Hello

Hello Jeanne, I'm sorry we couldn't get acquainted
before you left for Washington. You left the first week
I was here, and for some reason we never got a chance to
chat.   1

I'm not sure just what I'll be doing at ARC. For
the time being, I am just building a reporting system
to tell archetects how much their people are using the
system. Beyond that, things are pretty hazy.   2

JCN gave me your office, making me feel like
a vampire. You are (surprise!) now sharing an office
with Dean Meyer. I packed your books and things away
as well as I could. It's all there, but not in any
particular order. We also moved your desk down to
Dean's office.   3

I hope we can meet soon, either out here or in
Washington.   4

Hello

(J31720) 27-JAN-75 17:38;;;;   Title: Author(s): Raymond R.
Panko/RA3Y; Distribution: /RA3Y([ACTION]) JMB([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: RA3Y;   Origin: < PANKO,
HELLO.NLS;1, >, 27-JAN-75 17:26 RA3Y ;;;;####;

comments on nls to 26 jan

in keeping with your request to provide comments on nls, i am
providing this information that i have been gathering in my own file
for the last few weeks, this covers information through 26 jan 75
and comes from gilbert, during the period i have been using the
system, i have used sendmsg on a multiple time daily basis, but am
only now maturing to the point that i feel reasonably comfortable
with nls and its related capability.   1

AT THIS POINT MY BASIC COMMENT ON THIS SYSTEM IS THAT IT TENDS TO
GENERATE CANDOR AS WE BECOME MORE FAMILIAR WITH THE SYSTEM.   2

i am also finding that nls is probably more difficult to use than it
has payoff, at this time; but sndmsg seems to be worthwhile .   3

a third comment is that a delay in the terminal interface processor
can confuse the control language so that you can lose groups of
characters.   4

nls is a passive system, it is one thing to send a person a message,
but how do you prompt him to pick it up?, it seems to me that
something is definitely missing here.   5

SENDMSG IS IMPROVING OUR ABILITY TO COMMUNICATE FOR A NUMBER OF
REASONS, SOME OF THESE ARE PRETTY SUBTLE AND WOULD BE HARD TO HANG A
PRICE TAG ON, I'LL TRY TO ENUMERATE AND KEEP ADDING TO MY LIST FROM
TIME TO TIME.   6

    the matter of writing something down improves our communications
    since we have a record of what we have said, this prevents
    buffering by one oral communicator as he relays a message to the
    next,   6a

    the ability to send to multiple addressees and carbon other
    interested participants enlarges the group with whom we
    communicate rather naturally, this provides a broader base of
    people who are informed and involved in any issue,   6b

    the lack of a need to establish two-way verbal communications
    between busy people and the more difficult task of establishing
    multi-way communications among more than two people is alleviated
    since one is assured that everyone receives the message if
    addressed and ok'ed by the system,   6c

the accounting system for the tips that became operational
approximately 26 jan, 75 is an excellent example of a corollary to
peter's principle that eventually organizations will confuse the
means and the ends, this occurs for at least two reasons; (1) the
sign-on at the tip is more awesome than establishing contact with the

comments on nls to 26 jan

ultimate computer and (2) the buffer space in the tip is so reduced
that one is forced to hunting and pecking slowly.   7

one of my big surprises is that people browse through other's
mailboxes. apparently, they do not consider this amoraleven, though
it is tantamount to going through another person's in-basket.   8

comments on nls to 26 jan

(J31721) 27-JAN-75 18:06;;;;   Title: Author(s): John C. Gilbert/JCG;
Distribution: /JCG([INFO-ONLY]) RPU([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: JCG;   Origin: < GILBERT,
CMTS-ON-NLS.NLS;9, >, 27-JAN-75 17:59 JCG ;;;;####;

comments on nls

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comments on nls

(J31722) 27-JAN-75 18:08;;;;   Title: Author(s): John C. Gilbert/JCG;
Distribution: /JAA([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: JCG;
Origin: < GILBERT, CMTS-ON-NLS.NLS;9, >, 27-JAN-75 17:59 JCG
;;;;####;

comments on nls to 26 jan

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comments on nls to 26 jan

(J31723)   27-JAN-75 18:09;;;;   Title: Author(s): John C. Gilbert/JCG;
Distribution: /BRL([ACTION]) ; Sub-Collections: NIC BRL; Clerk:
JCG;   Origin: < GILBERT, CMTS-ON-NLS.NLS;9, >, 27-JAN-75 17:59
JCG ;;;;####;

NLS problems

I have found a few problems :-   1

   We are having trouble with ident TEH in receiving journal mail.
   The only unique factor I can see about this ident is that it
   doesnot have a directory exclusively for its own use. Using the
   Sendmail subsystem to send a message or a file to a number of
   idents, all were received (including the author copy) except the
   TEH copy.   1a

   When inserting a statement which contains a a cntrl=R to
   redisplay the line does not print the .   1b

   A "Process commands from a structure" command only appears to take
   the first word (as well as the others) in the structure if it is
   preceeded by a space and even then with a bell (presumably for the
   space). If the space is omitted then it tries to make sense of the
   second word in the structure ignoring the first.   1c

   After logging in this morning and entering NLS I did a Print
   Journal command which resulted in No Mail followed by a Goto
   Sendmail command. The reply to this was "File locking conflict -
   Please reload" whereupon it appeared to enter a loop (judging from
   the increase in the times shown by cntrl=T commands). To escape I
   had to enter a cntrl=C.   1d

NLS problems

(J31724) 28-JAN-75 06:25;;;;   Title: Author(s): Keith McCloghrie/KM;
Distribution: /FEED([INFO-ONLY]) KM([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk; KM;

MAP2 28-JAN-75 08:21   31725

Attendance at KWAC Meeting III

The odds of my being in attendance at your scheduled KWAC III meeting
in February are good. Let me know if there's anything I can to in
preparation to assist you. -- Mike

PS - Would be good if the next architect were in attendance, right?   1

MAP2 28-JAN-75 08:21   31725

Attendance at KWAC Meeting III

(J31725)   28-JAN-75 08:21;;;;   Title: Author(s): Michael A.
Placko/MAP2; Distribution: /JCN([ACTION]) ; Sub-Collections: NIC;
Clerk: MAP2;

Project 5550 OUTYEAR PROGRAM

Bill,
    This is what I forwarded to Col. Krutz for his approval. I have
not heard from him yet. I did not interpret your first message to
mean you were also interested in 79 - 81. It will take me awhile to
get it together. I will try to arrange a meeting with the Colonel
this P. M. and call you to let you know what results. I don't think
there is any problem in using the FY78 figeres below. Just remember
they are not yet approved.
                            Roger   1

MESSAGES FROM YOU REGARDING SUBJECT.   2

    16-JAN-75 0649-PDT PATTERSON: fyy78 program
        Distribution: PANARA, krutz, patterson
        Received at: 16-JAN-75 06:49:54   2a

    Ron Starbuck tells me that the Air Staff is looking at our
    funding past fy77 and wondering why we have such a big jump
    from fy77 to fy78. His answer is that we are starting new
    programs. We need to come up with them fairly soon. There is
    no specific suspense, but he would like to be able to give some
    answers by the end of next week. p.s. Part of the increase ,of
    course is in inflation.   2a1

    17-JAN-75 0755-PDT PATTERSON: fy78 program
        Distribution: PANARA, KRUTZ, patterson
        Received at: 17-JAN-75 07:55:10   2b

    ref panara message, same subject.   I checked your numbers with
    ron and came up with
    fy77=6.5,fy78=10.6,fy79=18.3(!),fy80,22.6.   2b1

    28-JAN-75 0722-PST PATTERSON: fy78 and beyond
        Distribution: PANARA, patterson
        Received at: 28-JAN-75 07:22:13   2c

    Ron Starbuck is getting anxious for an answer to the
    question of programs for fy 78 and beyond. How are we doing?
    Also, I wasjust asked for a funding breakout by task out to
    fy 81. Anything you canget me by this afternoon will be
    appreciated. I'll wing the rest, since the mission is going to
    have to be more c-cubed oriented.   2c1

Major Patterson,
    Outlined below is the five year plan for 63728F. It is intended
to provide you with the information you require regarding the FY78
plan. You have the descriptions of the proposed tasks in the PMP and
in the added descriptions previously supplied for the FY77 planned

Project 5550 OUTYEAR PROGRAM

program. The emphasis in FY77 & FY78 will be in Software C, R, & T.
The five areas below will be emphasized: 3

   1. Software Data Repository Implementation (pilot & full-blown).   3a

   2. Language Control Facility Implementation.   3b

   3. Modern Programming Practices Evaluations.   3c

   4. Software Tools Acquisitions, Testing, & Evaluations.   3d

   5. SEMANOL for COBOL & FORTRAN.   3e

                   5-YEAR PLAN FOR 63728F   4

	FY75	FY76	FY7T	FY77	FY78	
	----	----	----	----	----	5
ARCHITECTURE						6
Assoc Proc	370	535	70	200	200	6a
Config Proc			-	500	800	6b
Dist Computation Fac			-	600	600	6c
S/W TECHNOLOGY						7
S/W C, R, & T	1270	3185	1130	4700	6500	7a
Reqmts Anal			-	500	1000	7b
Multisource Data Fusion				-	500	7c
ADP SYSTEM SUPPORT						8
Security	550	280	-			8a
H/W TECHNOLOGY	110	-				9
PROJECT 2108			-	1000	1000	10
	----	----	----	----	----	
TOTALS	2300	4000	1200	6500	10600	11

Project 5550 OUTYEAR PROGRAM

(J31726) 28-JAN-75 09:14;;;; Title: (Expedite) Title: Author(s):
Roger B, Panara/RBP; Distribution: /WWP2([ACTION]) ;
Sub-Collections: RADC; Clerk: RBP;   Origin: < PANARA,
BILL,NLS;1, >, 28-JAN-75 09:10 RBP ;;;; ####;

Meeting with NAC

I am proud to inform you that you are requested to attend the Feb.
5th meeting of NAC. The occasion will take place between 1000 and
1300 in conf room #10 (2W075) and then from 1300 to 1500 in 1S013.
Be sure to be there!!!!!!!!!!!!!!!!   1

1

Meeting with NAC

(J31727)   28-JAN-75 11:53;;;;   Title: Author(s): Steve P, Bailey/SPB;
Distribution: /SPN([INFO-ONLY]) SPB([INFO-ONLY]) TEH([
INFO-ONLY]) JNH([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: SPB;

more net trouble

28-JAN-75 1303-PST POTTER: net trouble
    Distribution: PETERS AT SRI-ARC, potter
    Received at: 28-JAN-75 13:03:34   1

    Jeff, I've been having more net trouble today tan I usually do in
    a week or two...connection suspended, net trouble about six or
    eight times today. Following your advice, I called the
    NCC...talked with Joel Malman...he said the problem must be in the
    IMP at OFFICE-1, that they weren't having any problems there.
    Well, I am. Any ideas or suggestions? My phone call to NCC
    didn't exactly leave me feeling like everything would be fixed
    shortly...
                            YOurs, Dave   1a

more net trouble

(J31728) 28-JAN-75 13:10;;;;   Title: Author(s): David A. Potter/DAP;
Distribution: /JCP([ACTION]) ; Sub-Collections: NIC; Clerk: DAP;

MAP2 28-JAN-75 13:19   31729

Invitation

Let me formally extend an invitation to you from Terrie and I to
reside with us during the forthcoming KWAC III meeting, Let me know
when you'll be here and for how long and we'll plan accordingly,
Rita is welcome too (so is Happy for that matter)! Anxious to hear
from you, -- Mike   1

MAP2 28-JAN-75 13:19   31729

Invitation

(J31729)   28-JAN-75 13:19;;;;   Title: Author(s): Michael A,
Placko/MAP2; Distribution: /RMS2([ACTION]) ; Sub-Collections: NIC;
Clerk: MAP2;

questions about undelivered messages

When one gets a sendmsg from "mailer" that a message didn't go
through, does that refer to sendmail of nls or to sendmsg of tenex?
I send so many of each that I can't tell. Also, I get the following
files in my directory, which I can't seem to type acceptably in the
Tenex delete command in order to get rid of them (the message is
obsolete anyway so I don't need them); with ESC, it will recognize
up to the period, but types a question mark in response to my typing
the characters of the person's name,   1

    < BECK, /UNDELIVERABLE-MAIL/.hardy@SRI-ARC;1, >   1a

    < BECK, /UNDELIVERABLE-MAIL/.bondurant@SRI-ARC;1, >   1b

    < BECK, /UNDELIVERABLE-MAIL/.vannouhuys@SRI-ARC;1, >   1c

    < BECK, /UNDELIVERABLE-MAIL/.bair@SRI-ARC;1, >   1d

questions about undelivered messages

(J31730) 29-JAN-75 06:09;;;;   Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /FEEDBACK([ACTION]) ; Sub-Collections: SRI-ARC
FEEDBACK; Clerk: JMB;

EPC Proposal

In the meeting on the Editorial Proceessing Center proposal, NSF in
dicated a need to have a definition of feasible alternative
approaches to developing an EPC at the end of the experiment if it is
successful. That is they realize that the Utility Slot concept is
not a suitable approach to a community of small journals accessing a
subset of NLS. They are interested in several things:

1) the availability of a commercial packet-switching network over
which the system could be accessed.
2) the feasibility of implementing the developed NLS system on
another system perhaps run by a commercial outfit.
3) the types of pricing structures that might be used for a
community of journals accessing NLS through a Front End.
4) the assumption is that approximately one and oneKhalf years
form now they want to be able to implement the system for a community
of journal subscribers (and maybe others) at which time the developed
system is production oriented and may require a separate or new
commercial network and service subscription structure to address the
needs of the user community. They want possible answers to these
questions.
Have you yet formulated ideas on these problems yet. We need to
address them in the proposal revisions which have to go out Friday,
I appreciate any input you can give. Doug is not in today and Dick
said you were the person to talk to. Thanks.
                                        Pat.

1

EPC Proposal

(J31731)   29-JAN-75 10:11;;;;   Title: Author(s): Pat Whiting
O'Keefe/PWO; Distribution: /JCN([ACTION]) PWO([INFO-ONLY]) DVN(
[INFO-ONLY]) ; Sub-Collections: NIC; Clerk: PWO;

request for info on NVC

Dirk, could you please send me a reference on the Network Virtual COM
format (control characters, etc) for a project we are running to tru
to develop a standard COM format for the Air force. Thanks, /Larry
crain   1

request   for info on NVC

(J31732)   29-JAN-75 11:48;;;;   Title: Author(s): Lawrence A.
Crain/LAC; Distribution: /DVN([ACTION]) ; Sub-Collections: NIC;
Clerk: LAC;

Tenex at NSA

Martin   1

    Jim Norton said you might be able to give me a hand. We are
    getting a TENEX system here at NSA and it looks like the initial
    configuration will be about a third the size of that at OFFICE.
    We will start out with 96K core and 3 RP03's as well as a swapping
    disk and 2 tape drives. Most of my questions deal with the
    effects of this smaller system on our operation.   1a

    When OFFICE first came up what was its configuration? How many
    pages does OFFICE get from a RP03? As far as that goes what is
    the number of words per page?   1b

    Since we will be limited in storage we would appreciate some
    values for disk storage of TNLS, DNLS, the JOURNAL sys, RSEXEC,
    and DEX. Along with the amount of storage needed it will be
    helpful if we had an idea on what percentage each sys uses of the
    system and cpu. Also what kind of affect does output processor,
    110 and cml have on the load.   1c

    I'll try and give you a call to make things a little clearer.
    Thanks much..   1d

                                                                            1e

    Steve Bailey   1f

    SPB   1g

Tenex at NSA

(J31733) 29-JAN-75 12:56;;;;   Title: Author(s): Steve P. Bailey/SPB;
Distribution: /MEH([ACTION]) ; Sub-Collections: NIC; Clerk: SPB;

net trouble

bitch a little

net trouble

You may regard this as a formal complaint from a disgruntled user.
Yesterday and today were VERY bad days for the net. I was
disconnected with a "connection suspended, net trouble" or "host not
responding" message several times each day.
     This may not be your problem. Nevertheless, from a user
viewpoint it really doesn't matter one whole hell of a lot; all I
know for sure is that I can't get my work done. This is doubly true
because I regard my role as architect as part of my work; and you'll
have to admit it's hard to build confidence in the system in new and
potential users who see troubles like those of the past couple days.
     I'll keep you posted on problems like this. They're
individually trivial, but collectively serious. I would not like to
see the future of the ETS slot decided on the basis of experiences
like this --but they can't be ignored.   1

net trouble

(J31734)   29-JAN-75 13:39;;;;   Title: Author(s): David A, Potter/DAP;
Distribution: /FEEDBACK([ACTION]) JHB([INFO-ONLY]) DAP([
INFO-ONLY]) ; Sub-Collections: NIC FEEDBACK; Clerk: DAP;

New TI in the Display Area

It would be appreciated if people would not carry it off,

New TI in the Display Area

In order to have a generally available terminal for accessing
office-1 directly I've set up a TI on a table with a phone out in the
display area.   1

If the noise disturbs anyone or if there are other reasons why this
is a bad idea let me know.   2

New TI in the Display Area

(J31735) 29-JAN-75 15:12;;;;   Title: Author(s): Special Jhb
Feedback/FEED; Distribution: /SRI-ARC([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: FEED;   Origin: < FEEDBACK,
BLAP.NLS;1, >, 9-JAN-75 11:46 FEED ;;;;####;

Response to (31724,) NLS Questions

1, Looks like the ident TEH wasn't set up quite right - I'll fix it
and it should be o.k. tomorrow, 2, I couldn't get the problem you
described with CTRL R and <CA> to happen. How were you entering
<CA>? 3, I havn't had the trouble you describe with the Process
command, If you give me a link to your file I'll take a look and see
if I can see anything wrong, 4, And you won't belive this but I
tried a Print Journal and then Goto Sendmail when I didn't have any
journal mail and I got the message No Journal Branches but no
jproblem when I got to sendmail, So unless there is more info you
can give me on this one I don't think it'll happen again, Sorry I
couldn't be more helpful, Susan/FEED   1

Response to (31724,) NLS Questions

(J31736)   29-JAN-75 15:53;;;;   Title: Author(s): Special Jhb
Feedback/FEED; Distribution: /KM([INFO-ONLY]) FEED([INFO-ONLY])
; Sub-Collections: SRI-ARC; Clerk: FEED;

Tech Evaluation

ISCA/X7746   27 Jan 75

Technical Evaluation - PR-B-5-3108

RADC/ISCA
      ISC
      ISM
      PMRD (Mr. P. L. Nicotera)
IN TURN

1. Eleven proposals under this solicitation have been evaluated and
the results are contained in the following paragraphs.

2. The following offers are considered responsive to the RFP based
upon proposals submitted:

      a. Bolt Beranek and Newman Inc. (BBN) - (90)

          Understanding of the Problem - (30)

          BBN displays an insight into the problem far beyond that
which is contained in the statement of work. This understanding is a
natural extension of specific experience and background BBN has in
the distributed computation problem area.

          Soundness of Approach - (16)

          The proposed approach of generalizing and extending
concepts into a methodology for distributed system design is
considered quite acceptable.

          Compliance with Requirements - (24)

          BBN proposes no deviations from the Statement of Work, with
the exception that no specific mention is made of the required
deliverable data items, monthly reports and final report;
clarification is required. If the offeror will deliver the required
data items, a score of 30 would be in order.

          Special Technical Factors - (20)

BBN has an excellent background in distributed computation problems, BBN has gained significant insight into many issues of concern in this study in particular through their hands-on experience with the Resource Sharing Executive (RSEXEC), The RSEXEC is the heart of a BBN in-house test bed for examining distributed processing concepts,

b, University of Southern California/Information Sciences Institute - (86)

Understanding the Problem - (24)

USC/ISI has a unique understanding of the problem and extends the concept definition beyond that given in the Statement of Work, This offeror has a good understanding of the user oriented problems associated with a distributed computation implementation,

Soundness of Approach - (16)

The approach outlined in two tasks, one for the identification of NOS primitives and the other for NOS primitive implementation plan is quite acceptable and should lead to the identification of critical issues in NOS design,

Compliance with Requirements - (30)

This offeror complies with all the requirements of the Statement of Work,

Special Technical Factors - (16)

This offeror has significant experience with the ARPA network and has been involved in distributed computation issues through such projects as the National Software Works, but has had little if any hands-on experience with distributed processing systems,

This offeror proposes no deviations from the requirement of the Statement of Work,

c, Informatics Inc, - (71)

3

Tech Evaluation

Understanding of Problem - (15)

This offeror has undertaken studies in distributed
computation and networking of heterogenous computers with many
problem areas similar to those considered under PR No B-5-3108. The
problem components covering network topology, user control,
transparency, load shading, security, etc., are discussed to a
reasonable depth which indicates the contractor has an understanding
of the problems to be encountered in the effort.

Soundness of Approach - (16)

The offeror's approach would utilize information derived
from other studies combined with those to be developed by his staff.
He plans to provide more than one alternative with clarifications of
the trade-off involved. His overall approach is sound and adequately
addresses the areas of concern.

Compliance with Requirements - (30)

Informatics has indicated close compliance with the
specified requirements of the SOW. He specifically states what will
be provided including the sequence of preparation and anticipated
problem elements to be encountered. The potential line of solution
will be evaluated in terms of cost, feasibility and effectiveness.

Special Technical Factors - (10)

The offeror has some limited experience in studies
concerned with heterogenous computer networks, however, he does not
have any direct working experience with the ARPA Network.

No deviations from the Statement of Work are proposed.

d. Sperry Univac - (65)

Understanding of Problem - (15)

The offeror has a reasonable understanding of the problem.
He seems overly concerned with some of the details of the problem and
has in some instances lost sight of some of the overall objectives of

distributed processing. The problem of distributed data bases has
not been adequately discussed.

Soundness of Approach - (10)

The offeror will study all the areas enumerated in the
Statement of Work. He has a reasonable plan for accomplishing the
end goal of the design of a distributed network. Because of his
somewhat limited network experience he intends to rely heavily on
interaction with RADC to define the specific functions to be studied.
While the problem of distributed control is heavily discussed the
problem of distributed data is not treated as thoroughly.

Compliance with Requirements - (30)

The offeror complies with all the requirements as stated in
the Statement of Work.

Special Technical Factors - (10)

The offeror has had some limited experience in ARPA network
operations. He maintains a very distant host interface on the system
tied to the IMP at the University of Illinois. Some work has been
done on network operation systems but this has been limited to
experimental hardware organization under study at Univac. General
network experience is limited.

This offeror proposes no deviations from the Statement of
Work.

    e. Computer Sciences Corporation - (59)

Understanding of Problem - (15)

CSC has a good understanding of the problems associated
with distributed computation. Each of the areas stated as necessary
in the SOW such as system throughput, frontend processing, and remote
job entry were covered in detail. In particular, the problems
associated with user job transparency which are important to a
practical implementation of a NOS were outlined adequately.

Soundness of Approach - (10)

5

Tech Evaluation

CSC has an approach which includes analyzing the technical
problems and defining a set of hardware/software alternatives to a
distributed computation study. They promised to pay special
attention to critical system function and software components. Also
CSC will address all relevant design aspects. This has a crucial
significance because of the nature of the problem.

Compliance with Requirements - (24)

CSC has shown great initiative in giving an adequate
explanation of the work statement items and has promised to deliver a
report which contains answers to the problems of distributed
computation. All requirements in the SOW were exposed to the light
and no attempt was made to coverup.

Special Technical Factors - (10)

The experience level of CSC has been shown to be adequate
in particular through their work with the prototype WWMCCS
Intercomputer Network.

This offeror proposes no deviations from the Statement of
Work.

3. The following offers are considered non-responsive to the RFP
based upon the proposals submitted.

    a. Auerbach - (55)

Understanding of the Problem - (15)

This offeror through his discussion of the various aspects
of the distributed computation has shown that he has a good
understanding of the problem. They have offered more detail and have
expanded on issues presented in the Statement of Work. This
offeror's discussion is surprisingly good considering the lack of
experience in the specific problem area.

Soundness of Approach - (10)

The three task approach of system architecture,
implementation strategies and resource estimation would address the

6

major issues of the study. Though the approach is adequate the
concern is whether this offeror could carry it to an acceptable
conclusion.

Compliance with Requirements - (30)

This offeror complies with all of the requirements of the
statement of work,

Special Technical Factors - (0)

This offeror has no background experience in computer
networks. Though the offeror has presented an average proposal there
is serious doubt whether the study can be effectively carried out as
proposed. This offeror would require considerable amounts of time
just to acquire the necessary background and develop a degree of
confidence before proceeding to the more advanced issues required to
be investigated in this study.

b. INCO Inc. - (26)

Understanding of Problem - (6)

INCO displays a very shallow or superficial understanding
of the problem. Concepts discussed by this offeror appear to be
disjointed and do not relate to the total system concept to be
investigated under this effort. With the lack of depth displayed in
the proposal it can hardly be believed that INCO can produce the
results required at the conclusion of this effort.

Soundness of Approach - (10)

The offeror's approach is, in this case, not outstanding
nor is it unacceptable. The prime criticism being that significant
time may be consumed in a study of user's requirements and current
network resources. This study of requirements and resources is not
considered critical to this effort; for this approach to be
acceptable expenditures of time in that area should be minimized.

Compliance with Requirements - (6)

The offeror has omitted any reference to the items to be

7

investigated in this study as contained in paragraph 4,1,4, of the
Statement of Work, Though INCO has stated that the problem will be
investigated there is no confidence that such important areas as
"automatic job assignment", "dynamic job relocation" and "network
protocols" will be investigated,

Special Technical Factors = (4)

INCO states that the government needs to provide to the
contracter "considerable amount of information about existing
systems" and provide for "hands on access to the ARPANET and its
resources", Such comments lead to the conclusion that INCO will be
spending an unacceptable amount of time on gaining background
experience, Therefore, the results of this effort would produce more
knowledgeable personnel at INCO but not a study report which would be
of value to the government,

c, Westinghouse (16)

Understanding of Problem (6)

Westinghouse misunderstands the problem of investigating
the aspects of distributed computation, They have stated it to be a
division by classes of computational functions and a subsequent
generation of special architectures, An in-depth presentation of the
problems of distributed computation was not evident,

Soundness of Approach (0)

The Westinghouse approach as stated is not based on a sound
method of attacking the problem, Westinghouse proposes that a DHCCS
computer system be employed to handle the distributed computation
problem, thus limiting the scope of the investigation short of what
is considered essential, Westinghouse does not explicitly state
which approach they intend to pursue, They have presented a
reordering of the requirements of the SOW and state that they will
accomplish them but do not state how to any depth, They state the
importance of solving the security and reliability problem, but not
how they intend to solve it, Their approach of providing at least
one system architecture for each class of operation is totally
incorrect, The SOW requires a set of architectures which covers all

8

classes of operation. The probability of success using their
approach is very low.

        Compliance with Requirements (6)

        The Westinghouse proposal does not indicate how they intend
to comply with many of the requirements in the SOW. For example, the
proposed program is in variance with our requirement that a family of
distributed computation architectures be specified and defended.

        Special Technical Factors (4)

        Westinghouse has moderate experience in networking. Their
experience is limited to data multiplexors, and remote job entry
facilities which have limited applicability to the study required.

    d. Systems Architects, Inc. (14)

        Understanding of problem (0)

        SAI has presented no evidence that it understands the
problems and complexities of distributed computation. The list of
areas including user job transparency, automatic job assignment,
remote job entry, and extensions to network protocols was not even
mentioned. The proposal suggests that SAI knows so little about the
problems of a generalized distributed computation network that they
did not even address many of the critical issues suggested in the
SOW.

        Soundness of Approach (4)

        SAI intends to approach the problem of distributed
computation by extensively interviewing current network users,
compiling a list of network functions, and using these to generate
possible architectures for the NOS. This approach is unacceptable
because it does not take the required approach of considering the
generalized problems of an unknown technology and formulating
solutions to the various components of RJE, file transfer, and
interprocess communication.

        Compliance with Requirements (6)

9

The program proposed by SAI is not in accordance with the requirements of the SOW. The SAI approach of determining functional classes and designing around them cannot produce a meaningful result as long as it does not address the issues raised in the SOW. There is no indication of how SAI will comply with the requirements of determining network architecture which shall be treated as a single processor whose internal processes are made transparent to the user.

Special Technical Factors (4)

SAI has some limited experience in networking but not with heterogeneous computer networks. Their experience is not sufficient to guarantee any degree of success in the performance of the work required.

e. Control Data Corp. - (14)

Understanding of the Problem - (0)

It is apparent that Control Data has missed the objective of the effort. They are viewing Distributed Computation as a minor extension of a computer network. They have lost the complete concept of a network operating system and the dynamic and heuristic characteristics desired in a distributed system.

Soundness of Approach - (4)

Control Data does not provide an approach that would lead to the results desired by the study. Their approach is as if the offeror were being required to design a network without providing a specification. They propose to define a system and then propose implementation. This was not what was desired. The in-depth analysis and insight into the basic problems of distributed computation cannot be achieved by their proposed aproach.

Compliance with Requirements - (6)

Task 1 and 2 as proposed by Control Data are not requested services in the SOW. Task 3 does not meet the requirements as delineated in Section 4.1.1 and 4.1.2 of the SOW. The contractor does not propose to attack the problems detailed in the SOW. The offeror proposes a level of effort at 1100 to 1140 hours. It would

be impossible for this offeror to deliver a useful product with this low effort level.

Special Technical Factors - (4)

Most of the Control Data experience has been limited to providing computer services in this for a computer utility network. Their expertise seems to lie in engineering large systems which may or may not utilize more than one processor. They have little experience in distributed computation in the context of the ARPANET.

f. Boeing Computer Services (BCS) - (10)

Understanding of the Problem - (0)

The contractor indicates that a portion of the effort will be expended in a technology review (Task 1) of networking concepts, mini computers, communications and telecommunications. This task was not a SOW requirement, would expend most of the projects allotted manhours, and would not contribute significantly to the effort. This is an example of the contractor not appreciating or understanding the major areas of interest.

It is evident from the proposal that the contractor is not familiar with the detailed aspects of the problem and has shown less than minimum satisfactory effort in its preparation, therefore, based on the contents of the proposal, the contractor could not generate a satisfactory product.

Soundness of Approach - (4)

The offeror generally restates the requirements given in the statement of work without adequate amplification or discussion of the approach he intends to use. He is placing heavy dependence on RADC to restate and explain the requirements in detail after contract award thus implying that they lack experience and do not have sufficient confidence or background knowledge to initiate the effort.

Compliance with Requirements - (6)

Contractor indicates that he will comply with the requirements, however, there is no significant discussion pertaining

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Tech Evaluation

to each requirement area. Therefore, the contractor's ability to
comply SOW requirements involves considerable risk.

      Special Technical Factors - (0)

      Offeror does not have any experience with a heterogenous
network as required for background experience in the office.
Although contractor has developed a homogeneous computing service
network, no experience is evident for the ARPA type heterogenous
networks.

      Qualifications Based On Offeror Data (Unsatisfactory):

      Contractor is not committing fully qualified experienced
people to work on this effort. The individual they plan to use full
time is a 1974 graduate having six months experience with the
company. Principal investigator with better qualifications will work
only part time. Since this effort requires experienced and very
competent personnel, the chance that the contractor could provide a
good product is remote. Also, since he is using an inexperienced and
probably low salaried new employee to perform the bulk of the work in
this effort, he could underbid other offerors who intend to furnish
qualified people.

THOMAS LAWRENCE   2 Atchs
Computer Architecture Section   1. AFSC 66
Computer Technology Branch   2. Proposals

      MURRAY KESSELMAN
Computer Architecture Section
Computer Technology Branch

      LEON PANAS

12

Tech Evaluation

Computer Architecture Section
Computer Technology Branch

        MICHAEL WINGFIELD, Capt, USAF
Information Management Sciences Section
Information Processing Branch

13

Tech Evaluation

(J31737) 30-JAN-75 05:32;;;;   Title: Author(s): Roberta J.
Carrier/RJC; Distribution: /TFL([ACTION]) RJC([INFO-ONLY]) DRL2(
[INFO-ONLY]) ; Sub-Collections: NIC; Clerk: RJC;   Origin: <
CARRIER, TMEMO.NLS;2, >, 27-JAN-75 08:12 RJC ;;;;   ####;

Thanks for numbers

Thank you. As you can tell I am using them. This may be your first
mezxsage via computer from Grenage Village. I don't know whose boobs
ar involved, but the temperature here is about like there, which
makes it nice.   1

Thanks for numbers

(J31738)   30-JAN-75 06:12;;;;   Title: (Unrecorded) Title:
Author(s): Dirk H, Van Nouhuys/DVN; Distribution: /JAKE([ACTION]) ;
Sub-Collections: SRI-ARC; Clerk; DVN;

Oh, COM not NVT

I realized later that I had seen COM and heard NVT in my mind, You
must have thought my response crazey. The question of Network
virtual COM requires more thought. I will send you a considered reply
early next week when I am back at ARC   1

Oh, COM not NVT

(J31739)   30-JAN-75 06:18;;;;   Title: Author(s): Dirk H. Van
Nouhuys/DVN; Distribution: /JOAN([ACTION] docs notebook please) LAC(
[INFO-ONLY]) JPB([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk:
DVN;

FY 76 AMC Use of Office

MEMORANDUM FOR RECORD

1

SUBJECT: Management Information Systems Directorate Use of OFFICE-1
During FY 76 and Related Matters

2

DATE: 29 January 1975

3

1. On Monday, 27 January 75 an informal meeting was held between Mr.
John Gilbert, Director of Management Information Systems, Mr. John
Cianflone, Chief, Resources Division, and Dr. Ronald Uhlig, Chief,
Scientific and Management Information Division. Mr. Gilbert made the
following decisions regarding use of the OFFICE-1 facilities by this
Directorate during FY76.

4

2. Mr. Gilbert said that we would purchase a slot at OFFICE-1 for this
Directorate for FY 76 and that Mr. Cianflone should budget accordingly.
He also said that Mr. Cianflone should plan to obtain terminals for use
within the Directorate as follows: One hardcopy terminal and two CRT
terminals for each Division, and one hardcopy terminal and two CRTs for
the "front office". Anticipated use of the terminals would be that the
Division Secretaries would use the hardcopy terminal, the Division Chief
would use a CRT and one additional CRT terminal would be available to
share among the action officers within a Division. The "front office
use would be that the hardcopy terminal would generally be for the two
secretaries and the CRT terminals would be for the Director and the
Deputy Director. The total number of terminals for the Directorate
would be 8 CRTs and 4 hardcopy terminals. Generally, all of the
terminals should be portable.

5

3. In addition to budgeting $40K for purchasing a slot at OFFICE and
additional funds for obtaining the terminals (the terminals currently in
use are leased using the RDT&E Funds obtained for the "SNDMSG
Experiment"), funds would be needed for paying an appropriate share of
AMC HQ use of the ARPA node at MERDC. This would probably range between
$20K to $40K, depending on whether HDL would be sharing in use of the
node during FY 76 and what the node costs during FY 76 turn out to be.

6

4. Use of mailboxes within the Directoate was seen to be as follows:
one mailbox for each Division Chief, one mailbox for the Director, one
mailbox for the Deputy Director, and one mailbox assigned to each
Division for general use by action officers within that Division, for a
total of eight mailboxes. A maximum of ten mailboxes can be made

FY 76 AMC Use of Office

available within each slot.

7

5. We will also attempt to generate interest on the part of two other
groups within AMC in buying separate slots. These groups are the MSC
ADP Chiefs, and ten individuals from the SECC. ALMSA and LSSA would tie
in with the MSC Chiefs. The cost to each individual would be between
$4000 and $5000 per year, which should be possible within their budgets.
Mr. Gilbert will discuss this with the MSC ADP Chiefs when he meets with
them next month, and Dr. Uhlig will discuss this with some key
individuals in the SECC. In the event that the MSC chiefs are unable to
obtain a separate slot ALMSA and LSSA would share in the AMC
Headquarters slot.

8

6. Mr. Cianflone stated that he was planning on paying $10K as the AMC
Headquarters share for use of the MERDC ARPA net node. However, if
customers could not be found to make up the difference, AMC might have
to pay the entire $52K owed for FY 76. Mr. Gilbert stated that if AMC
was paying at that he level, he wanted MERDC to make sure that the ANTS
System would be up 24 hours per day/7 days per week.

9

Ronald P. Uhlig   10

2

FY 76 AMC Use of Office

(J31740) 30-JAN-75 06:20;;;;   Title: Author(s): Ronald P, Uhlig/RPU;
Distribution: /AMC-MIS([INFO-ONLY]) ; Sub-Collections: NIC AMC-MIS;
Clerk: RPU;   Origin: < UHLIG, OFFUSE.NLS;4, >, 29-JAN-75 05:45
RPU ;;;; ####;

ESTIMATE OF PROPORTIONS OF MY TIME SPENT LAST 2 1/2 WEEKS AT ARPA

Estimates compiled at JHB's request

ESTIMATE OF PROPORTIONS OF MY TIME SPENT LAST 2 1/2 WEEKS AT ARPA

ESTIMATE OF PROPORTIONS OF MY TIME SPENT LAST 2 1/2 WEEKS AT ARPA: 1

   Formal Training: <5%>   1a

      Note--only one class so far. But much more is being scheduled
      for the future.   1a1

   Direct Assistance, specific applications: <30%>   1b

      Hardware, TIP, network problems: <30%>   1b1

         Note--Hardware: DNLS Workstation problems. Both Connie and
         I hope these stop soon: 1b1a

            One bad Delta Data   1b1a1

               Serviceman has been here twice but it still is broken.
               Connie may agree to receive a Data Media instead and
               send the Delta Data back to SRI to let Martin deal
               with its repair.   1b1a1a

            One bad Line Processor   1b1a2

               Martin is mailing a replacement card for it.   1b1a2a

   Documenting, scenarios, handouts: <30%>   1c

   Misc, administrative, reading mail, etc: <5%>   1d

   Do not take this as having any bearing on how my time will be
   spent in the future (I hope): See Notes above.   1e

ESTIMATE OF PROPORTIONS OF MY TIME SPENT LAST 2 1/2 WEEKS AT ARPA

Prof, Samuelson's Visit

I would be interested in meeting Professor Samuelson if he comes
to ARC, In addition to working at SRI, I am a graduate student in
communications at Stanford, and I am interested in NLS's capacity as
an information retireval system or front end,   1

\ ...

Prof, Samuelson's Visit

(J31742)   30-JAN-75 08:12;;;;   Title: Author(s): Raymond R,
Panko/RA3Y; Distribution: /JAKE([ACTION]) RA3Y([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: RA3Y;

When and how will the user-subsystem "Modify" be available at
Office-1? It is needed at ARPA for a special application, for
funding tables. This subsystem was announced in <JOURNAL, JRNL24,
J25187>, but it is not in the <PROGRAMS> directory at Office-1, so
cannot be loaded. Neither is PUBLISH. When they are available as
user-subsystems (I guess when the version of NLS at ARC is moved over
to Office-1), should access by users be:
        Goto (subsystem) Programs
        Load Program XXXXX
        Goto (subsystem) XXXXX   ?   1

Capabilities announced in--25187,>--Usersubsystems availability

(J31743)   30-JAN-75 09:03;;;;   Title: Author(s): Jeanne M. Beck/JMB;
Distribution: /FDBK([ACTION]) ; Sub-Collections: SRI-ARC FDBK;
Clerk: JMB;

Acknowledgement of (31734,) - Net trouble

Your message was received and will be kept filed in the feedback file
as a registered complaint. Thanks for the input - sometimes people
have a hard time understanding how people feel out on the net and
messages like yours help. Susan/FEED   1

Acknowledgement of (31734,) - Net trouble

(J31744) 30-JAN-75 09:46;;;; Title: Author(s): Special Jhb
Feedback/FEED; Distribution: /JHB([INFO-ONLY]) DAP([INFO-ONLY])
; Sub-Collections: SRI-ARC; Clerk: FEED;

Acknowledgement of (25242,) and (25241,)

Both bug reports were received and have been put in the bugs branch
of feedback, Susan/FEED   1

Acknowledgement of (25242,) and (25241,)

(J31745)   30-JAN-75 09:49;;;;   Title: Author(s): Special Jhb
Feedback/FEED; Distribution: /POOH([INFO-ONLY]) ; Sub-Collections:
SRI-ARC; Clerk: FEED;

Follow up on KSH for info, re a U,S, mail-order house having
difficulties that might be alleviated through the use of an Automated
Order Service, such as that operated by Sears in Toronto,

1

Michael T, Bedford
Supervisor=Business Planning

H.Q. Planning
Bell Canada

TO: K.S. Hoyle, Assistant Vice-President, Planning

Interest Expressed By Northwest Tel.
Re Sears Ltd.'s Automated Order Service

I talked with Northwest Tel's. Peter Beckman about some of the
problems that the mail-order house of Fingerhut Corp. were having.
Specifically, we mentioned the problems that were outlined in the
FORTUNE article, namely the rising costs experienced by Fingerhut as
a result of increased postage costs, increased number of customers
defaulting on contractual obligations, and increased inventory costs
for unsold merchandise.   2

    P.M. Beckman
    District Sales Manager
    Northwest Tel. and Tel.
    224 S. Fifth Street
    Minneapolis, Minnesota   55402
    (612) 344-5158   2a

I told him of what Sears Ltd. was up to in the way of Automated Order
Services. He seemed very interested, but indicated that Fingerhut
had not thought about anything like that (despite the fact that they
already have a large INWATS network across the U.S.).   3

Peter was interested in hearing more about Sears' A.O.S. work,
indicating that he would like to discuss the possibility of a similar
venture with both Fingerhut and Montgomery-Ward.   4

I'm sending him a package of the press releases that accompanied
Sears' entrance into this venture, along with some of this
department's work in related areas.   5

After reviewing what I send him on the Sears work, and after
exploring it with the Wards people, Peter is going to get back in
touch with me. In any case, I will follow this up in about four
weeks.   6

                                                                     7

Michael T. Bedford   Page 1
Supervisor-Business Planning

Follow up on KSH for info. re a U.S. mail-order house having
difficulties that might be alleviated through the use of an Automated
Order Service, such as that operated by Sears in Toronto.

(J31746) 30-JAN-75 10:15;;;;   Title: Author(s): Michael T.
Bedford/MIKE; Distribution: /KSH([INFO-ONLY]) LHD([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: MIKE;

testing journal to TEH

this is a test message to ident TEH to test whether feedback have
cured the problem,   1

testing journal to TEH

(J31747) 30-JAN-75 11:42;;;; Title: Author(s): Keith McCloghrie/KM;
Distribution: /TEH([INFO-ONLY]) KM([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: KM;

more net trouble

for the record

DAP 30-JAN-75 12:11   31748

more net trouble

In reward for your prompt aknowledgement of yesterday's m,message,
here's another: around 10:45 PST today we couldnt get to OFFICE-1 at
all...reached ARC just fine.   1

more net trouble

(J31748)   30-JAN-75 12:11;;;;   Title: Author(s): David A, Potter/DAP;
Distribution: /FEEDBACK([ACTION]) ; Sub-Collections: NIC FEEDBACK;
Clerk: DAP;

draft of a letter to speakers inviting them to Tues, supper

this draft is for review by lhd, with copies for info to piw,imm,

draft of a letter to speakers inviting them to Tues, supper

Dear Speaker,   1

On behalf of the organizers of "Technology and Growth", I would like
to invite you to a special supper being held for the speakers (and
spouses or guests, if accompanying them in Ottawa) on Tuesday
evening,   2

In order to provide you with an opportunity to meet the other
speakers in a relaxed and informal atmosphere, the organizers have
arranged for supper to be served after the evening reception, This
supper will be served at *** o'clock in the ### of the Carlton Towers
Hotel, (Limited seating accomodation dictates that only the speaker
and his respective guest be included in this invitation,)   3

I expect that most of the speakers will be attending this supper, and
consequently, no confirmation of this invitation is required, I am
looking forward to your company at supper, and hope you will be able
to attend,   4

Yours sincerely,

Lawrence H, Day
Conference Co-Chairman   5

1

draft of a letter to speakers inviting them to Tues, supper

(J31749) 30-JAN-75 12:33;;;; Title: Author(s): Michael T.
Bedford/MIKE; Distribution: /LHD([ACTION]) PIW([INFO-ONLY]) IMM(
[INFO-ONLY]) ; Sub-Collections: NIC; Clerk: MIKE;

slide presentation of MIKE for conference (March 10-11, 1975, right
?)

this s not complete.......10 slides on the technical results are being
made up separately.....any comments ? (I know, I know, I spelled
Forrester's name wrong.....I think I'll leave that slide
out....'Forster' ¦)

slide presentation of MIKE for conference (March 10-11, 1975, right ?)

slide presentation of MIKE for conference (March 10-11, 1975, right
?)

slide presentation of MIKE for conference (March 10-11, 1975, right
?)

slide presentation of MIKE for conference (March 10-11, 1975, right
?)

searching for relevant questions will increasingly concern us   18b

An Alternative Methodology for Technology Assessment   19

How can we upgrade the classical technological forecasting
methodology to better reflect the concerns found in Technology
Assessment programs ?   19a

An Alternative Methodology for Technology Assessment   20

methodology geared toward the exposition and exploration of
relevant issues   20a

methodology with the aim of inputting to the process of resolving
the issues, rather than resolving them directly   20b

An Alternative Methodology for Technology Assessment   21

solicit inputs from a variety of interest groups   21a

recogninize that there are no experts in most areas   21b

An Alternative Methodology for Technology Assessment   22

bring new insights to light through stimulation of interest groups   22a

emphasis on conflict generation rather than development of
consensus   22b

An Alternative Methodology for Technology Assessment   23

encourage dialogue and controversy through use of semi-structured
questions, rather than multiple-choice,   23a

An Alternative Methodology for Technology Assessment   24

slide presentation of MIKE for conference (March 10-11, 1975, right
?)

slide presentation of MIKE for conference (March 10-11, 1975, right
?)

slide presentation of MIKE for conference (March 10-11, 1975, right
?)

(J31750) 30-JAN-75 13:19;;;;   Title: Author(s): Michael T,
Bedford/MIKE; Distribution: /PIW([INFO-ONLY]) LHD([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: MIKE;

More on (31724,) questions

Thanks for looking into the problem on ident TEH - I will let you
know what results. As regards the ctrl-R problem, I inserted the by
typing ctrl-V followed by ctrl-D (note that while typing this message
in, a cntrl-R typed now does not display the two lines above). This
happens all the time in this kind of situation (but not in a Print
command). I have tried it in other directories and under different
idents and the same happens. Perhaps we can link our terminals
together "and I will demonstrate. I have set up file
(mccloghrie,process) with two statements - one with a space in front
and one without. Perhaps you can try these. I do believe that you
could not get the 'File locking conflict' to occurr - I mentioned it
because it was the second time it had happened to me but I agree that
it does not consistently happen.   1

More on (31724,) questions

(J31751) 30-JAN-75 13:20;;;; Title: Author(s): Keith McCloghrie/KM;
Distribution: /FEED([INFO-ONLY]) KM([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: KM;

offquota

The new offquota allocation scheme stinks! NSA purchased 1 slot with
the understanding that if another slot was unused, it was available
as needed. It is assumed that this allocation scheme will allow the
maximum utilization of the Knowledge Workshop Technology.   1

Under the new scheme, the cutoff point is when the load factor
reaches 6. This load factor does NOT affect the response time for
TNLS users unless they execute heavy CPU bound commands (output
processor, etc.).   2

If user response is suffering do to heavy load factors I suggest you
restrict the use of cpu bound commands to low load time frames rather
than dumping the user.   3

What is more agrivating is that the situation is temporary. As the
slots become more used, offquota will dissappear, and the loading
factor will still remain unless hardware/software modifications are
made to reduce the problem.   4

The klinker is that the new scheme doesn't work as advertised. We
were locked out numerous times yesterday when the load factor was 3
or less and only 17 to 19 jobs were running.... Go back to the old
method, and work on increasing efficiency instead.   5

Jess Hill, COTR   6

offquota

(J31763) 1-FEB-75 06:59;;;;   Title: Author(s): Jesse N. Hill/JNH;
Distribution: /FEED([ACTION]) JCN([ACTION]) CKM([INFO-ONLY])
TEH([INFO-ONLY]) KM([INFO-ONLY]) THP([INFO-ONLY]) RWM([
INFO-ONLY]) ; Sub-Collections: NIC; Clerk: JNH;   Origin: <
HILL, OFFQUOTA.NLS;2, >, 1-FEB-75 06:48 JNH ;;;;####;

Suggested Topics for Architects Meeting

Please try to respond by the middle of this week so that I can send
around a tentative agenda by Fri. or Mon.

Suggested Topics for Architects Meeting

Here are some additional suggested topics for the Architects' Meeting
which is being held Feb. 18-21. Please send comments and I will then
send around a revised list. Frank   1

Suggested at last KWAC Meeeting   2

    What the new ones (KWAC-ers) have experienced   2a

    Feedback in NLS 8   2b

    Possibly workshops on specific problems   2c

Suggested by JCN   3

    Talks of specialized use of NLS by some architects   3a

    Potential system additions desired by KWAC collectively   3b

    Plans for further expansion of the user community   3c

Suggested by FGB   4

    Getting Acquainted   4a

        New Sits: Who/Where are they? What are they doing? When/Why are
        they coming on?   4a1

        Old Sites: Something like the new sites plus last 6 months in
        review   4a2

        Newsletter Revisited: Put one out as "meeting notes" so we will
        publish at least one issue this time around   4a3

    Expansion of Office-1 facilities   4b

        For example, can a teleconferencing package be made available. 4b1

    Integrating NLS into local site operations.   4c

        For those sites willing to share experiences, what does
        effective NLS use require in terms of people support,
        documentation support, hardware support (e.g., hi-quality
        printers, cassettes,..), etc.   4c1

    Improving the Effectiveness of KWAC   4d

        Each of us are probably doing things of interest to others
        (e.g., writing user programs, coordinating the production of

1

documents, etc.) Can we take another crack at establishing a
better mechanism for information exchange?   4d1

There is also the old problem of establishing user idents and
possibly getting them validated for one directory or another,
And then, I imagine one must remove idents from time to time.
Why can't the local Architect be responsible for this?   4d2

Improving the Effectiveness of Office-1   4e

At any given time, one may encounter difficulty in determining
what is at Office-1, what will be available , and what is going
away. Suggestions ?   4e1

The NSW and NLS   4f

More on the Back End/Front End NLS split and any implications
this may have for NLS users.   4f1

Future NLS expansion & to what degree can KWAC affect this?   4g

Miscellaneous   4h

Improved access to NLS (e.g., via a commercial net)   4h1

Alternative pricing schemes   4h2

DEX over the Net (& how it compares to having very large
buffers available in your TIP,ANTS,ELF or whatever)   4h3

Specific Problems   4i

My own involve integrating NLS into our local site operations
and using NLS to cooperatively produce documents (where the
cooperators are geographically dispersed and have varying
degrees of expertise in NLS). If you all will send me
additional topics, I'll try and work up some sessions to
discuss them in.   4i1

Suggested Topics for Architects Meeting

(J31764) 1-FEB-75 13:52;;;;   Title: Author(s): Frank G, Brignoli/FGB;
Distribution: /KWAC([ACTION]) ILA([INFO-ONLY]) RJM2([INFO-ONLY
]) CMC([INFO-ONLY]) LAH([INFO-ONLY]) PRB([INFO-ONLY]) ;
Sub-Collections: NIC KWAC; Clerk: FGB;

1st DRAFT OF KWAC MSG

Ron-
   I have a draft of message in my NOTEBOOK file that I would like
you to ok. It is located at address SCRATCHPAD.d - or 3a, if you
prefer.
   Please give me your comments.   Ed vonGehren   1

1st DRAFT OF KWAC MSG

(J31765)   1-FEB-75 21:01;;;;   Title: Author(s): Stan M, Taylor/SMT;
Distribution: /RPU([ACTION]) BRL([INFO-ONLY]) ; Sub-Collections:
NIC BRL; Clerk: SMT;

Thanks for answers in (31760,)

Thanks Susan. Ident TEH now has no problem receiving journal mail and yes, name delimeters is the obvious answer to my Process command problem - I should have thought of that myself. One other query - is there anyway to find out the distribution of a journal mail item ? Keith,   1

Thanks for answers in (31760,)

(J31766)   3-FEB-75 06:23;;;;   Title: Author(s): Keith McCloghrie/KM;
Distribution: /FEED([INFO-ONLY]) KM([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: KM;

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AGENDA FOR DR. WALTER BEAM'S VISIT TO RADC

DATES: 18 - 19 December 1974

18 December

0900   Arrive by military air

0900-1000   Welcome, Meet with Division Chiefs & Commander

                Topic: Dr. Beam's View of C3 (No RADC Overview)

1000-1200   Information Sciences Division

1200-1300   Lunch

1300-1330   Executive Session with Commander

1330-1630   Information Sciences Division

19 December

0830-1130   Information Sciences Division

1130-1230   Lunch

1230-1630   Communications & Navigation Division

1630   Depart by military air

Dr. Walter Beam - Consultant for Advanced Technology - SAFRD

Mr. Charles Porter - USAF/RDPS

Maj Ron Starbuck - USAF/RDPE

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Maj William Patterson - AFSC/DLCE

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INFORMATION SCIENCES DIVISION

TENTATIVE AGENDA

18 December

1000	Overview	Col Robert Krutz
1015	Introduction to Software Area	Mr. Dick Nelson
1025	HOL Control and J73 JOVIAL	Mr. Sam DiNitto
1200	LUNCH	
1300	Executive Session: Dr. Beam with Col Giesy	
1330	Software Sciences Program	Mr. Dick Nelson
1500	Software Management Program	Mr. John McNamara
1900	DINNER	

19 December

0830	Computer Architecture	Mr. Jim Previte
0945	Pattern Recognition & Computer Graphics	Mr. Dick Metzger
1045	Pattern Recognition Demonstration	Mr. Dick Metzger
1115	Executive Session: Dr. Beam w/Col Krutz & Mr. Barnum	
1130	LUNCH	

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Notes on Dr. Beam's Visit......18, 19 December 1974

The following are comments from Dr. Beam unless otherwise noted.
They are not actual quotes, but rather summary of comments which
reflect his views or philosophy.

Col Krutz's Presentation

*How to insure your visibility as Info Sci focal point - PR
type?

*Any contact with Gunter? Grace Hopper thinks they are using
good techniques to write software. Bob Scherr thinks
different "living in sin". Grace's success is being able to
get COBOL accepted for business application. APL and BASIC
successful due to too easy not to use. B-15 has 54
modules--all but 2 in assembly language - not the way to go.
We are ones that can get HOL accepted.

*You will lose if you are not in main stream. Need to stress
strategy for getting in main stream in the software area. I
would like to discuss this further. You must steer; steer Air
Force and the contractor at the same time.

*If this lab can spec main system, can probably do this area
more good than any other approach.

*NELSON: D&F of $100,000 create problems. BEAM: Not too much
limitation if D&F process flows. I and my boss are committed
to make this flow by making the D&F route a lot easier. Can,
also for instance, group all JOVIAL task under one D&F. Must
have good D&F, though. PANARA: Class D&F problem. BEAM: Must
use class D&F if separate procurement. But can do it.

*Missing one block in flow chart. Filter and Coordinate
between "evaluate" and "decide." This is where we are having
problem.

*I am interested in controlling architectures and to establish
a common, central "set" of software to interface compilers to.

*Would like a background paper on J3 (WWMCCS) including life
cycle costs.

*Keep up in-house capability

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> *Mentioned need for a different look at the design language to
> see if it can handle parallel functions, not sequential.
>
> *Harry Davis is in parallel processing (e.g. STARAN) for target
> tracking.

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Dick Nelson's Introduction to DiNitto's Presentation

*I am collecting documents on Software area, Would appreciate
any useful inputs (e.g. CCIP-85, Monterey Conference),

*NELSON: Productivity--Ratio of 4 to 1 difference for language
against 25-1 for individual productivity, BEAM: I have seen
figure 10:1 APL: Fortran, NELSON: Can understand that,

*Add to Buzzward: Life Cycle Cost, Even if we have to increase
the acquisition cost to reduce the life cycle cost,

*Introduce one "silver bullet" at a time, There are no
panaceas in the software area, Too dependent on people, Must
improve people aspects,

*Mgt has need to get answers on short notice and better answers
than now available in regard to software costs, STARBUCK: No
place in AF today can this be achieved, BEAM: No place
anywhere, But needed very bad, If you can get such a facility
and answer these critical questions occasionally, then people
will give you a number of million of dollars to play in your
sandbox,

*TOMAINI: See lots of reliability in hardware but not
software, BEAM: Not a similar analogy due to faultless
programming versus errors in software, TOMAINI: The problem is
in undetected errors, BEAM: Agree,

*Need presentation and vugraphs with more zip,

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Sam DiNitto's Presentation

*To Do: Buy software for some project and give them to show them results, i.e., Technology Demonstration.

*Two jobs: (1) Convince mgt of correctness of approach. (2) Convince people to use it.

*Another problem with compilers: Lack of diagnostics. I think this held back PL/1.

*Another problem: Proliferation of computer architecture. I'm as worried about this hardware architecture proliferation as I am of the software.

*DINITTO: JOVIAL had no I/O. Included FORTRAN like I/O in J3. BEAM: Why FORTRAN mentality. FORTRAN has poor I/O. NELSON: WWMCCS was factor. DINITTO: They were familiar with this type. Doesn't affect run time if not included.

*Compiler alone for a target computer will not convince people to use language. There are other aspects, such as debugging aids. I don't know what all would be included here, but we must do full job. What can be done? Must try to design aids with as much commonality as possible for various target machine. Old story: Complex system include operating system and other parts. DINITTO: Will cover some of these this afternoon. BEAM: Probably should have a list of what people think assist their efforts. Then study list and add others to find items to concentrate your efforts.

*Interactive compiling is no good. Programmers are poor typists. Better to have coding forms and then input. But still interaction is good. People who use it, like it. Would like to see how you use interaction.

*The FORTRAN default to use a single index to get at a doubly scripted array is bad. DINITTO: Not in J73. User wanted but we threw out. BEAM: User sometimes still want things to get them in trouble. One success of COBOL is its necessity to spell out details.

*NELSON: Committee approach to language design is bad. BEAM: But committee refinement is good. But really no good method to assure the design of a good language. NELSON: Hoare has also said no really good method.

*Having a place to go to order compiler is necessary. Must do

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job to demonstrate this capability. e.g. small SPO, critical
job, no resources. Do for him.

*I am worried about hardware architectural proliferation which
seems to be taking off like a missile.

*Software problem suffers from fact it is so immense that no
one can get their arms around it.

*Regulation of language is contrary to military men in Command
and Control who want flexibility to make decisions. Especially
bad problem in Navy.

*Tremendous opportunities in software area. Problem is to get
to it. Must consider critical decisions at critical times.

*We seem to be lacking a plan as to where we can go with these
concepts and plans. Need a five year or seven year plan.
NELSON: Thought you would never ask. Here is a five year draft
plan.

*Start with premise: Minimizing number of languages is a good
thing. Do we all agree. ALL: Yes. PATTERSON: Not sure one
is proper figure. BEAM: For IBM 5 is proper number. FORTRAN -
Traditional, APL - they want, COBOL - necessary, RPL - ?
Assembly - because they let user fiddle with system. When I
left, about 70 compilers though. No one wanted to introduce
new language due to cost.

*It doesn't appear that JOVIAL has any feature which makes it
better address real time situations. NELSON: We can show some
comparisons.

*Work in such areas as Compiler Implementation Tool not totally
lost even if go to something like CSM-4. Concepts valid even
if not detail. Need to get across view of general, yet must
tie to specific.

*There is the extensible language facility at Harvard. If
Cheatham has interesting results, must study independently to
see what merits for us.

*Let me say, I think what is complete programming environment.
Best example Burrough B5500. Integrated architecture and
language. Twelve people etc. System lasted 10 yrs. But are
we talking 400 people working on bits and pieces.

*Let small group of very bright people do tools, i.e.
innovations.

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    *Reiteration of Philosophy: Visibility, recognition, selling,
    building on what you have.

    *In talking inadequacy in languages, might mention FORTRAN was
    developed in 1958. I really think it developed too early in
    computer history for full development.

    *Commercial data processing: compiler modification NO-NO. You
    will eventually have this problem too.

    *Performance timing shown to be bad for long-life system. I
    don't like this as reason for developing new language. As
    consultant, used to say don't tune past a certain point.

    *Macros is an add-on that are only nice to have. Question is
    whether you control programmer by telling him what to do with
    Macros or restrain him in programming languages.

    *A key question is: How many places are there with skilled
    JOVIAL programmers. NELSON: Quite a few. Some with dialects
    of J3.

    *DINITTO: An advantage is control of language. BEAM: That's
    what IBM said about PL/1.

    *Say "the Air Force needs to maintain HOL Control and the
    easiest way to control a language is to have its own" rather
    than say "the Air Force needs to maintain its own HOL."

    *You guys watch DAIS. Else they may go off course. What is
    this I hear about a new developmental computer (directed to
    DAIS representative.) Trainer (DAIS project Repr) I hope not.
    We are also striving for standardization.

    *I want to be an advocate of language control. Want to be your
    emissary on this as I visit people all over the country.

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Nelson's Presentation

*A great deal of things you have to do in this area do not
sound exciting. Problem is people going Ho-Hum on you. PR guy
must say for instance: no error data exists for JOVIAL code of
n thousand lines. Extra costs XSM. Must do something.

*One of more interesting things: Where are errors found? This
can tell you where to put effort. NELSON: We are doing this.

*Things you want to test more thoroughly are those items which
will not be used often. If used frequently, testing will
naturally occur in use.

*Need probability and deterministic view and need to marry
these views.

*I don't know whether treating software errors like hardware
errors have any validity, particularly if we understand
problem.

*Case study information is useful and should be included in
your presentation. Would be nice to get good example of
software errors causing malfunctions or real problems. If
example relates to another study going, would help

*Might be interesting to have Grace Hopper up.

*Syntax of a programming language is a natural language
(English type) statement. Not convinced that systems are that
way. We draw flow with boxes, etc.

*Programmers are as provincial as anybody. I fear that if we
lock design languages to DO,,,WHILE,,,, type descriptives, we
are leading programmers to continue to think in nested
iteration etc. This may not be what we want with different
designs of computer systems. Analogy in hardware in that
system is composed of CPU plus peripherals; we would object if
description of system only concentrated on memory.

*Reliability means something different in software than
hardware. Perhaps a better term is "Effective Error Control."

*In reference to structured programming, I like the word System
Analyst instead of Chief Programmer.

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John McNamara's Presentation

*Disagrees strongly with on-line preparation of program. But good scheme is to put on coding sheets, typists enters, and then interacts to compile.
Group--(after discussion) Generally agree. Method of input not important
What is important is on-line edit, debugging, etc.

*If you give programmer all tools, he can't use all day--too high an individual activity for 8 hours a day; can only use to a certain point.
Thus strive for optimal use of tools.

*Suppose contractor has all available tools, but his programmers produce lousy code. I know there is no absolute standard; but how do we handle this.

*We may have to think about this: Mutual criticisms of practice or someone in AF who does subjective view of code and assigns merit.
Perhaps can do by sampling small segments. Going to be needed to qualify software vendors. TOMAINI: We were thinking of plans for qualifying software vendors to SPOs.

*We do prototype in hardwares. Why not in software? Out of range?
NELSON: Must have 30,000 lines of code; time period to take over 1 year, involve 8 or more people. Too expensive. BEAM: Can you pay for one?
NELSON: No one wants to pay for second. STARBUCK: Big systems must be supported by SPOs. Not really that kind of money in R&D.
BEAM: Ought to keep eye out for suitable system to try to do something.

*DAIS are people like yourselves. Must put near operational requirements.

*Would you kindly think of C3 function in concept of network.
I am not convinced that ARPANET is suitable for C3. REPHRASED:
For tactical C3 need redundary or distributed memory and facilities. ARPA network is extremely democratic network. Should it be used?

*Incumbent on us to be alert on C3 due to problem.

*Maybe during next year we should address question of whether it is costing us more to avoid problems we can solve by using

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machine with modern computer techniques such as virtual store,
etc. Particularly as regards third generation computer system.

*You have to work at several levels; (1) technology and
scientific level, and (2) regulation level. I think software
is more regulation than science.

*PDP-10's have not been demonstrated to be efficient file
handlers.

*I have personal doubts if NSW type operation can serve
productive programming shop although useful for occasional user
or research user.

*If doing this later, might put all tools at one location
rather than sending data. Communications costs are not going
down as fast as hardware costs.   MCNAMARA: Other point is
software development cost for tools.   BARNUM: Operating
systems for different computers don't support all of these
tools.   BEAM: They have to if they want to sell computers.
BARNUM: But when?

*Are you in DBMS?   MCNAMARA: Lot of effort but now getting
out.
BARNUM: Basically people thought the AF didn't need to
support, industry could.
BEAM: Without commercial motivation, will always have
specialized expensive system. But not pleased with IBM
efforts.
Am not impressed with IMS approach (hierarchical, pointer type
approach).
STARBUCK: Even Congress indicated get out.   BEAM: May be best
to sit out awhile.

*I hope someone is looking at future requirements and what
future systems might include in way of capabilities.   TOMAINI:
Too many "now" organizations like JTSA without looking ahead.
TOMAINI: CCIP-85 to staff, but not agreed on. If can get
agreement on part of it, should publish to industry.   BEAM:
Political situation makes it difficult to dictate to industry.

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Jim Previte's Presentation

*Crying need for single instruction stream with parallel
processing for a variety of military requirements. You have
best focal point. That is, think more in terms of parallel
processing rather than content addressability.

*I think micro-processor technology has made the time come for
associative processing. I am most anxious that you remain on
top and be consultant to all in Air Force on this; be focal
point for Air Force.

*Must compare cost for associative processing with IMS
structure on conventional memory in order to avoid error of
judgment; i.e., look at cost of AP over on IMS equivalent.

*Management Information Systems were a disaster, which
adversely affected DBMS.

*Cost AP processor for AWACS vs 4-PI. Cost trade off where AP
advantageous is about cross over for performance on chart.

*General comments on importance of AP

*RADC should be having interaction with Army regarding use of
AP in tactical situation.

*There is too large a segment of people who are saying new
problems require new architecture. This is not so.

*Not clear as to what primitives are in configurable processor.
The configurable processor is not everything to everyone.

*Big problem in system design is partitioning hardware and
software. *PREVITE: Configurable processor is aimed for
hardware/software tradeoff.

*Essentially configurable processor is a series parallel
process which can collapse algorithm. I see as "Configurable
Calculator". I don't seek data formatting, data transfers,
etc. Maybe you should call it a "Multiple Function Series
Parallel Processor".

*You got to be extremely careful that you don't come up with
something which can be done better simply. Must not pick
sample problems which can be solved easily; e.g., you're
convinced that configurable processor is way of doing it when
it really can be done with a single chip.

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*There are stupid things to do (e.g. emulate PDP 11/45 and use
as in-house processor) but also clever things to do. Your job
is to find clever ones. Be careful of picking targets. If you
have a scheme of configuring common hardware to do uncommon
jobs better, more reliability, etc., you're much better off.

*If you talk designing "computers", people will blow top.
There is a strong negative reaction. If you talk complex
dedicated digital systems, people won't think you are inventing
the wheel.

*Consider netting of serial processors in a battlefield
situation. Localized picture and global picture. Analyzing
the system requires the labs getting together with the System
Analysts.

*Need chart that shows number of dedicated digital systems that
need solving as military market, i.e., figure to support circle
chart. Talk about addressing dedicated requirements
(speed,etc). For example, in the year Y, there were X number
of dedicated requirements that we couldn't meet.

*Only two critical aspects in hardware: (1) Is satisfactory
hardware available (e.g., weight, size)? (2) Can it do job in
time limit? Should emphasize second more in presentation;
critical requirement is time.

*Should discuss approach with a couple trips to industry.
Could start with Dave McCall at Boeing. Visit industry. Ask
them where they think the Government should put dollars in
facilities (too high risk, high cost for industry).

*Emphasize real time to separate from commercial data
processing.

*If we can transfer to commercial world a technology from
military application, that would be good.

*In reference to software first, you may inhibit yourself as
much as designing the hardware first.

*Can we handle real time. Can you do it at all, e.g., with MOS
circuits or bi-polar circuits. Be wise to emphasize the real
time aspects. Stay abreast with industry's work on process
control. This is more real time related.

*I may ask your help in strategizing dedicated, real time area.

*Keywords in vugraphs don't hit you. Keypoints: Timing is

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critical (real time), reliability is critical, size, weight,
etc.

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Dick Metzger's Presentation

*Complex variable is area which has shed some light in PR field although somewhat limited.

*For a Pattern Recognition Design capability, need to (1) establish potential market, (2) establish available market (who has a need which is not yet satisfied), (3) plan to reach available market, (4) phase out of R&D. Use 1, 2, or X number of people to operate it. But it has to pay its own way. Must be cost effective. We must convert it on turnover. Give yourself certain amount of time and at some point of time, cast off apron strings.

*Should take look at people at CRL who are getting a color display for weather. (off shelf components) Should look if still in displays. LORETO: We're not in displays.

*For D&F - please explain as well as possible what it is for. Anticipate questions and answer them.

*Raster Graphics; Computer Graphics with joy stick and light pen is old hat. Not sure what remains to be proven or are you just doing for experience. METZGER: In this area what remains to be proven is how many terminals can be in clusters.   BEAM: Don't really have to build to prove that.   METZGER: Yes, you can prove speed on paper. But prototype will be used in application.

*Make sure that when you do the high performance jobs that you still do the simple jobs as well.

*I suggest new title (for real world chart): "Interactive Design of Pattern Recognition Logic."

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(J31767) 3-FEB-75 07:20;;;;   Title: Author(s): Robert D. Krutz/RDK;
Distribution: /RJC([INFO-ONLY]) FJH([INFO-ONLY]) ;
Sub-Collections: NIC; Clerk: RDK;   Origin: < KRUTZ,
BEAMVISIT.NLS;1, >, 22-JAN-75 06:11 RJC ;;;;   ####;

1

funds

[no content was specified!]   1

funds

(J31778)   3-FEB-75 08:58;;;;   Title: Author(s): William W.
Patterson/WWP2; Distribution: /RBP([ACTION]) ; Sub-Collections:
NIC; Clerk: WWP2;   Origin: < PATTERSON, WWP2,NLS;2, >, 27-DEC-74
12:09 WWP2 ;;;;####;

course 2

    I read your document describing the second TNLS course, It
looks like a nice piece, but I do have a few comments, Can we talk
about them?   1

course 2

(J31779)   3-FEB-75 09:12;;;;   Title: Author(s): Raymond R.
Panko/RA3Y; Distribution: /JHB([ACTION]) RA3Y([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: RA3Y;

Request for new Directories

Would you please set up the following directories associated with the
ARPA Group: 1

INFORMATION FOR DIRECTORY REQUEST   2

    Directory Name: DSDC-SD   2a

    Account: 80   2b

    Password: SDC   2c

    A 400llocated Disk Pages: 2d

    Default Protection: 775200   2e

INFORMATION FOR INDIVIDUAL IDENT ENTRY (source: NIC requirement)   3

    INFORMATION FOR DIRECTORY REQUEST   3a

        Directory Name: AFDAA-XO   3a1

        Account: 80   3a2

        Password: DAAXOP   3a3

        Allocated Disk Pages: 50   3a4

        Default Protection: 775200   3a5

    INFORMATION FOR INDIVIDUAL IDENT ENTRY (source: NIC requirement)   3b

        Name:Crabb, William T, ; Orton, Stephen L   3b1

        Home Organization: GUNTER   3b2

        Phone: (205) 279-4940   3b3

        US Mail Address: 3b4

            AF Data Automation Agency/XO
            Gunter AFS, ALA 36114   3b4a

        Network Mailbox: AFDAA-XO@Office-1   3b5

        NLS Mailbox: Office-1   3b6

        Delivery: Journal   3b7

    Name: Beverly S, Boatner   3c

Request for new Directories

Home Organization: GUNTER   3d

Phone: (205) 279-4912   3e

US Mail Address: 3f

   Command Systems Division(SDC)
   Air Force Data Systems Design Center
   Gunter AFS, ALA 36114   3f1

Network Mailbox: DSDC-SD@Office-1   3g

NLS Mailbox: Office-1   3h

Delivery: Journal   3i

Would you please also add my ident (LAC) to the authorized list of
users for all accounts associated with the Gunter subgroup. This is
so I can help these people or in worst case do the work for them
without logging in as them.   4

If you could set these accounts up within the next week or so, I
would appreciate it greatly, as the sooner I can get these people
practicing on their own accounts the better.   5

   (They are currently learning the system using my account and the
   STALOG directory, which leads to response time problems when
   multiple users access the same directory.)   5a

INFORMATION FOR DIRECTORY REQUEST   6

   Directory Name: DSDC-SY   6a

   Account: 80   6b

   Password: SYO   6c

   Allocated Disk Pages: 100   6d

   Default Protection: 775200   6e

INFORMATION FOR INDIVIDUAL IDENT ENTRY (source: NIC requirement)   7

   Name: Jo Ann Hall, AAB,AJM,LAC   7a

   Home Organization: GUNTER   7b

   Phone: (205) 279-4221   7c

Request for new Directories

US Mail Address: 7d

   Operations Reearch Division (SYO)
   Air Force Data Systems Design Center
   Gunter AFS, ALA 36114   7d1

Network Mailbox: DSDC-SY@Office-1   7e

NLS Mailbox: Office-1   7f

Delivery: Journal   7g

Thanks,   8

   Larry Crain   8a

Request for new Directories

(J31780) 3-FEB-75 12:59;;;;   Title: Author(s): Lawrence A. Crain/LAC;
Distribution: /CKM([ACTION]) FEED([ACTION]) AAB([INFO-ONLY])
; Sub-Collections: NIC; Clerk: LAC;   Origin: < CRAIN,
DIR-REQ.NLS;3, >, 3-FEB-75 12:21 LAC ;;;;####;

Status on ARPA/RADC/SAI Contract

As of today 3 Feb 75, I understand that the contract funds are
obligated. We were attempting, as of 31 Jan, to add almost another
$200K to bring the total to $300K - before the obligation. But we
missed the boat and now a new 77 has been initiated and signed by me.
This new PR will be for the purpose of adding money to an existing
contract. Hopefully it gets out today.   1

The reason for all the rush is calls from SAI and from ARPA
indicating that the money in the contract not yet signed has all been
spent and that SAI is concerned about continuing work without
positive signs that there is money available. So much for all the
control RADC is going to have over this contract. But, I suppose
that SAI can't be faulted for not living up to a contractual
obligation, to wait for clearance from procurement before embarking
on a new job, when they have no contract.   2

Status on ARPA/RADC/SAI Contract

(J31781) 3-FEB-75 14:22;;;;   Title: Author(s): Edmund J. Kennedy/EJK;
Distribution: /JLM([ACTION]) FJT([INFO-ONLY]) RDK([INFO-ONLY]
) ARB([INFO-ONLY]) IJB([INFO-ONLY]) ; Sub-Collections: RADC;
Clerk: EJK;

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Status on ARPA/RADC/SAI Contract

(J31782) 3-FEB-75 14:25;;;; Title: Author(s): Edmund J, Kennedy/EJK;
Distribution: /ELF([INFO-ONLY] I sent this to jlm rdk fjt arb tjb) ;
Sub-Collections: RADC; Clerk: EJK;