradition rather than logic.   4e5a

4e6 The privacy of the information stored in the memory of
systems such as this received a great deal of additional
comment in the second round.   4e6

4e6a (503-504-00) Security and privacy are all important
factors; this could be overcome by a rapid system of "voice
printing" and comparison. Official institutions (income tax,
etc.) however, must be allowed to check the computer banks,
but the citizen involved must be aware and consenting.   4e6a

4e6b (503-218-00) Decentralization & partition of Data
should be maintained except when there is a special need for
long-distance reference. Keep as much of the system close to
the users as possible. Perhaps every terminal should have
Data cassette or Hard Copy output for the users to keep
their own records.   4e6b

4e6c (503-115-01) In order to be successful, the system
would have at least to be absolutely secure, simple to
understand and to use and to retain at least the same
advantages to the consumer than the current system (control
of bank account, credit extension, etc.)
  ** Absolute privacy and hard copy receipt at time of
transaction. Also, the right to question one's credit file
and credit rating.   4e6c

4e6d (503-122-00) There are over 140 bills on privacy now in

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US Congress. Privacy is a popular bug. Will have to ensure
accuracy & security.   4e6d

4e6e (503-130-00) In the U.S. much legistation is being
enacted which bears on many of these questions.
Unfortuantely, the legislations themselves differ from state
to state, or is between state and Federal. It is likely to
be a highly confused (and risky) area for some time to come.   4e6e

4e7 This researcher alone commented on the distinction between
the privacy of the information, and the misuse of that
information (although the same point WAS brought up by several
others in responding to the general questions on the changing
attitudes toward privacy that might be brought about by the
proliferation of this and other "wired city" services):   4e7

4e7a (503-203-00) Oppenheimer is quoted as saying that we
must reach the day when secrecy is illegal - as far as
practically possible. I think the privacy bit is a strawman
which has to be knocked down. Prevention of misuse of
information - yes, secrecy no.   4e7a

4e8 Of the hardware suggestions for increasing the security of
the information contained in systems of this sort, voice-prints
were mentioned most frequently; it may be interesting to note
that the researchers did not mention voice-prints at all.   4e8

4e8a (503-604-00) I would think that something like your
fingerprints would be the least personal verification people
would require. Or a voiceprint. Something absolutely
personal.   4e8a

4e8b (503-504-00) Security and privacy are all ijportant
factors; this could be overcome by a rapid system of "voice
printing" and comparison. Official institutions (income tax,
etc.) however, must be allowed to check the computer banks,
but the citizen involved must be aware and consenting.   4e8b

4e8c (503-212-01) Handprint, voiceprint transmitted to
central memory bank and back from point of transaction.   4e8c

4e9 The fact that services of this nature could eliminate a
majority of the "float" experienced as a result of traditional
paper-bound accounting methods came in for some comment in the
second round, although the statistical responses did not
indicate whether the absense of a float would neither encourage
nor discourage bank patrons from using the service.   4e9

4e9a (517-123-50) I'm a "kite flyer" who lives on the

"float", We ar a significant force - perhaps a majority
among consumers,   4e9a

4e9b (517-132-30) A few play with the float to a minor
degree but overall I would not expect any real effect,E   4e9b

4e9c (517-218-40) Current line of interest rates make all
interest free delays quite valuable to the consumer,   4e9c

4e9d (517-302-30) Some sort of credit arrangement can
replace the float system,   4e9d

4f Remote Work Center   4f

   4f1 The internal and external Business Delphi studies looked at
   this question and saw neighborhood work centers evolving by
   1986-1990; home work centers by 1991-2000:   4f1

      4f1a "Entrepreneurs will strive to get their money out of
      existing downtown skyscrapers. We in Canada will not have
      reached the point where alternatives to present day
      arrangements are unsatisfactory - ie. road congestion,
      transportation difficulties, etc."   4f1a

      4f1b Dan Goodwill's summation......"A 'lack of desire for
      travel', the 'greater economy in substituting communications
      for travel', and the inability of our transportation system
      to cope with the population increase are expected to
      encourage us to more in this direction."   4f1b

      4f1c "The neighborhood remote work center offers a means of
      managerial control. Conceptually it is little different
      from the branch bank or store. It will have to come ase
      large urban areas become absolutely choked by
      Transportation."   4f1c

      4f1d "The professional working man requires the intellectual
      stimulation of interacting with other professionals in a
      'work environment'. As a result, single person work
      centers, despite their initial appeal, will not be
      successful. They would be too intellectually lonely."   4f1d

      4f1e "Who can work with the kids around."   4f1e

   4f2 The statistical responses indicated that there were a
   number of factors that would encourage the development and use
   of remote work centers. The strongest encouraging factors will
   be changes in the time and distances traveled in order to reach
   a central office and the changing nature of the work-week.   4f2

   4f3 There were an extraordinarily high number of comments on
   various aspects of the use of the remote work center.   4f3

   4f4 Round 1 Researcher: In general I do not feel that working
   at home will fill the requirements for control which most
   business organizations will want to maintain. Much mor likely,
   it seems to me, is the concept of the satellite office, located
   not as an office to meet the public locally, but as the place
   of work for the employees who can reah it - then carry on the
   work from it via communications links to fellow workers in
   other satellite offices.   4f4

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then carry on the work from it via communications links to
fellow workers in other satellite offices.   4f4a

4f5 The use of a variety of communications media were assumed
by most of the respondents in their comments. Most of the
comments concerning the communications hardware pointed out
that most of the hardware is available today: 4f5

4f5a (602-132-00) Assuming a Community Work Center with
face-to-face as needed in 2-3 timesper week depending on the
task, I see no problems. I like audio teleconferencing.
Other methods ie. computer teleconferencing, particularly
with graphics backup can be useful in some applications and
work areas. This would be new. Broadband is not really
necessary. The possibility for dynamic changes, to see "what
if" could also be exciting.   4f5a

4f5b (602-123-00) Computer-Augmented communications has
great potential, e.g. as a mechanism for reaching a rapid
consensus, particularly when the group is large.   4f5b

4f5c Therefore these systems are not a total substitute but
could replace much of our face-to-face and provide on a wide
basis many new possibilities.   4f5c

4f6 Some of the researchers comments on technologies that are
just arond the corner, in terms of prices falling to a level
competitive with alternative means of accomplishing the task: 4f6

4f6a (602-218-00) It should be possible to have information
"bourses" where people put up ideas & scheme requests &
appraise & bid on them etc. Sort of a distributed spectics
group - The FORUM kind of thing or what I've proposed is a
"Cyberwork" exchange, (institute for the future Stanford) -
replacing much scientific technical & other publishing.   4f6a

4f6b (602-120-00) A great deal depends upon what happens to
the flow of paper which is still in 1974 such a large part
of most white collar jobs. Certainly storage and retrieval
systems will be important. Nevertheless letter writing and
paper flow is going to be with us for a long time. Therefore
for many types of professions it will be necessary to be at
the receiving end of the paper flow. Therefore I would see a

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cheap telecopier, a cheap scribblephone, conference TV and
video storage and retrieval becoming important in addition
to these services mentioned on p. 21   4f6b

4f6c (601-216-01) I feel a conventional telephone and
telecopier are too primitive as communication facilities.
Some broadband (high speed) soft copy facsimile or
alphanumeric/graphic presentation is a minimum requirement,
with teleconferencing facilities, at least for special
purposes. The greater ease of providing these at community
work centres is a strong point in their favour over the home
work centre.
   ** In general I do not feel that working at home will fill
the requirements for control which most business
organizations will want to maintain - much more likely it
seems to me, is the concept of the satellite office, located
not as an office to meet the public locally, but as the pt.
of work for the employees who can reach it --- then carry on
the work from it via communication links to fellow workers
in other satellite offices. Probably 80 percent of such
comm. needs can be met by ordinary telephone, and most of
the rest by inter-office telecopiers.   4f6c

4f7 Some comments addressed the behavioural changes that might
be expected from relying heavily on telecommunications services
to provide much of the inter-personal communications. (Few of
the comments in this section addressed the question of these
technologies acting to depersonalize the relationships between
a worker and his peers; this potentiallity was reserved for the
discussion of the impact that all the services considered in
this study might have on inter-personal relations.)   4f7

4f8 These comments indicate some of the ways in which group
processes might be improved through the use of
telecommunications alternatives to conventional face-to-face
meetings: 4f8

4f8a (602-213-00) All forms of formal communication are
possible and desirable for greater efficiency.
Telecommunication may also eliminate "noise" from
interpersonal communication such as strange room
environment, other individual present, can produce absolute
privacy. All forms of counseling may work here from group to
individual. Like remote diagnosis.   4f8a

4f8b (602-123-00) Computer-Augmented communications has
great potential, e.g. as a mechanism for reaching a rapid
consensus, particularly when the group is large. This
technology could also facilitate a greater range of

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interrupt strategies so that more than multiple dialogues
could take place with more than one speaker talking at once,
But I can't see much promise for improving face-to-face
dialogue between two people, The big payoff is in assisting
group dialoguei   4f8b

4f8c (601-305-01) This is very interesting and a real
possibility. The advantage is to avoid long trips (possibly
under congested conditions) to work while at the same time,
permitting large enough groupings of workers so that the
benefits of face-to-face contact can be obtained as needed.   4f8c

4f9 Some of the researchers comments on technolgies that are
just arond the corner, in terms of prices falling to a level
competitive with alternative means of accomplishing the task: 4f9

4f9a he public served). No technological advance is needed.
Only a different viewpoint by the businessman,,xci
\D]j,"
%2(601-132-00) A major problem with CWC's would appear to be
the city planners, For example - in Ottawa the city planners
do not like decentralization. They encourage work in the
central core - makes the small business more viable, makes
public transit more viable, etc, These attitudes will have
to be consulted,is t4,2dRK!
%2(601-113-00) Energy shortage: If people move out even
further such spread of populations will encourage even more
use of automobiles by greater numbers of people, and thus
greater consumption of petroleum,T<<(dYGI
%2The emphasis in the questions in the first questionnaire
was on remote work centers located in the worker's home. A
comment by one of the researchers in that first round swung
the majority of the dialogue to the costs and benefits
associated with COMMUNITY work centers:orkeTPdY}
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entertainment asttimes: t

                          d&the pubh" locally, but as the
place of work for the employees who can reah it - then carry
on the work from it via communications links to fellow
workers in other satellite offices,T4(dRF3
%2The physical location of the Community Work Center with
respect to the (decreasingly) conventional donwtown business
district was mentoned in a number of different
contexts:it0UdYG
%2(601-130-01) In many respects, the suburban office
building, which houses a number of company satellite
offices, is alrea   4f9a

4f9b to be consulted,is t4,2dRK!

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              DI2]j-L
%2(601-109-00) Community work centers within walking
distance of residence, possibly in same building -
information processing and intercom services, probably on
rental basis. Meetings in hotels or airports or central
offices of large coporations: the end of "down town", and an
enormous saving of physical, psychic, and social
"energies".uld XC5]j,'
%2(601-132-00) Generally, CWC's would appear to combat urban
sprawl in the sense of providing a "neighbourhood" focus for
the work of many. Thus, the city may well grow but as
(hopefully) sets of cohesive neighbourhoods. The centre of
the city (existing) will suffer - the degree will depend
upon the true frame.3eEL)+ejK

'Some of the researchers comments on technolgies that are
just arond the corner, in terms of prices falling to a level
competitive with alternative means of a   4f9b

4f9c (601-109-00) Community work centers within walking
distance of residence, possibly in same building -
information processing and intercom services, probably on
rental basis. Meetings in hotels or airports or central
offices of large coporations: the end of "down town", and an
enormous saving of physical, psychic, and social "energies".   4f9c

4f9d (601-132-00) Generally, CWC's would appear to combat
urban sprawl in the sense of providing a "neighbourhood"
focus for the work of many. Thus, the city may well grow but
as (hopefully) sets of cohesive neighbourhoods. The centre
of the city (existing) will suffer - the degree will depend
upon the true frame.   4f9d

4f10 The question (raised in this last comment) of the effect
of a migration of white collar job centers away from the city

center was commented on by a number of the respondents. There
appears to be a mixture of functional and dysfunctional
consequences.   4f10

   4f10a (601-212-00) It would help keep me out of the city.
   I'm for it. It would contribute strongly to a decreased tax
   base in the city, resulting in fewer resources to solve city
   problems.   4f10a

   4f10b (601-116-00) This depend greatly on residential
   patterns which vary substantially. Also on population
   density, in Los Angeles the satellite office might be more
   attractive than in New York City.   4f10b

   4f10c (601-205-00) City centres - should relieve traffic and
   parking - allow for more park areas etc.   4f10c

   4f10d (601-205-00) Urban sprawl - would probably increase
   this but could revitalize smaller towns. Energy - would save
   energy to a great degree.   4f10d

   4f10e (601-123-00) It's very appealing but not feasible for
   many kinds of work due to inherent limitations on
   face-to-face contact with clients and co-workers. If the
   concept we're widely adopted it could have a profound impact
   on encouraging further abandonment of the center cities.
   Most people would rather not work in the center city just as
   they already don't reside there. This could provide an
   impetus for total abandonment of the core city. The
   foregoing comments apply only to large U.S. cities. I do not
   feel qualified to comment on the Canadian experience but
   suspect it might be different.   4f10e

   4f10f (601-113-00) Question: Would major employers build the
   satellite offices, or telephone companies, or governments,
   or ....? Is this a real alternative to travel? If such
   satellite offices are built it will make suburbs into cities
   and urban sprawl will be speeded up even further. The center
   cities may become empty even during the day. The structure
   of the city will be changed, more ghettoes, etc.   4f10f

4f11 The availability of energy resources was associated with
the decentralization of work locations by many respondents.   4f11

   4f11a (601-504-00) It would certainly alleviate city-center
   automobile congestion, and therefore any energy crises.   4f11a

   4f11b (601-505-00) The city centres would no longer exist,
   we would have one big area with no visual city centre. More

land would be used in this concept of satellite offices. The
energy shortage would be the same, people would save energy,
by not having to go into a main centre every day, but that
energy would be used to keep the satellite office running.   4f11b

4f11c (601-213-00) Satellite centers are more economically
sound and could provide more service at lesser costs to more
individuals. Conservation of energy should be assured in
small satellite centres over large units.   4f11c

4f11d (601-207-01) The satellite office concept is great. It
saves time, energy, wear and tear and satisfies the need for
socialization, person-to-person transactions, & provides
resources lacking in the average home.   4f11d

4f11e (601-106-00) NASA has examined this concept (Sam
Fordyce - Wash. D.C.) and continues to pursue it. Not all
jobs are tractable. Perhaps 30-35% of work trips ultimately
- much less than that in first decade. The impact would be
both positive and negarive - fixed costs for existing
transportation systems would have to be borne by the
remaining riders. Society may need these too much to
jeopartize them. The ramifications are immense and require a
detailed study.   4f11e

4f11f (601-110-00) Reduce energy, pollution, accidents.
Increase productivity, quality of life.   4f11f

4f11g (601-111-00) Unless the concept is researched
thoroughly and is found viable I shall have considerable
doubts about it . In the short term building these centers
would make energy situation worse, thereafter a slight
improvement could be envisaged unless people, as a result,
tended to disperse more from cities and use their cars more.   4f11g

4f11h emote work centers located in the worker's home. A
comment by one of the researchers in that first round swung
the majority of the dialogue to the costs and benefits
associated with COMMUNITY work centers:orkeTPdY}
%2It would naturally tend to substitute for a lot of other
entertainment asttimes: t
                        d&the pubh" locally, but as the
place of work for the employees who can reah it - then carry
on the work from it via communications links to fellow
workers in other satellite offices.T4(dRF3
%2The physical location of the Community Work Center with
respect to the (decreasingly) conventional donwtown business
district was mentoned in a number of different
contexts:it0UdYG

FILE JULY15- rough final outline of SPRITE

%2(601-130-01) In many respects, the suburban office
building, which houses a number of company satellite
offices, is already this concept in action. ThT'(dR:u
%2Round 1 Researcher: In general I do not feel that working
at home will fill the requirements for control which most
business organizatio   4f11h

4f11i (601-115-00) Excellent suggestion! But this may not
necessarily solve the problem of traffic congestion if
people having to work at one given center live in different
areas of the city since I presume the satellite office would
consists of the people forming working units rather than
people living in the area.   4f11i

4f12 Alternatives to a permanent steel and concrete work center
were mentioned by a couple of the respondents: 4f12

4f12a (601-218-00) Another possibility are mobile work
carrels & cabins - trailers or campers that a group of
people could take to various sites - construction sites,
recreation sites, etc. so that the workplace would be
mobile.   4f12a

4f12b (601-218-00) Yes something like a community centre for
a Public Library work & playcentre is needed.   4f12b

FILE JULY15- rough final outline of SPRITE

    4g Remote Medical Diagnosis   4g

        4g1 1973 Demand Analysis:
                                                                  4g1

        4g2 Text for this section was lost in a "BAD FILE" screw-up.
        It will have to be typed in from the hard-copy version at a
        later date.   4g2

FILE JULY15- rough final outline of SPRITE

4h Remote Political Participation   4h

   4h1 1973 Demand Analysis:
                                                                                        4h1

      4h2 Text for this section was lost in a "BAD FILE" screw-up.
      It will have to be typed in from the hard-copy version at a
      later date.   4h2

41 Home Surveillance Systems   41

    411 1973 Demand Analysis:
                                                                          411

    412 There was general agreement among all groups of respondents
    that the appeal to householders of this type of service will
    increase over the next ten years.   412

    413 The main factors expected to encourage the use of this type
    of service by householders were changing demographic patters
    (urban core vs. suburban and rural concentrations of
    population) and householders' changing attitudes and
    expectations about the need for such services. The impact of
    changing crime rates was thought by the consumerists to be a
    major encouraging factor to the widespread development of
    services of this kind.   413

    414 From previous studies, it was determined that the false
    alarms that would inevitably result in systems of this sort
    would be a major concern for providers of the services,
    householders, and law enforcement agencies. The respondents
    were asked to consider some of the issues involved in this
    problem.   414

    415 They indicated that the majority of the false alarms would
    result by accidental triggering, rather than technical
    malfunctions or equipment failure. Following are some of the
    comments that addressed the question of false alarms: 415

        415a Round 1 educator: Make the equipment as foolproof as
        possible; put triggering devices well out of reach of
        children and dogs; remind householders at regular intervals
        to check the equipment; forbid smoking. Human nature you
        won't change, so accidental trippings of the alarm will
        continue as long as children can climb on stools, cabinets,
        other furniture; cooks forget that they have pots on the
        stove while they talk on the telephone and parents lock out
        teenage kids.   415a

        415b Round 1 Researcher: If voice, computer, and video
        channels provided as standard for each household
        (installation now being tested in Japan), redundant signals
        could be used on separate channels for imprttant protective
        functions; general alarm for total system failure,
        requiring instant service by telephone company "flying
        squad" equipped for appropriate action.   415b

        415c (900-102-00) One must recognize that false alarms must

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be paid for. If one obtains a zero false alarm rate there
is probably also a finite LOST ALARM RATE. Gaming strategy
can be employed here to advantage.   415c

415d (900-505-02) Don't put the triggering device out of
reach of children, they may have a good and valid reason to
trigger it at some time.   415d

415e (908-201-00) Look at the record. Police departments
want out now - the stuff misfires in every storm.   415e

416 A further concern of the respondents was that the perceived
need for services of this type might be much greater than the
rational or economic need.   416

416a (900-604-02) I think this system would only appeal
really to those in isolated areas and to the elderly, who
are prone to accidents, and, unfortunately robbery. Most of
us have a neighbour 10 ft. away to call upon. I do believe
all homes should have smoke sensors to rouse sleepers before
they're overcome by the fumes.
** Don't install the damned things.   416a

416b (901-132-00) The crime rate is disturbing - the U.S.
scene (which we know best but on which we get inadequate
information) is a forerunner of our urban life. The
"fortress" complex could overflow here ie. the problem is
one of perception not necessarily one of substance, the
latter is yet improved although in fact may be proven.   416b

416c (901-141-00) Perhaps the crime rate aspect is more a
question of perception than real data. One fundamental here
is the security and peace of mind aspect even though the
system may never be used. If people perceive crime to be a
problem then they will feel better having this type of
system.
** 1) Certify the supplier of systems 2) Make tests
compulsory.   416c

416d (901-608-00) The type of community which truly needed
this service would not be one in which I would wish to live.
At present, the idea seems impractical, and if implemented,
would be guilty of producing one more manufactured "need",
like second cars and backyard swimming pools.   416d

416e (904-213-06) I don't understand the housewife reaction
since the research shows the housewife has major concern
over crime.   416e

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5 IMPACTS of the services, by type of impact   5

  5a Available Leisure Time   5a

    5a1 According to the staistical summaries of the respondents'
    opinions, these services will have little affect on the amount
    of leisure time available to householders.   5a1

    5a2 The largest deviation between the groups were on the Demand
    Entertainment service and the Remote Work Center.   5a2

    5a3 A number of comments on this question were directed to the
    definition of "leisure time", and to the fact that different
    interpretations could lead to different responses. This is
    undoubtedly true, and the questions was designed, in part, with
    the objective of determining how people's conception of leisure
    time may change during the study period. Note how the
    delineation between time spent in gainful employment and all
    other activities enters into the following interpretations of
    leisure time: 5a3

      5a3a Round 1 Researcher: It of course depends on what one
      means by "leisure". Let's just say that leisure (or play)
      is something that one is not obliged to do and that the
      opposite (work) is that which one is obliged to do.   5a3a

      5a3b Round 1 Educator: How do you define "leisure time"? I
      use the idea that leisure is doing something which intereste
      me other than my gainful employment. Therefore these
      services would allow me more "leisure" by using up my
      "spare" time.   5a3b

      5a3c (a050-109-00) Leisure: statisfactions on human scale,
      beyond markets when work and pleasure merge - just doing
      waht comes naturally" doing nothing is "natural" only for
      the "sick".   5a3c

      5a3d (a050-113-00) Leisure = time available to do all things
      not directly related to the job. (e.g. reading a report at
      home, in one's "spare time" is work, not leisure). (I used
      this definition when answering the questions.)   5a3d

      5a3e (a050-123-00) The distinction between leisure and work
      is getting more difficult to discern, especially out of the
      context of traditional middle-class lifestyles. Many middle
      aged workers are moving into second careers more related to
      the hobbies and leisure time interest. There is a
      heightened emphasis on job satisfaction which is often
      traded off against money as a service of job remuneration.   5a3e

5a4 The emphasis on gainful pursuits (in a vocational sense) is noticeably absent in the following comments, however: 5a4

5a4a (a050-143-00) More people should get paid for what they do in Leisure, Because other want them to do it,   5a4a

5a4b (a050-143-00) One can build a precise model - leading to Roman Circuses or to some other Utopia . Better get one with an economically sound development future! That's what my whole thing is about,   5a4b

5a4c (a050-505-00) I consider leisure time as times when I have nothing to do and I do nothing then. Your definition of leisure time seems better, but I don't believe I would change my answer for any of the services,   5a4c

5a4d (a050-620-00) Leisure time to me means a few more stolen moments to do the things that are for my pleasure! Creative things - music, time doing little things for other people and my church. That's living!   5a4d

5a5 This researcher identified leisure time as a function of several interrealted factors   5a5

5a5a (a050-143-00) Leisure Time = f([creativity in society] x [Productivity of the society] x [Consensus-forming ability] x [Communication])   5a5a

5a6 A few of the panelists brought up the point that while these services might not actually result in "documentable" increases in leisure time, they may significantly alter the distribution of time spent on all activities: 5a6

5a6a (a550-604-01) This researcher has a car, and works near a bank, and is dressed to appear in public. This housewife has the car only sometimes, has to drag small children along and is tired of the 1,001 errands housewives run, and has to "clean up" she and the kids to go out. Therefore - the difference,   5a6a

5a6b (a550-203-06) There are many indirect activities which could be handled as the housewife has pointed out,   5a6b

5a6c (a550-115-01) I agree with the housewife, Has the above researcher ever experienced waiting in a line at a department store while two or three people in front of you are using credit card cheques or cashing a social security cheque? I doubt very much that an "automatic" purchase would be slower on the average.   5a6c

5a6d (a550-116-00) There are major social class differences
in "banking". Poor people who have to wait in line to buy
thinks like money orders and foodstams spend more time
"banking" than middle class people need to.   5a6d

5a6e (a550-120-06) I support the position of the housewife.
Banking may take no more than 60 minutes a month but that
figure could certainly be trimmed somewhat through the use
of Remote Banking.   5a6e

5a6f (a550-123-01) I would also have to agree with the
researcher's comment above. Even now I do most of my
banking by mail or telephone. The only times I go to the
bank is for getting cash. Even, then I generally don't go
to the bank but to a supermarket or other retail
establishment which will cash my checks without all the
hassle of a bank. I have my employer deposit my check
directly into my savings and checking accounts. So who need
al these electronic, frills? Only the banks themselves not
the public!   5a6f

5a6g (a550-124-01) This definition of banking is doubtless
far too narrow, thus the 30 minute/mo. figure. Banking
should include time involved in all non-trivial purchases
and transactions.   5a6g

5a6h (a050-620-01) Your researcher in this instance, is
either a male with a wife or secretary to do his running
around for him, or he has a different banking system than
ours.   5a6h

5a6i Round 1 Educator: It's not clear whether the time
spent with the service is available leisure time or lost
leisure time. Hence, a neutral response. Actually, it
would lead to a changed distribution of leisure time
activity.   5a6i

5a6j Round 1 Educator: All these services wold probably
increase my efficiency at doing things I am already doing
without necessarily changing the distribution of my
activities.   5a6j

5a7 This question of changes is the "efficiency" with which
current activites are conducted was a key topic in the
responses to the second questionnaire. In the first
questionnaire, the following comments were made about the impct
of the remote banking concept on the leisure time of bank
customers: 5a7

     5a7a Round 1 Housewife: This would save time - no more
payday lineups, etc,; also, no special trips out to pay
bills; save money on stamps, writing of cheques; this cost
could be used towards computer service,   5a7a

     5a7b Round 1 Researcher: Banking per se takes probably no
more than 30 minutes per month; the time taken to make a
purchase "automatically" would probably increase.   5a7b

5a8 The comments in the second questionnaire were fairly evenly
split in supporting these two positions. Again, the different
connotations of leisure time may be responsible for the
differences, but more important to the results of this study is
the development of the idea that many of these services, while
purportedly directed at increasing efficiency, pleasure, or
convenience in one or two specific areas, may actually impact
across several areas. There may be a multiplicaive factor
presnt which produces "leisure time" not as a total of several
individual factors, but as a total that is greater than the
some of the parts.   5a8

5b Amount of Time Spent at Home   5b

   5b1 The respondents indicated a slight trend in the direction
   of more time being spent at home as a result of the availabilty
   and use of these services. Services which set the pace for
   this general trend were Demand Entertainment and Education,
   Remote Shopping and Banking, and Remote Work Centers. (The
   welfare workers on the panel saw the Remote Work Center as a
   factor leading to a DECREASE in the amount of time spent at
   home. The reason for this was not made clear in the comments,
   unfortunately; the representation of this group in the second
   questionnaire was much less than that of the other groups.)   5b1

   5b2 Several of the respondents pointed out that people were
   gregarious by nature, and that no amount of encouragement could
   induce them to isolate themselves to the extent that the
   interpersonal contacts would be reduced.   5b2

      5b2a (b051-130-00) I doubt that peoples' overall time
      proportions would change much (or historically Have)
      regardless of technology at hand. "Getting out" is the name
      of the game, regardless of prupose or motivation, since man
      is inherently a gregarious animal, not a loner.   5b2a

      5b2b (b051-504-00) Man is basically a social animal, geared
      to functioning in and interacting with varied groups. The
      services tend to make man a more stay-at-home animal,
      ultimately decreasing social interaction on al levels,
      though the services would mainly benefit the users, this
      reduced group activity is the only serious drawback. It
      would, unfortunately change our entire social structure.   5b2b

      5b2c (b051-602-00) My own opinion would be that very little
      change would be caused by any of these services, in time
      spent at home. Those who enjoy going out will continue to
      do so. People have to associate personally with others in
      order to learn and grow.   5b2c

   5b3 A great many others took exception to the generalization
   implied in the question and inferred that the introduction of
   new communications capabilities would not in itself lead to
   specific decisions to stay home or go out (in particular), and
   to the elimination of individual preferences and behaviours in
   general.   5b3

      5b3a (b051-111-00) All I can say is that to the extent
      telecommunications removes constraints and provides more
      options people will be a little freer to do what they want,

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to stay at home or the reverse depending on their
inclinations. But there are bound to be side-effects.   5b3a

5b3b (b051-203-00) I think there is a balance between having
people around and having solitude with one's own ideas.   5b3b

5b3c (b051-203-00) I think there is a balance between having
people around and having solitude with one's own ideas.   5b3c

5b3d (b051-505-00) Some people would be home stayers while
others would want to go out. This would account for why
there might be a great difference between the two groups.
People would stay at home more if these services were
installed.   5b3d

5b3e (b051-505-00) The services would depend on what type of
life a person leads. If a person stayed at home most of the
time, it wouldn't matter if these services were brought into
the home, but probably a more significant change would
appear in the person who spent his time away from home.   5b3e

5b3f (b051-604-00) I think that the time we spend at home is
fixed by other considerations. People who must stay home
generally are: women with small kids, the elderly, those
with physical disabilities, those without transportation.
To these the ability to shop, bank, work, get education,
medical help and surveillance in their own homes would be a
blessing. Others, for whom "getting out" presents no
problem would probably still do so generally, but would use
entertainment, education, household info, news and political
services as an alternative to T.V. with some banking and
shopping thrown in a a convenience.   5b3f

5b3g (b051-608-00) If the services became widely used,
naturally users would spend more time in their homes and
would go out for reasons other than to deal with these
problems. Motives for going out would vary widely and would
depend upon whether the home began to be perceived as a
"work" or duty centre, rather than the relaxation centre it
is now.   5b3g

5b3h (b651-612-00) This would depend on the sex of the
person. Most females like their husbands to leave their
home so they can get work done. A husband at home all the
time would drive most wives up the wall because what takes
most women 1 hour of time, a husband says its a five minute
job. Mine especially. But he never does it himself to show
me how to do it in five minutes. Most men couldn't stand to

be at home all the time. Even people retired complain about
husbands telling them what to do.   5b3h

5b4 As in the series of questions on Leisure Time, some of the
panelists recognized that if one were to look beyond the direct
application and use of these services, it was often the case
that where the direct application involved very little impact
on how personal time allocations were formulated, the
second-order or indirect effects might involve a significant
redistribution of available time. This first comment
adequately covers the consideration of first-order effects.
The others refer to an expected redistribution of time and
activities.   5b4

5b4a (b051-113-00) General comment: By using "future home
communications services" one naturally stays home more
(banking, shopping, taking courses, being entertained, etc.)
compared to going away to do such things. (or it may not
reduce the overall time away from home. it may merely shift
the type of activities conducted at home.   5b4a

5b4b (b051-115-01) B.S.
   ** If more people spend more time at home getting
entertainment there, watch the brith-rate; it might be
afected - upwards, of course - unless other developments
offset.   5b4b

5b4c (b051-143-00) Home=Labour. Fix the TV , Paint the
porch, vacuum the floor, change the diaper etc.etc.   5b4c

5b4d (b051-203-01) Hasn't considered redistribution of time.
   ** It's a stupid question because it's related to the
first - its use demands staying at home.   5b4d

5b4e (b651-135-00) Work centres would allow far less
regimented work hours thus time at home could center around
specific events or desires rather than fitting into the
routine work schedule.   5b4e

5b4f (b651-616-00) I'm not sure if remote work centers mean
a single employee or groups of employees away from their
main office. However, if it means a single employee working
on his or her own - they may spend more time in their homes
if they are group oriented. What I mean is if you work in a
large office and are in their bowling league, vacation club,
etc., this would be lost to you and you would spend more
time at home.   5b4f

5c Similarity between Work and Recreation   5c

   5c1 With the exception of the Demand Education service and the
   Remote Work Center, there was general agreement among all the
   groups that the services studied would have little effect on
   the perceived similarity of gainful employment and recreation
   in the future. The student group of respondents felt that the
   Entertainment service would lead to increasing differences
   between work and recreation; the Welfare Workers thought that
   the two would become more smilar if the concept of the Remote
   Work Center developed into widespread use. Once again, there
   were no comments that would help explaing the difference in
   opinion of the Welfare Workers.   5c1

   5c2 The ability to work from home, as distinct from the concept
   of the Community Work Center which was also developed in this
   second questionnaire and discussed elsewhere, led many
   respondents to comment on how the (increased or decreased)
   efficiency of such a facility would lead to a (decreased or
   increased) amount of work performed in the name of "gainful"
   employment.   5c2

      5c2a (a650-205-00) Things might become as efficient and
      interesting that one works more!   5c2a

      5c2b (c652-123-00) Productivity Incentive: The Remote Work
      Center concept might precipitate a shift away from measuring
      time spent at the office to direct measurement of work
      output. Productivity might jump if knowledge workers were
      paid on a piece rate basis much like independent consultants
      and freelance writers. The more productive workers would
      therefore enjoy more money and more leisure time.   5c2b

   5c3 In addition to considering the changes in the content of
   the work that was being performed in this environment, some of
   the panelists considered how changes in work styles might
   increase the similarity between work and recreation: 5c3

      5c3a Round 1 Researcher: Assuming home
      entertainment/recreation functons delivered on same system
      as home instruction and terminal console.   5c3a

      5c3b (c052-141-00) Computer games, social computer
      conferences etc. might bring work and recreation closer
      together for those who have terminals at home.   5c3b

      5c3c (c052-141-00) Education and entertainment might become
      merged or closer together as a result of shared systems.   5c3c

5c4 The fact that in any office environment there will remain
those systems and resources which cannot be physically
decentralized led many respondents to comment on the inevitable
links that would have to be maintained with the central office,
and the effect these links would have on the evolving
similarity/dissimilarity between work and recreation.   5c4

   5c4a (a650-211-00) Unsolved problems are not so easily left
   behind at the office.   5c4a

   5c4b (c652-203-02) Educator # 1 sees need for personal
   contact and there are some jobs where this is required.
   However, there are many where this is not true. Access at
   specific hours is a ximple soln.
   ** The implications of the remote work center bother me
   somewhat. An office at home might encourage people to do
   their business at your home. A public servant might find
   himself always on the job with no time of his own.   5c4b

   5c4c (c652-604-00) I would think that your function at the
   remote terminal (whatever) would be interrelated with those
   of the "parent" office, who would still be on normal hours,
   and you would be limited by their hours therefore. Besides,
   at 5 PM all you have to do is pull the plug.   5c4c

   5c4d (c652-616-00) Some people would have trouble dividing
   their time. Some need definite hours for work and for
   leisure time. If this is not imposed on them, they feel
   disorganized.   5c4d

5c5 "Pull the plug".....It seems clear from the above comments
that this may be less convenient than at first expected.   5c5

5c6 The increasing similarity of work and recreation (should
these services result is such a development) would have both
attrctive and unattractive qualities, as indicated in the
following comments.   5c6

   5c6a (c052-109-00) Work, education, and entertainment tend
   to merge in leisure: using all our wits and senses to
   explore the problems of all times and places now HERE via
   electric media is fun.   5c6a

   5c6b (c052-504-00) Actually, only the activity would change;
   the setting would stay the same. If everything is done at
   home, is there a real difference between them?   5c6b

   5c6c (c652-301-00) The assumption seems to be that the home
   risks becoming infected by work germs. But might no the

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opposite happen, and might this not be of much greater
significance? For example, the relative unimportance of
schedules in home living starts to pervade work.
Fascinating.   5c6c

5c6d (c652-305-00) One problem with working at home is that
the work comes to invade the home. Similarly other
activities which have been outside will come in to the home.
The question which then emerges, in how important is the
private and heretofore different atmosphere of the home to
peoples prefereces and needs. Casual empiricisim won't do
on this.   5c6d

5c6e (c652-505-20) Your work and recreation would become
similar because you would have both located in the same
area, therefore if you wanted to work you might consider
your work recreation and visa versa.   5c6e

5d Amount of Money Spent on Maintaining Privacy   5d

  5d1 According to the respondents' numerical responses, there
  does not appear to be any expectation that householders will be
  spending less money to protect their privacy in the future.
  For a few services (Remote Banking, the Remote Work Center,
  Remote Medical Diagnosis, and Remote Political Participation)
  it appears they may be spending more.   5d1

  5d2 The concept of having to spend money to protect privacy
  seemed strange to some of the panelists. They pointed this out
  in some cases, or pointed out that up to now, the cost of
  privacy had remained hidden from them.   5d2

    5d2a (d053-111-00) I don't consciously spend any now I
    wouldn't in the future. But I would raise hell and attempt
    to sue if there were any breaks now or in the future.   5d2a

    5d2b (d253-203-00) This is a psychological problem to a
    large extent. The need for privacy of household information
    is because in the past someone was allowed to misuse the
    information.   5d2b

    5d2c (d053-607-00) I don't know where privacy is involved,
    not in this day and age anyway.   5d2c

  5d3 Other panelists pointed out that the degree of privacy
  desired by householders was a function of the sensitivity of
  the information involvled, and that in many cases they would
  not be willing to pay anything to protect privacy.   5d3

    5d3a (d053-109-00) Privacy mainly needed to protect
    confidential information about other peoples' business i.e.
    client relationships. Responsibility for costs due to such
    leaks is a dominant consideration.   5d3a

    5d3b (d053-123-00) Most thinking people would only be
    concerned about the confidentiality of sensitive personal
    information such as financial/banking transactions, medical
    records, criminal history and arrest files and tax returns.
    I could care less if you know what kind of entertainment I
    watch. The privacy of personal information about political
    involvement and personal ideology could get rather sticky!   5d3b

    5d3c (d053-504-00) Since social interaction is reduced, what
    does it really matter if people know how you spend your
    leisure time (unless it's criminal activities)?   5d3c

  5d4 The allocation of the costs of maintaining the privacy of

the information transmitted and stored by users and providers
of these services is a factor that could vary for different
services, or for different user-perceptions of the value of
privacy. The differences in cost to the user could be based on
several different philosophical views of the subject.   5d4

    5d4a (d053-101-00) Perhaps money spent as a fraction of the
    cost of service. Some of these services might contain a
    fairly high percentage of the total cost for privacy.
    Perhaps if this were true, the consumer could buy a cheap,
    low privacy service or an expensive high privacy one.   5d4a

    5d4b (d053-303-00) Index of respondent refusal on
    questionnaires. - Legal proceedings involving privacy. - #
    of articles in press concerning privacy. - I believe people
    are concerned but frustrated in knowing how to protect their
    privacy, to what extent it has already been violated. It is
    therefore difficult to quantify the price people are willing
    to pay for a basic civil right.   5d4b

    5d4c (d053-505-00) I would suggest you approach it from, how
    much time people would try to have privacy, if these
    services were installed. In my family, I know that a great
    deal of privacy is looked for, but not much money is spent
    on it.   5d4c

5d5 In the same vein, the incidence of the costs of privacy -
wether the cost falls directly on the user, on the provider, or
perhaps on the government - is related to the cost of the
services, since in some manner these costs will have to be
picked up somewhere. This first statement reflects the idea
that someone has the right to privacy without having to pay
anything for it. Is this belief justified only if one further
believes that the individual willing to pay nothing for privacy
in no way benefits from the the information or transactions
that others are paying to protect?   5d5

    5d5a (d053-113-00) 1) Pressure groups for the promotion of
    privacy legislation may be formed. People signing such
    petitions or whatever shows concern for privacy without
    spending $$$ on it.   5d5a

    5d5b (d053-141-00) People are concerned about privacy but
    may not be willing to spend their own $ for it.   5d5b

    5d5c (d653-141-00) The skewed results on Remote Work Centers
    may be a reflection of the fact that someone else will pay
    for the privacy, ie. government or business.   5d5c

5d6 At least one respondent related very weeall to the concept
of putting a dollar value on privacy; rather than pay to keep
it to himself, he is going to turn around and sell it to
interested parties: 5d6

  5d6a (d053-101-00) If a user has a right of privacy, he can
  sell information about himself and his tastes to
  advertisers; the user then has a choice.   5d6a

5d7 In an earlier discussion on the security requirements of
the Remote Banking service, the differentiation between access
to information and misuse of information was made. The
difference was brought out by respondents in this section also.   5d7

  5d7a (503-203-00) Oppenheimer is quoted as saying that we
  must reach the day when secrecy is illegal - as far as
  practically possible. I think the privacy bit is a strawman
  which has to be knocked down. Prevention of misuse of
  information - yes, secrecy no.   5d7a

  5d7b (d053-203-01) If someone misused this information he
  might be in trouble - eg. used as evidence to establish a
  case of sex offender! The point is to control mis-use of
  info. ** These question don't make sense to me unless I
  don't want people to know that I watch pornographic opera!   5d7b

5e Changes in Respect for the Privacy of Others   5e

    5e1 With no exceptions, the six participating groups indicated
    that none of these servies services would result in an increase
    or decrease in people's respect for the privacy of others
    around them.   5e1

    5e2 There was some disagreement over one of the comments from
    the first questionnaire; this researcher was concerned that a
    heavy reliance on telecommunicatons services to produce
    informaton "on demand" would affect the way people related to
    other people: 5e2

        5e2a Round 1 Researcher: "Significant decrease";
        habituation to information "on demand" could cause general
        loss of patience and drop in traditional manners.   5e2a

    5e3 Some of the respondents in the second questionnaire saw it
    differntly: 5e3

        5e3a (e054-111-02) Interesting. Plausible. But I doubt it.   5e3a

        5e3b (e054-130-02) I agree. This is already a dangerous
        trend. The question of property rights in information is
        one that is beginning to be fought out in the U.S. courts,
        and probably will, over the next decade, become a major
        societal issue.   5e3b

    5e4 The following statements seem to make an implicit
    differentiation between absolute privacy (no one will know
    anything about the information coming INTO or OUT of the home)
    and security against misuse of that information.   5e4

        5e4a Round 1 Researcher: The availaility of information on
        entertainment choices could be embarassing to some.   5e4a

        5e4b Round 1 Researcher: Very small percent of users will
        be embarrassed by disclosing their choice of programs.   5e4b

        5e4c (f055-212-01) Round 1 Educator: Above all, we don't
        want any data collection system which can automaticaly
        identify what person watched which program, or which
        household, for that matter.   5e4c

          5e4c1 Some second round replies directed at this comment: 5e4c1

            5e4c1a (f055-212-01) Why not? It might result in more
            programs of the type I want?   5e4c1a

5e4c1b (f055-301-01) This is terrifying! Surely the
central issue of privacy includes the right to do
things that others may disapprove of. This guy seems
to be willing to forego this right!   5e4c1b

5e4d (e054-113-00) Making a phone call is an infringement on
someone else's privacy. Additional telecommnications
services into the home, if switched or feed-back
capabilities are included, may cause people to forget about
other people's privacy, even more. But since these services
are not switched, or there are no cameras in people's home,
there's no problem. No change in the respect for other
people's privacy.   5e4d

5e4e (e054-216-00) I suppose the implication of some of
these is that if you have a party line you are tempted to
listen to it.   5e4e

5e4f (f055-216-00) I cannot understand the heavy emphasis by
some on privacy of the first three services.   5e4f

5e4g (f055-303-00) I cannot imagine that a company selling
entertainment services etc would not wish to know something
about their customers in an effort to improve their
marketing and thus their profits. Thus the simple
administrative cum accounts of the operation would provide
such information. What should be of primary concern for the
consumer is that he or she is unwittingly furnishing this
information that can be used by the vendor or whomever
without any control whatsoever exercised by the customer.   5e4g

5e5 Probably more than one respondent felt that entirely too
much time was devoted to this question.   5e5

5e5a (e054-106-00) What is this question all about? It's
like asking whether use of the system will affect the
likelihood of contacting civilization on other planets.   5e5a

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5f Temporary Disruption in Privacy   5f

   5f1 In the statistical responses of the first round, the
   students seemed most concerned about the possible unsettling
   influences that might result from a disruption in the privacy
   of the information stored and processed in services such as
   these. For six of the nine services considered in this
   section, the students expressed greater concern than did any of
   the other six groups of respondents: Demand Entertainment,
   Demand Education, Household Information and Dedicated News,
   Remote Banking, Remote Medical Diagnosis, and Home
   Surveillance.   5f1

   5f2 This deviation was noticed by the respondents in the second
   round, and they asked for information concerning the students'
   viewpoints, but unfortunately, the statistical responses werre
   not supported with comments in this case. (This was a general
   observation with respect to the students' responses throughout
   the questionnaire.)   5f2

      5f2a (f055-116-04) I find the student reactions to the first
      3 items (Demand Entertainment, Demand Education, Household
      Information and Dedicated News) incomprehensible. Did any
      comment on the risks envisaged?   5f2a

      5f2b (f055-122-00) Interesting, that students generally most
      worried.   5f2b

   5f3 The question of exactly what constituted a "temporary"
   breakdown in privacy was an important one in considering the
   potential impact of these services. Following are some of the
   Round 1 comments about the possible different implications that
   "disruptions" of different types might have, followed by the
   reactions of some of the respondents in Round 2.   5f3

      5f3a Round 1 Researcher: Above all, we don't want any data
      collection system which can automatically identify what
      person watched which program, or which household, for that
      matter.   5f3a

         5f3a1 (f055-106-01) Amen to this! Pollsters would
         develop "sucker lists" for concentrated sales attacks on
         certain individuals.   5f3a1

         5f3a2 (f055-116-01) Note that this comment is not
         addressed to the problem of a temporary breakdown in
         privacy, but rather to an at least intermittant
         monitoring - these seem to me to be quite different
         things.   5f3a2

52

5f3b (f055-116-01) Note that this comment is not addressed
to the problem of a temporary breakdown in privacy, but
rather to an at least intermittant monitoring - these seem
to me to be quite different things.   5f3b

5f3c Round 1 Researcher: Availability of information on
entertainment choices could be embarassing to some.   5f3c

5f3d Round 1 Researcher: I don't see the privacy issue here
in broadband entertainment; they're not bringing TV cameras
to my house, and I don't have to use any services I'm
ashamed of being caught using (if there were any).   5f3d

5f3e (f055-122-01) From the frequency of comments about
pornography, I wonder if this guy is a small minority.   5f3e

5f4 A number of the respondents used this section to indicate
the relative threat that they foresaw arising from the
different data banks maintained by different industries and
institutions: 5f4

   5f4a (f055-106-01) I once reviewed a proposed law
   enforcement project in which this kind of information would
   be used to predict criminal activity so that concentration
   on potential criminals would be possible.   5f4a

   5f4b (f055-123-00) I am much more concerned about privacy
   threats because I have had the opportunity to see first hand
   the intimidation exercised by unscruplous politicians and
   law enforcement officers once they gained possession of
   disparaging private data on their adversaries.   5f4b

   5f4c (f055-123-00) The biggest violators of all are retail
   credit bureaus which have a reputation for confusing
   identities of people and perpetrating false, misleading or
   incomplete information. They should be held liable to
   lawsuits but they have been able to legally avoid such
   liability at least in the U.S. til now.   5f4c

   5f4d (f355-123-00) Newsmen/journalists are almost paranoid
   about protecting the confidentiality and identity of their
   news sources.   5f4d

   5f4e (f355-123-00) Newspapers and the wire services maintain
   large data banks called "morgues" which they want exempted
   from privacy protection information even though it is
   functionally a data bank strictly speaking. Much of the
   debate here concerns just how to distinguish between
   personal and public records/information.   5f4e

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5f4f (f555-215-00) Privacy breakdown of remote banking
system will be of low importance for "normal" users. But it
could be fata for instance to businessmen (competitors could
get information about clients, prices...)   5f4f

5f4g (f755-602-00) The possibility of a privacy breakdown of
the Remote Medical Diagnosis would be the only one that
would have a negative effect on me.   5f4g

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5g Extent to Which Previous Acquaintances Are Encountered   5g

   5g1 According to the statistical summaries, there was general
   agreement among the respondents that these services would
   neither tend to increase nor decrease the amount of contact
   with previous friends. Looking at the comments, however,
   indicates that there was a wide diversity of opinion on the
   subject.   5g1

   5g2 This educator's comment from the first questionnaire sums
   up the opinion of a lot of the respondents who thought these
   services would act to "dehumanize" or "depersonalize"
   individual relationships: 5g2

      5g2a Round 2 Educator: I get a claustrophobic feeling from
      this section. The human animal is a social creature. To
      isolate large numbers of these social animals in little
      boxes or cubicles with an array of technological devices, so
      that at coffeebreak he/she sees only his/her wife/husband is
      appalling. Have you considered the personal and
      psychological (and social) aspects of this kind of work
      pattern where large numbers of human beings communicate only
      through electronic devices, ie. machines? I do much of my
      work at home, but not bound to a computer, or to a small
      space, or by isolation.   5g2a

   5g3 These following comments generally support this view, and
   in some cases go on to make further observations on the
   possible dysfunctional consequences of extending these services
   on a widespread basis.   5g3

      5g3a (g056-109-00) Tendency would be to increase separation
      from work associates, intensify specialism, decrease
      corporate loyalty, and reduce range of involvement with
      colleagues just when return to human scale is becoming the
      most pressing demand of people against "technical solutions"
      for human problems.   5g3a

      5g3b (g056-113-00) A long term trend (sociologically)
      appears to be developing: away from close relationship with
      others to a situation where relationships are casual and
      short term. Communications technology and urbanization have
      made this possible . The technology talked about here will
      not reverse the trend. It will tend to help it aong. In
      order to keep track of everything that is going on in the
      world there will be less time to cultivate relationships
      with other persons.   5g3b

      5g3c (g056-118-00) I agree that technological interference

in traditional information-gathering techniques would have a
strongly alienating influence on social communications. So
insidious does this appear to me that I would refuse to
support even the entertainment service if it meant upporting
all the others. It looks as though most respondents don't
intend to change their social patterns anyway - judging by
the graph.   5g3c

5g3d (g656-604-00) To have everyone work in own home very
undesirable, unproductive and anti-social.   5g3d

5g3e (g056-302-00) Friendship is based on common
experiences. Common experience will disappear partially.
Following the advent of this technology, others (teachers,
fellow workers, fellow shoppers, maintenance men) will
become "images".   5g3e

5g3f (g056-602-02) If these services were in widespread use,
some acquaintances would be seen less often, perhaps not at
all. I'm thinking especially about the people you now see
and talk to while shopping, banking etc.; otherwise as the
[Round 1 Educator] said, the human being is a social animal
and must have the fellowship of others on a person-to-person
basis.   5g3f

5g4 Other respondents saw ways in which the new media would be
able to increase the level of interaction among community
members, partly through increasing the size of the available
community: 5g4

5g4a (g056-106-00) Nearly all my current social life
consists of at-work friendships. This has not always been
true but may be for many people. What is needed is a
balance between the various types of social life.
Interaction is the key thing - it need not be face-to-face.
I don't think harmful isolation will occur.   5g4a

5g4b (g056-203-06) Being an old amateur radio operator (now
not active) many friendship were built on communication by
morse code alone. They were "distant" friends but pleasant
people to talk with.   5g4b

5g5 But the majority of the respondents' comments reflect the
view that the availability of new media or new services will
not in themselves alter the relationships between users (and
non-users?) of the services.   5g5

5g5a (g056-115-00) I disagree with the opinion that these
services would tend to isolate people generally. With the

exception of remote work center, none of these services is going to occupy people full time, and none is a complete substitute for other activities. I just do not believe that people will stop all their activities such as hobbies, going to parties, visiting friends, etc. I do not see anything particularly so exciting in remote banking, household information, education, home surveillance, etc. to stop all my other additional activities. Even entertainment is not going to stop people from going to the theatres, a baseball game, etc., just as TV did not stop all these activities 25 years ago!   5g5a

5g5b (g056-301-00) Social patterns would change, with much more flexible use of time. There could well be more intense contact among a moderate circle of friends, rather than occasional, superficial contact with many acquaintances. The whole thing becomes much less structured.   5g5b

5g5c (g056-141-00) I agree [with the above Round 1 Educator's comment on the isolation effects], if things were taken to their (il)logical conclusions. Humans would not put up with this. Trust the individuals. Working at home will be a part-time (2-3 days a week min.) activity. The social aspects will draw people to central offices for the other times. Of course, job requirements will also pull people together for the 2-3 days a week.   5g5c

5g5d (g656-203-02) There is a balance. At the moment it's too much of pushing everyone together. Has this [Round 1 Educator] ever thought that kids were probably not born to sit 30 in a classroom. Being a social creature can also cause problems.
   ** I get a claustrophobic feeling from this section. The human animal is a social creature. To isolate large numbers of these social animals in little boxes or cubicles with an array of technological devices, so that at coffeebreak he/she sees only his/her wife/husband is appalling. Have you considered the personal and psychological (and social) aspects of this kind of work pattern where large numbers of human beings communicate only through electronic devices, ie. machines? I do much of my work at home, but not bound to a computer, or to a small space, or by isolation.   5g5d

5g5e (g656-307-02) Has this educator even worked in an office, where workers call their friends/family at every opportunity?   5g5e

5g5f This next comment from one of the Housewives in the

first questionnaire drew some agreement from both
researchers and other housewives: 5g5f

5g5g Round 1 Housewife: These answers may seem strange; one
would think you would see less of acquaintances if they are
involved in your work. To compensate, people would have new
hobbies, etc. This would no doubt encourage new
relationships.   5g5g

5g5h (g056-620-06) As a domestic engineer I go aong with the
above housewife.   5g5h

5g5i (g656-143-06) Only one slightly perceptive person - the
rest are finks.   5g5i

5g6 Other respondents saw ways in which the new media would be
able to increase the level of interaction among community
members, partly through increasing the size of the available
community: 5g6

5h Extent to Which New Acquaintances Are Made   5h

   5h1 As with the previous question concerning the impact of
   these services on individuals' relationships with previous
   acquaintances, this question on new acquaintances generated
   some very interesting comments - comments whose premises were
   not reflected in the statistical responses.   5h1

   5h2 There was a high level of agreement among the different
   participating groups that the widespread development and use of
   these services would have little effect on the number of new
   acquaintances that users would make. The exeception was the
   Remote Work Center; there was a slight indication that this
   service might reduce the number of new acquaintances made.   5h2

   5h3 Looking first at those respondents who foresaw an increase
   in the number of relationships developed, consider the reaction
   generated by these first round comments.   5h3

      5h3a Round 1 Researcher: "Many more", assuming service is
      interactive and brings people together; otherwise, no - just
      like present passive TV viewing.   5h3a

         5h3a1 (h057-115-01) Sorry! I don't see this.   5h3a1

      5h3b Round 1 Researcher: More free time, therefore interest
      in the community to a greater degree.   5h3b

         5h3b1 (h057-115-01) B.S. Interest in the community is not
         a function of free time.   5h3b1

   5h4 These comments raise the question of the level of
   interaction or feeling of "participation" that these services
   would be able to provide. The respondents grappled with this
   question at a number of different levels.   5h4.

   5h5 While the concept of the "video acquaintance" was raised in
   the first questionnaire (by the author, interested in obtaining
   reaction to the concept), there was little positive reaction to
   an interactive video capability in any of these services. The
   following comments expressed reservations about the type of
   interaction that would be possible with an interactive video
   capability: 5h5

      5h5a (h057-113-00) Assumption: The services are not
      interactive. In that case one will not make new
      acquaintances through the system. However: In our Conference
      TV experiments participants claimed to have met and felt
      that they got to know the people at the other end; yet when

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they met face to face, in sour instances they did not
recognize each other until they were introduced by name. If
this is generally true it would indicate that this type of
acquaintance is a different one from face to face. In f.to
f. situations people who know ea. other through telecom, may
have to "start over again" to get to know each other.   5h5a

5h5b (h057-505-00) I believe people would be able to make
new friends with a video system, but it would not be like
meeting people face-to-face, it would be rather a
face-to-machine acquaintance.   5h5b

5h5c (h057-612-00) Meeting people by video acquaintances
does nothing for me. This is really getting away from what
people call participation.   5h5c

5h6 Other respondents pointed out that a full interactive video
capability was not required for a lot of the services, and they
offered alternatives that might raise the general level
"interaction" perceived by the user.   5h6

5h6a (h057-115-00) What is a video acquaintance? Somebody
you see on TV or sombody you interact with? If it is the
second case, I agree that one would make new acquaintances,
but more than you can make now through the telephone?   5h6a

5h6b (h057-141-00) New acquantainces can be made over
electronic media. Face-to-face still important but sometimes
not possible (ie, many new international "friends" via
Conference T.V, and Computer Conferences). In this case,
most of us would not have the time or resources to meet all
the people we can meet via these "substitutes" or
"supplements" to face-to-face travel.   5h6b

5h6c (h057-203-00) Plato system has a "talkomatic" were
people who wish to talk with someone can to whom every is
willing. This phenomenon could grow if the systems were
designed with this in mind from the start.   5h6c

5h6d (h057-218-00) Hopefully systems like the Stanford FORUM
[sic] should lead to many valuable new acquaintances and
will do if the indexing of interest and work styles is
properly engineered.   5h6d

5h7 Many respondents compared the nature of the acquaintances
that would develop through these media and services as similar
to "ham" radio acquaintanceships: 5h7

5h7a (h057-109-00) "video acquaintances" could be like "ham

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radio" or much more profound, if private "gossip time"
available at reasonable cost.   5h7a

5h7b (h057-123-00) This is a useful term which effectively
makes the contrast between a video and a face-to-face
acquaintance. Ham radio is an example where people become
"audio" acquaintances via repeated over-the-air contact
without meeting face-to-face. This is an interesting audio
analogue to the "video acquaintance" concept.   5h7b

5h7c (h057-207-00) It would be interesting to study the
relationships that have developed among "ham radio" buffs.   5h7c

5h7d (h057-213-00) Pen Pals, ham radio operators, etc. have
all developed new acquaintances without visual contact -
thus other forms will also succeed.   5h7d

5h8 Some of the respondents could see no way in which these
services and their requisite media could provide them with
meaningful interaction with other users.

                                                                 5h8

5h8a (h057-505-00) I believe people would be able to make
new friends with a video system, but it would not be like
meeting people face-to-face, it would be rather a
face-to-machine acquaintance.   5h8a

5h8b (h057-604-00) Also, people thrive on group activity
where one becomes slightly anonymous - takes on the
behaviour of the group. (Yells out loud at a ball game, Goes
"skinny-dipping" at midnight.) Your "services" cannot
provide such situations, and people will still "go out" to
seek them.   5h8b

5h8c (h057-604-00) Easier to make-a-friend when there is a
physical presence and interaction.   5h8c

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51 Changing Formality / Informality of Relationships   51

    511 The statistical responses indicate that for five of the
    nine services, the students thought the services would lead to
    increasing formality of interpersonal relationships, while the
    other groups saw little change. The deviation of the student
    group is not significant, but it is again unfortunate that
    their comments offered no light on their reasons for their
    selections.   511

    512 These panelists thought that the services would have a
    detrimental effect on the nature of relationships.   512

        512a (1058-122-00) Would probably let the shy be shyer -
        since wont have to go outside as much.   512a

        512b (1058-123-00) Formal relationships may be a necessary
        consequence of the more highly structured protocols for
        dialogue required by the advanced computer based systems
        envisioned here.   512b

    513 Others foresaw an evolutionary period in which the services
    presented an immediate barrier to informal, unstructured
    interaction, but that attitutdes and behaviours would work to
    make the system more convivial as they came to be used more.   513

        513a (1058-505-00) At the beginning, most of the services
        would be very formal, but as they got older, I believe
        people would develop a more informal relationship towards
        them.   513a

        513b (1658-113-00) In the case of remote work centres, the
        workers may become more formal because of the use of the
        technology, at least initially. As novelty wears off,
        behavior will become "normal" (as informal as face-to-face
        situations).   513b

        513c (1058-307-00) Not likely. Informal life style would
        lead to informal relationships.   513c

    514 The question of the level of interaction afforded by these
    services was reduced in most questions to the bandwidth of the
    medium in question. There was little consideration given (in
    this section at least) to the idea of using existing bandwidth
    capabilities more effectively to raise the level of
    "interaction" or presence. The following comments address the
    role that different bandwidths might have in determining the
    impact of the services in question: 514

514a (1058-123-00) Gordon Thompson et al of Bell Northern
Research have stressed the importance of interrupt
strategies and mechanisms in remote dialogue. Face-to-face
meetings are much less formal because of less restrictions
on interrupts. It's bandwidth is effectively limited only by
the listener's perception of such cues as facial expression,
voice inflection and body language.   514a

514b (1058-109-00) More formal if video. Less formal if
audio only.   514b

514c (1058-109-00) The media and their hybrids have
differing effects, depending upon whether they are HIFI or
LOFI; used in private or in conference; for "making the old"
or for "making the new".   514c

514d (1058-118-00) I recognize the power of the telephone to
permit a new kind of communication as described by McLuhan
(oral-aural) but I find it difficult to extend this intimacy
to T.V. Even seeing a friend on T.V. doesn't turn me on so
much as hearing their voice on the blower and neither can
compare with meeting and talking personally.   514d

515 The decentralization (of offices and residential areas)
that these services would make possible would have a
significant impact on the formality/informality of individual
relationships, at least in the opinion of these respondents.   515

515a (a650-109-00) Decentralization of offices can lead to
reduction in levels in hierarchies, to decrease in physical
and psychic stress; and to more direct relations with people
involved in companies, not only formally but informally.   515a

515b (1058-203-00) Perhaps "urban tribes" will be created
where social interaction increases within community regions
with accompanying informal relations - but with more formal
between communities depending on perceived psychological
distance.   515b

515c (1058-608-00) Increasing tendency to view people as
role-players. - Increasing fragmentation in personal
relationships, friendships based on specific interests
rather than general empathy.   515c

516 Finally, a number of the respondents thought the terms
"formality/informality" were ill-chosen, and they suggested
alternative areas for investigation: 516

516a (1058-106-00) I don't think "formality" and

"informality" are prime variables - what difference to they
make?   516a

516b (1058-301-00) "Intensity" is the key noun, not
"Formality".   516b

516c (1158-213-00) Education would become less personal, not
necessarily less informal - the definition difference may be
a major problem with the question.   516c

FILE JULY15- rough final outline of SPRITE

5j Temporary Disruption in Availability of Service   5j

   5j1 In the feedback of the comments in the second round
   questionnaire, the responses were grouped according to the
   particular service to which they referred. This same practice
   will be repeated here, as an aid to the reader in following the
   dialogue. The following comments are those Round 1 comments
   which received the most discussion in the second round, as well
   as those Round 2 comments which introduced relevant new issues.   5j1

   5j2 Demand Entertainment   5j2

      5j2a Round 1 Consumerist: More babies ?   5j2a

      5j2b Round 1 Housewife: This would be the same as when the
      television quits; everyone will not know what to do with
      themselves.   5j2b

         5j2b1 (j059-205-06) Oh boy!   5j2b1

      5j2c Round 1 Researcher: Ref. "The Machine Stops", by E.M.
      Forster..   5j2c

         5j2c1 (j159-115-01) What if you haven't read it?   5j2c1

      5j2d (j059-505-00) This system would cause chaos if people
      became too dependent on it for making their entertainment,
      and if they had nothing planned for, just in case it did
      break down.   5j2d

      5j2e (j059-602-00) I would hate to think that my family
      would become so dependent on a mechanical entertainment
      device, that we would not be able to entertain ourselves. I
      hope people would not forget how to skate, bowl, dance etc.
      If they do, can you see what physical shape of people would
      be in in a few years?   5j2e

      5j2f (j059-604-06) I love it when the T.V. "goes" for a few
      days and I can read a good book, do a project, etc.   5j2f

      5j2g (j059-616-00) A disruption of this service for any
      length of time could benefit some people. Two days with T.V.
      left our family in a void. Three weeks without T.V. brought
      us much closer, i.e., new games were discovered, card games
      were re-discovered, more friends to visit (we lived in a
      community that was without T.V. reception for 3 weeks).   5j2g

   5j3 Demand Education   5j3

5j3a Round 1 Educator: This is worse if the program is
integrated into the schools.   5j3a

5j3b Round 1 Educator: "Minor consequences", if integrated
with existing school curriculum.   5j3b

5j3c (J159-116-02) Clearly, these 2 educators are using
"integrated" in different, if not opposite, senses.   5j3c

5j3d (J159-604-00) I don't see these services ever replacing
existing one, only supplementing - so - nuisance only.   5j3d

5j3e (J159-218-00) Could be rather like a lobotomy.   5j3e

5j3f (J159-302-00) No more impact than a teacher's strike.   5j3f

5j3g (J159-602-00) Some people might learn more through a
disruption of service.   5j3g

5j4 Household Information and Dedicated News   5j4

5j4a Round 1 Housewife: There is a disadvantage here if you
depend on this household information at the time of
disruption.   5j4a

5j4b Round 1 Researcher: Dependency on the service is what
makes it critical. If there are no more repairmen (for
example), and we have to dial this service for
"how-to-fix-it" information, then disruption of this service
is a critical evenr.   5j4b

5j4c Round 1 Housewife: This service actually is making
people depend on this type of service; people tend to stick
to themselves rather than go next door for help or ask
someone for information. To me this is what I meean when a
crisis happens you have no one to turn to if you are a
stranger in a city, people don't even get to know their
neighbors anymore,   5j4c

5j4c1 (J259-203-06) The real question is why this is
happening? It is because of poor social experiences? If
so how can they be made better?   5j4c1

5j4d (J259-505-00) It is hard enough to get help in a city;
what would it be like if this system broke down,   5j4d

5j4e (J259-602-00) I would think my family could cope. There
is always some way to get help if we look for it.   5j4e

5j4f Round 1 Researcher: A disruption leading to erroneous
information would be the worst kind.   5j4f

    5j4f1 (j359-116-01) Good point. Perhaps has Wells'
    Invasion from Mars in mind.   5j4f1

5j4g Round 1 Researcher: Depends on availability of
alternative services.   5j4g

    5j4g1 (j359-123-01) Yes; the monopoly control of the news
    media is a serious issue when it results in concentration
    of ownership and control.

                                                                          5j4g1

5j5 Remote Shopping   5j5

  5j5a Round 1 Consumerist: Once we got used to the new
  system, shopping and buying patterns could change
  significantly.   5j5a

  5j5b Round 1 Consumerist: "No effects", unless regular
  stores close down, in which case major consequences.   5j5b

    5j5b1 (j459-123-03) Only serious consequences if it
    disrupts shopping for essentials such as food and booze! 5j5b1

5j6 Remote Banking   5j6

  5j6a Round 1 Housewife: There would be complete chaos if
  this type of system ever broke down. There also could be a
  lot more delivery of bank cards, etc...   5j6a

    5j6a1 (j559-307-06) One would have expected this to be
    true of credit cards too, but doesn't seem to have
    happened.   5j6a1

    5j6a2 Round 1 Researcher: Privacy of this information is
    essential, or police state-type activities (for national
    security reasons, of course) could become widespread.   5j6a2

  5j6b (j459-119-00) I don't think you would have a back-up
  system for many of these services. We could not afford both
  for example in the banking system. Banks do not have
  effective back-up systems even today.   5j6b

  5j6c (j559-109-00) Remote banking breakdown serious but
  intolerable only if other access substantially reduced as a
  result of this new service.   5j6c

5j6d (j559-111-00) I agree with those who think it would be
serious, but things didn't grind to a halt in the Irish or
French bank strikes.   5j6d

5j6e (j559-123-00) Disruptions in the accuracy or
continuity/availability of banking services could be
catastrophic to the commercial life of the service area
affected. Remember the postal strike?   5j6e

5j6f (j559-203-00) It might hit stock speculators hard - but
I have doubts about their contribution to society anyway.   5j6f

5j6g (j559-216-00) Loss of privacy, particularly if not
widely known, would be much more serious.   5j6g

5j6h (j559-302-00) Not more chaos than in a postal strike.
Creditors will have to wait. It is assumed that a "manual"
systems will be on a stand-by basis.   5j6h

5j7 Remote Work Center   5j7

5j7a Round 1 Researcher: It might be the only way one could
work for several employers at once, hence a breakdown could
be serious.   5j7a

    5j7a1 (j659-123-01) Very profound insight: individual
    worker tends to become a self-employed "freelancer"
    rather than a steady wage-earner. Many workers would
    oppose such a shift to a less stable source of income as
    a threat to their financial security.   5j7a1

5j8 Remote Medical Diagnosis   5j8

5j8a Round 1 Educator: "Chaos" without a back-up system,
especially on medical information.   5j8a

    5j8a1 (j259-203-02) People have brains too! If in doubt
    the patient will be taken to an emergency clinic.   5j8a1

5j8b Round 1 Researcher: Not chaos, but there could be
numerous deaths and aggrevatd illnesses and injuries.   5j8b

    5j8b1 (j759-203-01) Disagree because I envisaged use of
    system in non-emergency case most frequently. People
    would still go to hospitals in case of emergencies, real
    or pretend.   5j8b1

5j8c Round 1 Educator: I am tempted to answer "chaos" here,
except that I suspect this might be one of the first systems

FILE JULY15- rough final outline of SPRITE

to be installed. It is so attractive to busy doctors,
Think how many more patients they will be able to service,   5j8c

5j8d Round 1 Educator: A rash of bad diagnoses could be
fatal,   5j8d

  5j8d1 (j759-123-02) Yes, quite literally !   5j8d1

5j8e (j759-119-00) Do we know the number of bad diagnoses
made by doctors today, I doubt it,   5j8e

5j8f (j759-123-00) This all depends on whether user come to
depend on this as their sole means of health care delivery
which is highly unlikely except for remote isolated
communities.   5j8f

5j8g (j759-216-00) My opinion that disruption would be only
a minor inconvenience is based on a feeling that this would
not become an essential link in the chain of medical
service,   5j8g

5j8h (j759-602-00) In most places hospital emergency wings
are not too distant, and this should solve a disruption of
service for those who need immediate attention.   5j8h

5j9 Remote Political Participation   5j9

  5j9a Round 1 Researcher: Beneficial effects !   5j9a

  5j9b Round 1 Consumerist: "Chaos"; politicians might become
  unwilling to make decisions in the absense of remote inputs.   5j9b

  5j9c Round 1 Educator: A breakdown might be a pleasant
  relief for many people!   5j9c

5j10 Home surveillance   5j10

  5j10a Round 1 Researcher: Depends on nature of disruption;
  it could destroy validity of concept, or it could be of
  short time (special protection offered in interim), and of
  small consequence.   5j10a

  5j10b Round 1 Housewife: Since the system would tend to
  enlourage reliance on home security rather than banks, etc,
  for valuables, a breakdown would be serious because often
  unnoticed,   5j10b

  5j10c (j959-109-00) Depends on relative costs of insurance
  and who would pay if breakin occurred during breakdown,   5j10c

5j10d (j959-111-00) Depends on a) length of breakdown and 2) quality of crooks' contingency planning.   5j10d

5j10e (j959-130-00) All are good comments here, "Security" must take account of what is at risk. If the surveilance system and/or backup cannot bring the decreased risk to a known and acceptable level, then it won't sell in the first place.   5j10e

5j10f Round 1 Educator: The whole thing is largely irrelevant.   5j10f

   5j10f1 (j959-213-02) Agree.   5j10f1

FILE JULY15- rough final outline of SPRITE

6 gr comments about different groups   6

  6a (g056-106-03) I think the consumerists try to see impacts on
  other people leading them to exaggerate.   6a

  6b (b051-301-05) I can't help wondering if the welfare workers
  answered the questions. In the opposite sense to that intended.
  Did they get an easy run of the questionnaire, or was there some
  mis-coding, or do they have some pathological reaction to
  questionnaires? Hey a new research project!   6b

  6c (b051-109-05) Traditionally, the welfare workers spcialist job
  is in other people's homes (must know context of their lives to
  give relevant advice), but the housewive's role is in her own home
  (a multiplicity of jobs and skills needed throughout her waking
  hours).   6c

  6d (b051-109-04) The student and researcher are information
  hunters who seek shortcuts to the available knowledge; they also
  need dialogue, or "bull sessions" to organize ignorance for making
  new discoveries.   6d

  6e (a650-116-04) I agree, the students' response indicate a
  naivety about work.   6e

  6f (a550-301-01) The researcher is being objective.   6f

  6g Oct. /di'nosis requires visual /tactile/aural inputs.mn dl
  tors? I think it's a good possibility and there is a need.heP!dYQ*
  %2(a550-213-01) No the difference is the housewife view of time
  versus the researcher.

  r*3|bFr
  %2(a550-213-01) No the difference is the housewife view of time
  versus the researcher.
    ** Banking per se takes probably no more than 30 minutes per
  month; the time taken to make a purchase "automatically" would
  probably increase.a1isbH
  %2(a550-203-01) The researcher's wife does most of the banking and
  spending!
    ** Banking per se takes probably no more than 30 minutes per
  month; the time taken to make a purchase "automatically" would
  probably increase.uTS&dROO
  %2Alternatives to a permanent steel and concrete work center were
  mentioned by a couple of the respondents:!2)]j06
  %2(601-218-00) Another possibility are mobile work carrels &
  cabins - trailers or campers that a group of people could take to
  various sites - construction sites, recreation sites, etc. so that
  the workplace would be mobile.d +]j06

FILE JULY15- rough final outline of SPRITE

%2(601-218-00) Yes something like a community centre for a Public
Library work & playcentre is needed.TP)AdRP:
%2Some of the researchers comments on technologies that are just
arond the corner, in terms of prices falling to a level
competitive with alternative means of accomplishing the task:
                                                            *J.1j
06
%2(602-218-00) It should be possible to have infor   6g

6h (a550-213-01) No the difference is the housewife view of time
versus the researcher.
   ** Banking per se takes probably no more than 30 minutes per
month; the time taken to make a purchase "automatically" would
probably increase.   6h

6i (a550-203-01) The researcher's wife does most of the banking
and spending!
   ** Banking per se takes probably no more than 30 minutes per
month; the time taken to make a purchase "automatically" would
probably increase.   6i

7 alts alternatives assumed   7

   7a (a350-141-40) Assume that I would still continue to get news
from traditional sources as well.   7a

   7b (j159-604-00) I don't see these services ever replacing
existing one, only supplementing - so - nuisance only.   7b

   7c (j159-616-00) Could find information elsewhere.   7c

   7d (j359-113-00) Cf. education   7d

   7e (j359-216-00) I have tacitly assumed that other sources such as
newspapers, magazines, and perhaps general news broadcasts by T.V.
and radio are still available. With this assumption disruption is
a minor convenience, without it a major inconvenience, but no more
if only temporary.   7e

   7f (j359-505-00) Everyone could live without this system for a
short time, because they would be able to catch up on it after the
service was working again.   7f

   7g (j359-602-00) I suppose it could be vital if one depended on
this service totally (e.g. a certain highway blocked, flooded
etc., warning of impending storm, tornado, etc.)   7g

   7h (j359-604-00) Nuisance only.   7h

   7i (j459-216-00) This could be a definite inconvenience, but no
more. I cannot conceive of "regular stores" closing down, although
they might become more widely separated.   7i

   7j (j459-602-00) Comparatively easy to be prepared for short
emergencies.   7j

   7k (j459-616-00) If bedroom communities had no other means of
shopping could cause trouble if people had living arrangements
that did not include physical on the spot purchasing.   7k

   7l (j559-302-00) Not more chaos than in a postal strike. Creditors
will have to wait. It is assumed that a "manual" systems will be
on a stand-by basis.   7l

   7m (j559-608-00) Breakdown in services 6-10 would be more serious,
since users would be more dependent on them and alternate systems
would require time to establish. In addition, these services deal
with the user's ability to earn a living and maintain his health
and belongings.   7m

FILE JULY15- rough final outline of SPRITE

7n (j559-608-00) Breakdown in services 6-10 would be more serious,
since users would be more dependent on them and alternate systems
would require time to establish. In addition, these services deal
with the user's ability to earn a living and maintain his health
and belongings.   7n

7o (j559-612-00) This is fine if the banks still run the same as
they do now. With remote banking as an extra service.   7o

7p (j759-123-00) This all depends on whether user come to depend
on this as their sole means of health care delivery which is
highly unlikely except for remote isolated communities.   7p

FILE JULY15- rough final outline of SPRITE

(J32876) 30-JUN-75 17:48;;;;   Title: Author(s): Michael T.
Bedford/MIKE; Distribution: /MIKE([INFO-ONLY]) ; Sub-Collections:
NIC; Clerk: MIKE;

Weekly report--June 23-27

1 Week of June 23 - 27:   JMB   1

   1a I was returning from a 3 week vacation, so it took me two days
   to clear up my mail. JHB and I discussed work I will be doing on
   maintaining & updating NLS-8 documentation. We made preliminary
   plans for the Help Database. We planned minor changes to the
   TNLS-8 Primer for reprinting, which I will do next week. We
   reorganized the "Brief Guide to User Programs in NLS-8" to reflect
   the recent change from a runable program for Letter to an
   attachable subsystem Letter, and the projected change of the sort
   keys to subsystems. We deleted mention of runable programs and
   sort keys, and will only add the sort keys when they become
   subsystems. The revised Brief Guide has gone into publication.
   We discussed JHB's proposal for the content of courses which deals
   with links and addressing; I also talked with SGR, PKA, & PAW2
   about the best ways of presenting links to learners of NLS at
   various stages.   1a

2 USER SERVICES WEEKLY REPORT from SGR   2

   2a I spent the first day back mostly talking to people to catch up
   on status of things etc. Most of the rest of the week was spent
   with Pam and Priscilla. We talked about how to present the basic
   and second courses. Pam gave the two courses to Laura Metzger
   (SRI-ARC) and Beth ? (SRI). I observed and then we talked about
   how she did. We spent some time with Jeff getting questions
   answered that came up in the courses. I called Jon Peterson in
   Albuquerque to see if they needed any training (to tack onto the
   Alabama trip) - they didn't so I plan to be gone only Tues. - Fri.
   next week.   2a

3 USER SERVICES WEEKLY REPORT from RH   3

   3a Note: Monday and Tuesday were devoted to ARPA, mainly to the
   ARPA Orders which are in the final stages. As a matter-of-fact I
   was able to give Susan a draft of them so that she could make
   suggestions on improving them while she was here which was very
   helpful and saved a lot of time. I also spent time with Ginnie
   Gross, Terry Coleman and Bill Bangert. June Ludwig did a very
   long MRAO quite successfully which shows how well the MRAO's work
   since she has forgotten all her NLS training. She has the problem
   that is very common there, she can follow orders and instructions
   very well but the minute something unexpected happens, she's lost
   as to how to correct it. Both she (June,) Arlene, Terry and
   Ginnie have expressed an interest in picking up courses again
   which I am hoping to do. There is also a new girl on the 6th
   floor who could use some training, especially if the VELA project
   gets going. Wednesday, Thrusday and Friday were spent with Susan
   at the Pentagon giving the Third Course.   3a

4 USER SERVICES WEEKLY REPORT from PKA   4

   4a Most of Monday was spent reviewing the first course as
   preparation for teaching it. Did some work on the April feedback
   file. I will be organizing April feedback and doing the
   statistics on it as I did the March feedback. Tuesday through
   Friday were almost identical --half of each day I taught part of a
   course and the other half I discussed how I taught it with Susan
   and Prisicilla. We also went over the material to be covered the
   following day. Two persons were in the class, Beth Sherman from
   SRI and Laura Metzger of ARC. I felt a sense of accomplishment
   after the Basic course, but realized I need to work on the way I
   present the second course. Working with Susan every day helped
   me immensely, and I appreciate the time she spent doing it.   4a

5 USER SERVICES WEEKLY REPORT from PAW2   5

   5a Week of June 23-27.   On Monday I began really studying the
   basic and second course from the trainer point of view, rather
   than that of the trainee. Pam and I made sort of a rough overview
   of them both in the morning and then in the afternoon we discussed
   in greater depth the second course with Sue. Tuesday morning I
   closely observed, taking copious notes, as Pam taught the basic
   course. That afternoon we went over some of the problems that did
   arise and discussed a few alternative approaches that might be
   more effective and more clearly understood. Wednesday, Thursday,
   and Friday were spent much in the same way. Each day, half day
   was spent in class and the other half reviewing the courses. I
   had never seen a semi-structured Basic or Second course given
   before, not having taken the course myself, so I found this very
   helpful. We spent some time talking with Jeff Peters about some
   of the questions that came up in the classes and we tried to clear
   up the idea of "pie-sharing" computer time. I continued work on
   the final report, section on First Studies of NLS command, lining
   up graphs and charts on DNLS.   5a

6 Blank form   6

   6a Week of XXX: JMB   6a

   6b USER SERVICES WEEKLY REPORT from SGR   6b

   6c USER SERVICES WEEKLY REPORT from RH   6c

   6d USER SERVICES WEEKLY REPORT from PKA   6d

   6e USER SERVICES WEEKLY REPORT from PAW2   6e

Weekly report--June 23-27

(J32877) 30-JUN-75 17:54;;;;   Title: Author(s): Pamela K. Allen/PKA;
Distribution: /JCN([INFO-ONLY]) US([INFO-ONLY]) ;
Sub-Collections: SRI-ARC US; Clerk: PKA;   Origin: < ROETTER,
USREPORT.NLS;15, >, 30-JUN-75 17:51 PKA ;;;;#####;

1 32877 Distribution
   1a James C. Norton, Priscilla A. Wold, Jeanne M. Beck, Pamela K.
   Allen, Rita Hysmith, Sandy L. Johnson,

To FEED re wrong links in five Journal citations

1 Following are the five citations (in my format). Missing digit
apparently after the "J2607" string -- but, I looked in the JRNL27
file, and found that already there were items 26072, 74, and 76
there. So, it looks as though something more fundamental is wrong,
since there can't be five succeeding Journal numbers that begin with
26072,,, Regards, Doug   1

2 G01-0546 JCN: SRI Proposal No. ISU 75-113
Sent: 30-JUN-75 18:41   (JOURNAL, JRNL27, J2607)   2

   2a Comments: This is the proposal sent to AFAA in June 1975.   2a

3 G01-0546 JCN: SRI Proposal No. ISU 75-114
Sent: 30-JUN-75 18:46   (JOURNAL, JRNL27, J2607)   3

   3a Comments: This is the proposal sent to RADC in June 1975.   3a

4 G01-0546 JCN: SRI Proposal No. ISU 75-115
Sent: 30-JUN-75 19:00   (JOURNAL, JRNL27, J2607)   4

   4a Comments: This is the proposal sent to AMC in June 1975.   4a

5 G01-0546 JCN: SRI Proposal No. ISU 75-116
Sent: 30-JUN-75 19:07   (JOURNAL, JRNL27, J2607)   5

   5a Comments: This is the proposal sent to OSHA in June 1975.   5a

6 G01-0546 JCN: SRI Proposal No. ISU 75-117
Sent: 30-JUN-75 19:13   (JOURNAL, JRNL27, J2607)   6

   6a Comments: This the proposal sent to AFDSDC in June 1975.   6a

To FEED re wrong links in five Journal citations

(J32879) 1-JUL-75 09:24;;;;   Title: Author(s): Douglas C.
Engelbart/DCE; Distribution: /FEED([ACTION]) JDH([INFO-ONLY])
RLL([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: DCE;

SAMSO MOA

This is a draft of the MOA required by the AFSC Form 56. I propose
to send it to SAMSO for review and comments. Please review it and
let me know if it meets with your approval.   BOBBIE - please be sure
that Dick Nelson sees it.

1	MEMORANDUM OF AGREEMENT	1
2	RADC/IS & SAMSO/DYT	2
3	ON	3
4	PROJECT 5550, ADVANCED COMPUTER TECHNOLOGY	4

5 I. PURPOSE: The purpose of the Memorandum of Agreement MOA is to define the working relationship between SAMSO/DYT and RADC/IS personnel pertaining to Project 5550, Advanced Computer Technology. 5

6 II. TERMS OF AGREEMENT: 6

6a A. Effective Date: This MOA is effective upon approval by the Commander, SAMSO and the Commander, RADC. It shall continue in effect unless changed, superseded or terminated. Changes must be mutually agreeable and cancellation will take place by direction in the Project 5550 AFSC Form 56 or PMD. 6a

6b B. Offices of Prime Responsibility: RADC/ISI and SAMSO/DYT are the OPR's for this MOA. Points of contact shall be established at each of these offices as focal points for communication and inquiries. 6b

6c C. Annual Review: This MOA will be reviewed at least annually by each OPR. It will only be revised by mutual consent of the signatures and RADC/ISI will be responsible for updating the MOA accordingly. 6c

6d D. Funding: Funding for efforts in support of this MOA will be forwarded from RADC by Procurement Directive or Obligation Authority. 6d

7 III Policy: The undersigned desire that the personnel of each organization work together efficiently, effectively and productively. It is intended that this agreement promote a spirit of cooperaton and mutual understanding on the part of all SAMSO and RADC personnel. 7

8 IV SCOPE OF RADC/IS RESPONSIBILITIES: RADC has total responsibility and authority for all aspects of Project 5550 and will: 8

8a A. Review task write-ups submitted by SAMSO as candidates for inclusion in porject 5550, determine appropriateness as advanced development, request a briefing on each task as required, and determine priorities when compared with other work in the project. Inform SAMSO of results. 8a

1

8b B. Review each technology need submitted by SAMSO in the information processing area, determine appropriateness of each need for inclusion in Project 5550, mutually determine with DYT the priority of each need, RADC will then examine the needs relative to other proposed efforts and inform SAMSO of the results.   8b

8c C. Determine, by mutual agreement, which organization will be responsible for the task/effort from technical, administrative and procurement standpoints.   8c

8d D. Provide assistance in statements of work preparation and proposal evaluations for Project 5550 efforts to be mutually agreeable on an individual basis.   8d

8e E. Keep SAMSO advised of all significant meetings which involve the areas of responsibility for which assistance is or may be requested.   8e

8f F. Provide SAMSO with all necessary general administrative documentation and other technical data necessaary for the proper performance of its function.   8f

9 V SCOPE OF SAMSO/DYT RESPONSIBILITIES: SAMSO/DYT will: 9

9a A. Prepare candidate task write-ups for Project 5550 and foward them to RADC for review in a timely manner and brief tasks as requested by RADC.   9a

9b B. Review SAMSO TN's, identify potential Project 5550 efforts, and be prepared to discuss each effort individually and assign priority to each one.   9b

9c C. Act as point of contact for each effort requiring Aerospace Corp. support.   9c

9d D. Provide assistance in statements of work preparation and proposal evaluations for Project 5550 efforts to be mutually agreeable on an individual basis.   9d

9e E. Review Project 5550 program and identify specific efforts, which by modification, could prove to be of benefit to SAMSO.   9e

10 VI COORDINATION: Both RADC/IS and SAMSO/DYT have a responsibility to keep the other informed in a timely manner of program status, progress, and changes as they occur, particularily in those areas which may have a bearing or influence on the other party's exercise of its mission. The RADC/IS and SAMSO/DYT will coordinate on an "as required" basis. Visits or direct verbal

2

SAMSO MOA

communication to contractors of either organization will be
coordinated in advance through the applicable OPR.   10

11   11

SAMSO MOA

(J32880) 1-JUL-75 12:19;;;; Title: (Expedite) Title: Author(s):
Roger B. Panara/RBP; Distribution: /RDK([ACTION]) FJT([ACTION])
RN2([ACTION]) ARB([ACTION]) RJC([ACTION]) RBP([INFO-ONLY]
) ; Sub-Collections: RADC; Clerk: RBP;   Origin: < PANARA,
SAMSOMOA.NLS;1, >, 1-JUL-75 12:12 RBP ;;;;####;

NLS Application Description (Ref your memo)

1 I cannot comment on the document because I can't see it (also can't
see the WUC you sent). When I did a "print journal" my line started
acting up, and when I later loaded journal and printed i apparently
lost the links you put in. Can you re-send (or tell me how to
restore the links)?
The topics of the papers I am (/was/will) writing with Loraine are as
follows:
    Interview Guide for TRAIDEX interviews
    List of information to be abtained prior to interviews
    Paper (for professional publication) on the catalog of non-DOD
information resources. (This is temporarily in limbo).   1

NLS Application Description (Ref your memo)

(J32881)   1-JUL-75 14:10;;;;   Title: Author(s): Leonard C.
Swanson/LCS; Distribution: /DAP([ACTION]) LTS([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: LCS;

Notes on a talk with Glenn Sherwood about teleconferencing

1 Rob Lieberman and I recently talked with Glenn Sherwood. He
mentioned to both of us that he had given up on teleconferencing.
For one thing, SRI has evidenced little need for teleconferencing,
and he is busy with things that SRI really wants. Also he said that
he had gotten no response from QWAC (only Bedford repplied to Glenn's
questionnaire) or from ARC.   1

2 Glenn's lost interest is disappointing. Several clients,
especially Ron Uhlig, have expressed strong interest in having
teleconferencing available to them, and teleconferencing has also
been high on ARC's list of desired services.   2

3 Lost interest is disappointing in another way too. We had been
looking toward teleconferencing as being the first system nucleated
out of ARC. Although Kirk's documentation group is outside of ARC,
Kirk had got things going here.   3

4 I would like to suggest a course of action to get teleconferencing
moving. I suggest that somebody in ARC (I would be happy to do it),
approach Ron Uhlig for money to do a preliminary study. The cost
would be $5,000 to $15,000. In this study, ARC would examine
alternatives for providing teleconferencing and take positive steps
toward integrating a system into NLS. The end result of the project
would be a set of specific alternatives for QWAC to examine and,
hopefully, to fund.   4

5 One alternative would be to bring in FORUM. FORUM has two main
advantages. First it is available and good, so that we could begin
with a useful system. Second, FORUM is quite similar to NLS in its
command structure. If we did bring in FORUM, we would do this only
for a year or so. After that we would almost certainly want a
from-scratch NLS teleconferencing system embodying the capabilities
of FORUM and our own "bootstrapping" insights.   5

6 In effect, we would use FORUM as an experience builder so that we
could evolve a system of our own in a coherent, proper evolutionary
way. FORUM could give us a system with which to examine
teleconferencing, and we could use it to expedite other nucleation
efforts. In the work to be proposed, we would negotiate for FORUM
service at Office-1 and also examine whether we could modify its file
structure to allow normal NLS jumping.   6

7 We would examine one other alternative -- the building of a de novo
teleconferencing system in NLS. Here, the advantage would be closer
integration into NLS, although perhaps at the cost of some time lag
and greater initial expense to the KWAC community. In the work to be
proposed, we would explore whether our file structure will let us do
the immediate-access things needed in teleconferencing and we would
project costs for building such a system.   7

Notes on a talk with Glenn Sherwood about teleconferencing

8 If you wish, I will be happy to prepare a proposal-draft for Ron
Uhlig or other potential funders of a teleconferencing system.   8

Notes on a talk with Glenn Sherwood about teleconferencing

test msg

1 Did you get my boo?   1

test msg

(J32884)   2-JUL-75 06:43;;;;   Title: Author(s): Frank G.
Brignoli/FGB; Distribution: /ILA([ACTION]) ; Sub-Collections: NIC;
Clerk: FGB;

David A, Potter
Educational Testing Service
Rosedale Road
Princeton, New Jersey 08540

To:
Access Copy

32885iencies; I, of
cheerfully accept whatever credit is due, plus whatever I can
get...
DAP

APPLICATION DESCRIPTION: ETS
(Educational Testing Service, Princeton)   1

Introduction   2

NLS (On-Line System) is a text-editing,
dialog-support, and communications system developed and
managed by the Augmentation Research Center at Stanford
Research Institute. It provides users with a
state-of-the-art tool for document production,
communication, and information management and retrieval.   2a

Use of NLS at ETS grew initially out of access to the
system provided as a part of a research contract with ARPA
(Advanced Research Projects Agency), an arm of the
Department of Defense. Brian McNally, a research assistant
on the ARPA Project, was the first active ETS user; all of
his NLS work revolved around the ARPA Project.   2b

In addition to ARPA use, David Potter in October, 1974
began to use the system as a support tool for project and
proposal-related document production and control. His use
of the system grew until by January of this year he was
using the system for virtually all of his clerical support,
and had gained sufficient expertise in its use to assume
the role of system Architect at ETS. As the Architect, he
began to build a group of other ETS users and to develop
system applications that would allow ETS to fully exploit
the system's capabilities.   2c

Full support of the system came from ARPA for the
first six months of the current fiscal year. In January of
this year, an agreement was reached whereby ARPA and ETS
would share the costs, resulting in a 50-50 split for the
remaining six months of the current fiscal year (ARPA
$10,000; ETS $10,000). Discussions with ARPA are underway
to determine the feasibility and desirability of continuing
this arrangement through the next fiscal year; regardless
of the outcome of these discussions, however, the use of
NLS at ETS has grown to a level at which even full ETS
support would seem desirable and could be justified on a
cost-effectiveness basis.   2d

This paper reviews the progress made over the past six
months toward the development at ETS of an active NLS user
group. The intent is to document the uses to which NLS is
currently being put, in order to enable ETS to effectively
evaluate its usefulness.   2e

Currently, NLS is being put to three major uses at

DAP 2-JUL-75 07:14   32885

ETS: document production and correspondence; data base
construction and management, including bibliographies; and
instrument construction.   2f

   The following descriptions include application
strategies, generalizable descriptions of the specific uses
of NLS, and a content specific description of the work
being done.   2g

Correspondence   3

   Correspondence is written in the usual manner using
NLS editing functions. The output is intended for non-NLS
users, and therefore must be formatted for hardcopy
printing. The formatting was done manually until recently
when a special program was written called ETSMEMO
(currently in directory <meyer>).   3a

Document Production   4

   Document production involves everything from writing
an initial outline through the production of camera-ready
copy. It includes composition (creative and formatting),
editing, and revising, as well as the production and review
of intermediate working copies. NLS is well-suited to all
phases of this process; the application descriptions below
summarize several examples. Of particular interest is the
work of Walton's group on a Report on Health Planning.   4a

Data Base Management   5

   Several users are utilizing NLS as an information
management and retrieval tool. This capability is
particularly useful in building bibliographic data bases
which may be explored interactively as well as being
readily updated; again, the application description below
contain several examples.   5a

CBI Data Base   (Anastasio, Sinnott; ARPA support)   6

   The CBI (Computer Based Instruction) community is
planning to use an NLS data base of literature in CBI.
Loraine Sinnott   is continuing the entry of citations in a
data base that is to be searched by keyword, author,
titleword, and the usual NLS search functions. This may be
done with the catalog production programs --- the data base
was started using the tagged field format necessary for the
programs. The following is a sample entry from this data
base: 6a

NLS at ETS

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        (CBI1) *a1 Marian H. Beard *a2 Paul V. Lorton *a3
        Barbara W. Searle *a4 Richard C. Atkinson #2 org #3 #4
        #5 Stanford,California 94305 *b2 Stanford University #3
        *c1 Comparison of Student Performance and Attitude Under
        Three Lesson-Selection Strategies in CAI #1 #6 16p, *d1
        31 December 1973 *f1 r *p1 Optimization and Instruction
        Theory Application #1 Richard C. Atkinson #3
        (415)321-2300 #4 Dept. of Psychology #5 Stanford,
        California 94305 *s1 ARPA #1 ONR #7 22212 *w4 *y1 *y4 #1
        #2 #3 #4 *z3 new *   6a1

Report on Health Planning (Walton, Fortna, et al; HEW, Region
2 support)   7

        A large report concerned with the technical assistance
    needs of the Public Health Service is being written in part
    through NLS, The project will discuss the Public Law
    requirements for a Center for technical Assistance to the
    Health Service, The report must be written with input and
    review from several geographically distributed
    contributors, Thus, NLS will be ideally suited to the
    numerous revisions that will be collected initially via
    phone converations with Barbara Esser, who is supervising
    the report preparation.   7a

Len Swanson has developed and implemented a number of
interesting applications: 8

    1. Committee selection (internal P/J)   8a

    The system is being used to record and maintain
    information on people who are being considered for
    membership on a committee, The names were originally
    entered from notes and memos suggesting nominees, After
    sorting the names, addresses and information about each
    nominee were entered, Periodically additional
    information was added, The aggregate list was then
    printed so that several people could "rate" the nominees
    and selct their top choices, The consensus of these
    choices were then culled from the original file and put
    into a second file, which will be used to record
    expanded biographical data and prepare a summary report
    listing the desired names in order of selection,   8a1

2. Mailing List (ARPA support)   8b

    Len Swanson is about to use the system to enter a 700
    name mailing list and sort it (geographically) in order
    to remove duplicates. The result will be used to
    prepare mailing labels for distribution of project
    reports, and to produce listings of subsets of names.
    He expects to maintain the mailing list on OFFICE-1
    (i.e., to add to it and make address changes).   8b1

3. Book (misc.)   8c

    Len and two associates are beginning work on a textbook,
    and they expect to use the system, at least in part, for
    preparation of the text. Len has entered a topical
    outline, with notes; they will subsequently divide the
    list of chapters and work independently on each, but
    with review, comments, and modifications by the other
    two authors.   8c1

4. Report (internal P/J)   8d

    Len has used the system to prepare several working
    documents and one (brief) formal report. The report was
    prepared in several stages, with intermediate external
    review. The first step was to enter the topics
    (sections and subsections) and basic content. He next
    wrote sections (at random) as they occurred to him.
    After two editings and one restructuring of the file it
    was prepared for output and distribution. The result is
    now being reviewed and will probably be further modified
    before final printing.   8d1

5. Joint Papers (ARPA support)   8e

    Loraine Sinnott and Len Swanson are working on three
    documents which they expect to prepare jointly. Initial
    drafts of each have been entered by Len, and Lorraine
    will modify them and/or suggest changes through the
    system. These papers include an interview guide for
    TRAIDEX interviewers, a list of information to be
    obtained prior to interviews, and a paper on the catalog
    of non-DOD information resources.   8e1

6. TRAIDEX scratch pad (information management; ARPA
support)   8f

Len has created a file to maintain miscellaneous
information related to one of his projects. The file
contains a list of key people (with addresses and phone
numbers) related to the project, a bibliography of
relevant reports and documents, a set of notes on
various phases of the project, and a list of project
milestones and date-related events.   8f1

Sex Differences and Discrimination in Education Data Base
(Harris, Ekstrom, Lockheed; internal P/J)   9

Currently 470 bibliographic citations extracted from
other more general data bases have been entered in a single
file for searching using the standard NLS search functions,
particularly content filters. Searching is done by author,
titlewords, journal, date, and the other elements of a
standard bibliographic entry (Pschological Abstracts
Format).   9a

[Citation sample:] Abel, H. And Sanenkaya, R. Emergence
of sex and race friendship preferences. CHILD
DEVELOPMENT, 1962, Vol, 33, 939-943.   9a1

Abstracts are available and it is planned to enter
them in a separate file linked to the appropriate citation
in the bibliography. This would form the basis of a free
text search and retrieval function on the abstracts.   9b

Volunteer Activities of Women Data Base (Harris, Lockheed,
Ekstrom; FIPSE support)   10

This bibliographic data base of 34 items is part of a
study to evaluate and analyze the volunteer activities of
women to establish a means of assigning academic credit to
those activities.   10a

Teacher Behavior Research (Potter; internal P/J)   11

Online Teacher Behavior Data Base   11a

David Potter is working in the area of educational
assessment, developing evaluative tools and instruments
for the assessment of teacher behavior in the public
schools. The methodologies are sociometric and involve
various techniques common to social psychology, e.g.,
shadowing, case studies, interviews, and questionnaires
-- the latter using the online index.   11a1

The online index is a structured list of statements that
describe the behavior of teachers in the classroom. It
is based on the "Florida Catalog of Teacher
Competencies".   11a2

The index is accessed through a locator modeled after
the Locator in Userguides at Office-1. It is not
limited to teacher behavior, and includes additional top
level headings such as Pupil Level, Object of Change,
etc., and Teacher Behavior. Each of the 8 categories
has lower level headings such as Developing Personal
Skills, Performing Administrative Duties, etc. The next
level contains more specific behavior categories such as
Accepting Responsbility, Confering with Parents,
Motivating /Reinforcing Students, and so on.   11a3

Instrument Development   11b

The online teacher behavior data base described above is
being used by Potter to develop questionnaires, rating
scales, and other instruments to be used in his Job
Analysis of Teaching project. Use of the system in this
manner has allowed working copies of these instruments
to be produced quickly and efficiently, which enables
him to make much better use of outside review than is
the case when each instrument -- and all revisions
thereof -- must be typed separately.   11b1

Example of question item with scale (instructions are
added to the beginning of each questionnaire of course):
                                                              11b2

                 [Heading =] PLANNING INSTRUCTION   11b2a

  8. Selecting and specifying goals, aims, and objectives

Time Teachers | | | | | Hours/
SHOULD Spend |....|....|....|....|....|....|....|....| Month

Time Teachers | | | | | Hours/
DO Spend |....|....|....|....|....|....|....|....| Month

Time | | | | | Hours/
YOU Spend |....|....|....|....|....|....|....|....| Month
               0   10   20   30   40   11b2b

Directives are used in the questionnaires and are
inserted manually due to the highly structured nature of
the questionnaire. One difficulty is encountered in the

use of the directive .Plexnum; which will number every
statement in a plex sequentially, e.g., 1. 2.... This
is perfect for questionnaires except for the fact that
all the questions are not in one plex. The headings
("Planning Instruction" in the above case) are logically
at a higher level, yet the questions they subsume must
be numbered from the beginning of the questionnaire.
This limitation has been circumvented by putting the
headings of other questionnaires at a level below the
questionnaire items.   11b3

Other Questionnaires are constructed from the locator
using different scales. For example, the respondents
are asked to rate the importance of each category: 11b4

8. Selecting and specifying goals, aims, and objectives   11b4a

Not at all   1   2   3   4   5   Extremely
Important.....|.......|.......|.......|.......|.....Important
                                                                11b4a1
The Work Diary, also created from the locator category
list, is best described by including the instructions
for the respondent: 11b5

"This work diary is intended to help us understand
how you spend your time as a teacher -- that is, how
is your time distributed across the 44 teaching tasks
listed below? We would like you to fill this form
out three times a day: (1) around noon, to tell us
how you spent the morning; (2) at the end of the
school day, to describe the afternoon; and (3) around
the end of the evening, so we can find out what
job-related tasks you've been working on since the
end of the school day. [check the appropriate
category!]   11b5a

[Example:] PERFORMING ADMINISTRATIVE DUTIES   11b5a1

23.____Supervising aides, tutors, etc.   11b5a1a

24.____Arranging physical environment   11b5a1b

(There are 44 statements total in the questionnaire under
approximately 12 headings.)   11b5a1c

The Critical Incident Record Form (Type I) uses an open
ended questionnaire design that when generated from NLS
allows the reiteration of the instrument design to
proceed without re-keying the highly formatted pages
(produced by manually inserted directives). Example of
instructions and questionnaire item: 11b6

"Think back over a period of time (six months or so) long
enough for you to have observed the activities of all your
teachers. Focus your attention on any one thing that one of
your teachers may have done which made you think of him/her as
an outstandingly good or very effective teacher. In other
words, think of a critical incident which has added materially
to the overall success of your school or department. Please
do not record any names of persons involved in the following
incident.

What were the general circumstances leading up to this
incident?"   11b6a

Document Composition and Production   11c

Potter has for some months been doing virtually all of
his writing on the system. This has included proposals,
reports, letters, and memoranda.   11c1

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General Comments: 12

        The ETS architect's general intent is, at least in
part, the augmentation of clerical functions. It may be
that additional capabilities have been added that would
take an unreasonably large task force of clerical
personnel, and therefore would not have been accomplished
outside of an augmented knowledge workshop. The typing of
questionnaires with scales is laborious at best, while the
repetitive functions can be easily accomplished in NLS.
The job would become odious if there were numerous
revisions necessitating complete retyping of the
questionnaires each time. This editing augmentation is
extended beyond the traditional Word processing systems
when the data bases, locator, and automatic generation of
special subsets are considered.   12a

        In sum, ETS's application includes questionnaire
production and bibliographic storage, search and retrieval,
in addition to the usual functions of communication, and
document composition and production.   12b

1 32885 Distribution
   1a Educational Testing Service , James C. Norton, James H. Bair,
   Special Jhb Feedback, Glenn A. Sherwood, Kathey L. Mabrey, Jeanne M.
   Beck, David A. Potter, Robert N. Lieberman, Terry H. Proch, Ronald P.
   Uhlig, Susan Gail Roetter, Michael A. Placko, Stanley (Stan) M.
   Taylor, Elizabeth J. Feinler, Rudy L. Ruggles, Frank G. Brignoli,
   Robert M. Sheppard, Richard W. Watson, Douglas C. Engelbart, James C.
   Norton, James H. Bair, Duane L. Stone, Inez M. Mattiuz, Connie K.
   McLindon,

practice

1 This is a message to bee sent   1

Practice

(J32891)   2-JUL-75 16:43;;;;   Title: Author(s): Priscilla A.
Wold/PAW2; Distribution: /PKA([INFO-ONLY]) ; Sub-Collections:
SRI-ARC; Clerk: PAW2;

COM 7/2/75

1 7/2/75; 10:50am, mta0; files sent: DOCINTRO.COM;2, ED1cOM.COM;3,
OP-GUIDE.COM;3, spoke to Ted Spires. proofs to be produced and sent
to ARC, tape #123 (sandy)   1

COM 7/2/75

(J32893)   2-JUL-75 18:26;;;;   Title: Author(s): Special Jhb
Feedback/FEED; Distribution: /DMB([ACTION] dpcs notebook,please)
&DPCS([INFO-ONLY]) FEED([INFO-ONLY]) ; Sub-Collections: SRI-ARC
DPCS; Clerk: FEED;

1 32893 Distribution
    1a Delorse M, Brooks, Documentation Production and Control System
    Interest Group , Special Jhb Feedback,

REQUEST FOR ARC PROGRAMMING ASSISTANCE

1 REQUEST FOR ARC PROGRAMMING ASSISTANCE: 1

   1a Jim, I would like some programming/design assistance in
   initiating and developing a simple-minded usersubsystem. My
   experience to date has exposed several common functions among
   current and potential users of NLS, simply put they consist of
   building a data base, updating it, accessing it, and occasionally
   producing reports from it. What I have in mind is getting some
   competent programmer who can help me consider the various
   alternatives availible and assist me in initiating a usersubsystem
   that I can develop futher on my own once I learn how. I think if
   I could get help for say one day per week for 4-8 weeks I could be
   well on my way. I have two different charge numbers that could be
   used to support the needed systems programmer...suffice to say I'm
   flexible with regards to any arrangements you and Dick Watson
   consider necessary.   1a

   1b The Commercial and Industrial Marketing group (CIM) of ORO is
   coming on board very soon , which complements ORO's PDG government
   marketing effort rather nicely, and the initial cut of the
   usersubsystem would be to support them. The specifications for
   the CIM groups pilot study are currently being developed so the
   following descriptions are necessarily a little vague.   1b

   1c Functionally what I had in mind are Processes within a
   usersubsystem such as :   1c

      1c1 INPUT : a single looping command that would prompt an
      operator to enter the various data items needed for the
      addition of a unit of data to the data base formatting the
      entered data as specified. Perhaps the option of an
      Interrogate switch as well, so that once familar with the
      sequence, the operator can skip the prompts. Again, once this
      is operational adapting such a command for other applications
      should be relatively easy...and Fast which is most important.   1c1

      1c2 STATUS : a command that would allow a operator to enter a
      date and then scan the data base at the appropriate level
      comparing data dates, such as action due dates, with the
      status date and take some action. Retrieve comes to mind of
      course, but the action possible is limited, showing the
      particular data unit may be all thats needed. The intent of
      this command, for that matter the whole idea of this
      usersubsystem, is to simplify the interface with
      application-specific users by providing specialized commands,
      with just enough flexibility to do their jobs. Since for the
      most part its a familar task being done a new way , the simpler
      the better...the options with this command should provide the
      needed flexibility.   1c2

1c3 SoRT : a command that would allow sorting of a complete
branch keying on data items at various levels within that
branch. This has been requested before and would provide an
order of magnitude more power.   1c3

1c4 MISC : Other commands such UPDATE for controlled appending
of data, REPORT for formatting pretty prints or FORMATTER to
read a file and reformat according to specifications would also
be useful, but for now I think you get the flavor of where I
want to start...and that's exactly what I need, some help to
get a running start.   1c4

1d I hope to hear from you soon, Thanks Glenn   1d

REQUEST FOR ARC PROGRAMMING ASSISTANCE

(J32894) 2-JUL-75 19:33;;;;   Title: Author(s): Glenn A.
Sherwood/GAS2; Distribution: /JCN([ACTION]) KLM([INFO-ONLY])
DSM([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: GAS2;
Origin: < SHERWOOD, JIM.NLS;1, >, 2-JUL-75 18:48 GAS2 ;;;;#####;

1 Yes I got you boo   1

(J32896)   3-JUL-75 07:31;;;;   Title: Author(s): I, Larry Avrunin/ILA;
Distribution: /FGB([ACTION]) ; Sub-Collections: NIC; Clerk: ILA;