JHB 17-JAN-74 15:39 21507

RADC

In response to your request.

JHB 17-JAN-74 15:39 21507

RADC

The Journal system provides the capability to send messages that are subsquently catalogged and indexed. In this msg I'd like to inform you that the forms system is receiving a great deal of attention and coding shoulld be underway as soon as the current technical proposal is approved by RADC (see D Stone for the details). 1

JHB 17-JAN-74 15:39 21507

RADC

(J21507) 17-JAN-74 15:39; Title: Author(s): James H. Bair/JHB;
Distribution: /EJK DLS(fyi) JLM; Sub-Collections: SRI-ARC; Clerk: JHB;

CHI 18-JAN-74 22:21 21508

PDP-11 Display Terminal System Structure, first pass

Sent to Rob Hoffman at ISI, For Your Information only

CHI 18-JAN-74 22:21 21508

PDP-11 Display Terminal System Structure, first pass

Rob, The following is a pictorial representation of my understanding of how a PDP-11 display terminal system such as we have been discussing might be structured. My assumption is that the ANTS people (or someone else, if we dont go with ants) would supply the LLDH and the general program environment, ISI would supply the GPI and GPDT, and ARC would supply the CLI and GPTS (or maybe ISI would do this?) and the DT's. I hope this terse presentation serves as a starting point for further discussion to clarify the structure of the resulting system and the ARC/ISI relationships in building it. -- Charles. 1

2

DEFINITIONS: 3

GPDT = Graphics Protocol Display Terminal 3a

A display terminal that has some graphics protocol built into it (like the System Concepts micro code). By graphics protocol, I mean Network Standard Graphics Protocol (NGP). 3a1

DT = Display Terminal, 3b

no graphics protocol capability 3b1

LLDH = Low Level Device Handler, 3c

necessary to communicate with the device. 3c1

GPI = Graphics Protocol (NGP) Interpreter 3d

interprets NGP commands and manipulates display image assuming display is a GPDT. 3d1

GPTS = Graphics Protocol Terminal Support, 3e

makes a DT look like a GPDT by performing the missing functions for it. 3e1

CLI = Command Language Interpreter, 3f

interprets a local grammar (which it fetched through the net) and communicates with the user via NGP commands to specify commands. When a command is fully specified, it communicates through the NET to an APBE to carry out the command. 3f1

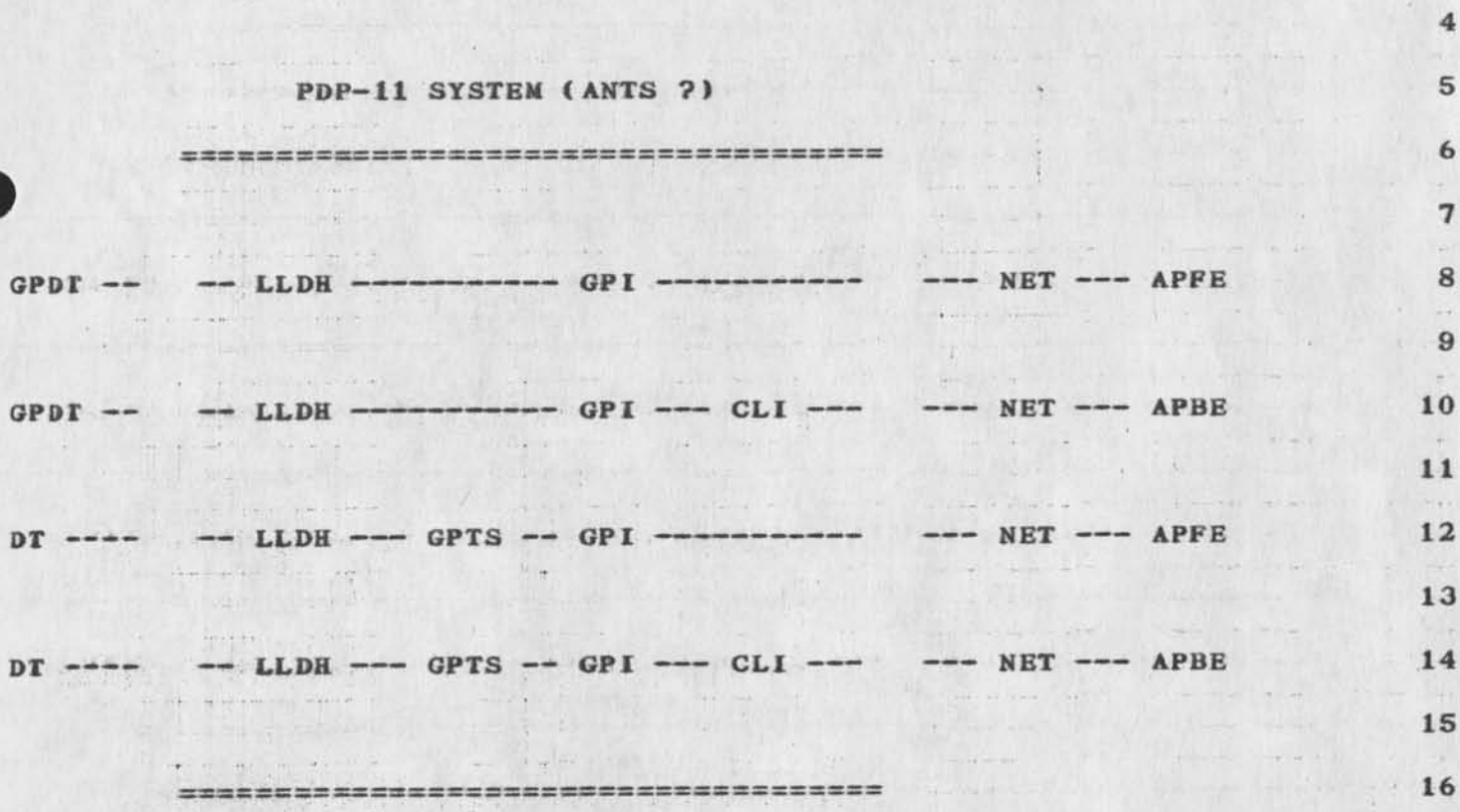
APBE = Application Program Back End, 3g

the execution part of an application program. The command

language for this application program is sent through the net at program startup time and is henceforth interpreted by the CLI. The APBE has only a NET protocol interface to the outside world. This protocol is utilized by the CLI to inform it of the users commands to it. 3g1

APFE = Application Program Front End, 3h

this is the typical one-piece application program which has its user interface and execution code combined into one package -- requires event-at-a-time communication over the net to a remote display terminal, which it controls via NGP. 3h1



CHI 18-JAN-74 22:21 21508

PDP-11 Display Terminal System Structure, first pass

(J21508) 18-JAN-74 22:21; Title: Author(s): Charles H. Irby/CHI;
Distribution: /RWW DCW; Sub-Collections: SRI-ARC; Clerk: CHI;
Origin: <IRBY>PDP-11-SOFT.NLS;1, 18-JAN-74 22:19 CHI ;

JDH 19-JAN-74 00:03 21509

One of your Journal Submissions Was Lost in Thursday's Catastrophe

Though our Journal system has considerable protection against loosing submitted data, one of your submissions was lost. 1

The following items submitted on Wednesday, 16-JAN, were lost 1a

DCE 16-JAN-74 16:08 21444 1a1

Discussion Log: 16 Jan 74, Roger Cooper, SRI Bioengineering Lab, re eye tracking and speech recognition 1a1a

MAP 16-JAN-74 14:50 21440 1a2

no title, Distribution: HELPDOC; 1a2a

RWW 16-JAN-74 11:15 21431 1a3

Rough Estimate ... 1a3a

JMB 16-JAN-74 10:29 21429 1a4

Schedule for Documentation slot until approx. Jan 29th 1a4a

DIA 16-JAN-74 08:26 21426 1a5

Bhart's PDP-11 configuration 1a5a

If the material is still available in one of your files, I would appreciate a message giving me the location. 1b

This is the first time since I have been working with the Journal that there has been a loss of recently-submitted material. The following coincidental occurrances brought it about. 2

Early Thursday morning, a tape broke during the incremental disk dump. The operator failed to take the corrective action nescessary to get a good dump. 2a

Later Thursday morning, another operator deleted the previous day's backup journal submission material from the system under the assumption that the dump had been good. 2b

Sometime before 4:00 Thursday afternoon, data transmissions from the disc began failing in a way that wasn't detected by TENEX, possibly for several hours. Many file directories and files were smashed. 2c

Through all this, we were still able to recover 28 of the 33 items submitted Wednesday and Thursday. 3

JDH 19-JAN-74 00:03 21509

One of your Journal Submissions Was Lost in Thursday's Catastrophe

(J21509) 19-JAN-74 00:03; Title: Author(s): J. D. Hopper/JDH;
Distribution: /DCE MAP RWW JMB DIA JCN(fyi); Sub-Collections: SRI-ARC;
Clerk: JDH;
Origin: <HOPPER>JLOST.NLS;1, 18-JAN-74 22:59 JDH ;

JDH 19-JAN-74 02:07 21510

HO

Ho there, this is being sent on ARC machine. 1

HO

(J21510) 19-JAN-74 02:07; Title: Author(s): J. D. Hopper/JDH;
Distribution: /JIMB JDH; Sub-Collections: SRI-ARC; Clerk: JDH;

Preliminar Feedback Committee report [for review]

ATTENTION: The following is a draft of the Feedback Committee report. You are invited to submit comments and/or suggestions; to be recieved prior to 26 January 1974 [if they are to receive consideration].

Comments should be directed to feedback through the NIC Journal system.

1

J. Calvin (CASE-10)
D. Crocker (UCLA-NMC)
J. Iseli (MITRE-TIP)
J. Postel (MITRE-TIP)
A. Rosenfeld (CASE-10)
26 JAN 74

Preliminary Report on Recommendations for a Network Feedback System

2

PREFACE 3

For a network (or any other service) to be viable, its users must be satisfied with the service being provided. A major factor, in having a broad base of satisfied users, is having a responsive mechanism through which those users can communicate their ideas and complaints to those providing service(s). In this report, we call such a mechanism a Network Feedback System. 3a

This report is regarded as an initial stimulus to the development of a network feedback mechanism. As such, it outlines a generic structure for a network solution, points out several of the critical human factors, then "steps-back" and proposes interim measures involving minimum implementation effort. 3b

> Preliminary effort would be directed towards creating a user base with which to perform experiments to generate data to be used to evaluate, test, and formulate design concepts and implementation strategies for the evolution of the network capability. 3b1

This report is the product of the Users Interest Working Group (USING) Feedback Mechanisms Committee. 3c

INTRODUCTION 4

This report, in outline form, presents: 4a

1. Human Factors (see (Factors) section) 4a1

   Psychological constraints are considered in this section. This includes such things as response time and response language. 4a1a

2. A structured boundary problem definition (See (Boundaries) section) 4a2

   The listed index provides a boundary statement on the characteristics of the "feedback" addressed in this report. By boundary, we mean the classic: who, what, where, when and how of the problem. This definition is to be regarded as an evolving one, with the current list accorded preliminary status. 4a2a

3. Interaction Matrices (See (Matrices) section) 4a3

   This portion of the report, employing rectangular arrays, is intended to indicate the possible interactions between selected boundary elements. Specifically, this section provides a characterization of: 4a3a

   - Transaction participant to transaction types. 4a3a1
   - Transaction types to transaction media. 4a3a2
   - Transaction type to transaction mechanism 4a3a3
   - Transaction type to transaction flow. 4a3a4
   - Transaction mechanisms to transaction flow. 4a3a5

4. Discussion of feedback system elements (See (Elements) section) 4a4

   This section will address the major components required to implement a network feedback system. The components will be defined generically in order to outline, without regard to participant specificity, the overall structure, in order to serve as a road-map for the various solutions that we will recommend. 4a4a

5. Recommendations (See (RECOMMENDATIONS) section) 4a5

   This section presents the "high-level" attributes for recommended solutions to the development of a network feedback structure. It is intended that this "high-level" presentation serve as a "straw-man" for review and approval prior to development of an implementation specification. The solution space is divided into three time periods: 4a5a

1) Near Term - The next two months 4a5a1
2) Intermediate Term - The next twelve months, 4a5a2
3) Long Term - Undetermined period. 4a5a3

Further, the solution space is assumed to accommodate overlapping and parallel development of all three phases. 4a5b

HUMAN FACTORS 5

In the preface of this report, we said that we were concerned with "satisfied users". This automatically puts us into the fuzzy realm of applied psychology. (We say "fuzzy" because there are currently no neat theories around which we can organize our thoughts.) In this section, we will simply list those system behavioral parameters we know to be important to statisfying users. 5a

The considerations 5b

It must be easy for users to input their ideas and complaints. 5b1

Assorted media must be available to the user; for example: telephone, U.S. Mails, SNDMSG, Nic Journal) 5b1a

The user should not have to work very hard to use the feedback mechanism. 5b1b

I.e., "@gripe<cr>" instead of "@logo<cr>, @c<lf>, @n<lf>, @gripe<cr>". 5b1b1

For interactive systems, such as telephones and querying programs, important information should automatically be asked for. For an example, see the (Recommendations) section. 5b1b2

Useful response in a reasonable amount time 5b2

A user must get some kind of response immediately (instantaneously, by telephone or Tenex-type link; within one day, by Netowrk mail). 5b2a

Even "I heard you, but don't know what to do about it yet; will get back to you as soon as I do" is occasionally tolerable, as long as the user feels that something is happening and that they are not being deferred. 5b2a1

If possible, the expected sequence of events, leading to the resolution of the problem or implementation of the suggestion, should be given to the user. That way, the user can reasonably predict what will happen, rather than have to guess at whether it is necessary to press someone's interrupt, again. 5b2a2

Often, a consultant-type needs to mediate between the user and the programme. 5b2b

The programmer is not generally adept at interacting with users and allowing for their state of knowledge; so the

consultant needs to be able to translate the user's comments. 5b2b1

The user should be kept informed of developments. 5b2c

This applies both to a user's being informed of a specific suggestion/complaint he generated and to general user awareness of what kinds of activities the Feedback Group (Software support, User services, etc.) is involved with. This latter activity is most often brought to Users awareness thru a newsletter. 5b2c1

The general effect of user's input should be told him 5b2d

At the very least, this gives the user a sense of importants (good public relations or psychology) and encourages him to provide more suggestions (useful for knowing what improvements need to be made). 5b2d1

BOUNDARIES DEFINITION 6

Participants 6a

- Humans 6a1
  - Managers 6a1a
  - Technicians 6a1b
  - Users 6a1c
  - Consultants 6a1d
- System 6a2
- Subsystems 6a3
- Network 6a4

Transaction-types 6b

- Requirements 6b1
- Bugs 6b2
- Status 6b3
- Suggestion 6b4
- Information-dissemination 6b5
- General 6b6

Transaction-medium 6c

- Network 6c1
- Local 6c2
- Subnet 6c3

Other 6c4

Transaction-mechanisms 6d

Interactive 6d1
Deferred 6d2

Transaction-flow 6e

One-way No response 6e1
Two-way 6e2
Multi-way 6e3

MATRICES 7

Participant to transaction type representation 7a

	Requirements	Bugs	Status	Suggestions	Info. Dissem.	General
Humans	X	X	X	X	X	X
Managers	X		X		X	X
Technicians	X	X	X	X	X	X
Users	X	X	X	X	X	X
Consultants		X	X		X	X
Resources			X		X	

Transaction-types to Transaction-medium representation 7b

R 7b1
e 7b2

	Requirements	Bugs	Status	Suggestions	Info. Dis.	Gen.		
Network	X	X	X	X	X	X	X	X
Local	X	X	X	X	X	X	X	X
Subnet	X	X	X	X	X	X	X	X
Other	X	X	X	X	X	X	X	X

Transaction-types to Transaction-mechanisms representation

	Requirements	Bugs	Status	Suggestions	Info. Dis.	Gen.		
Interactive			X		X	X		
Deferred	X	X		X	X	X		
Time Value	X	X	X	X	X	X	X	X

Transaction-types to Transaction-flow representation 7d

	Requirements	Bugs	Status	Suggestions	Info. Display	General
One-way	X	X		X	X	X
Two-way			X		X	X
Multi-way			X		X	X

Transaction-mechanisms to Transaction-flow representation 7e

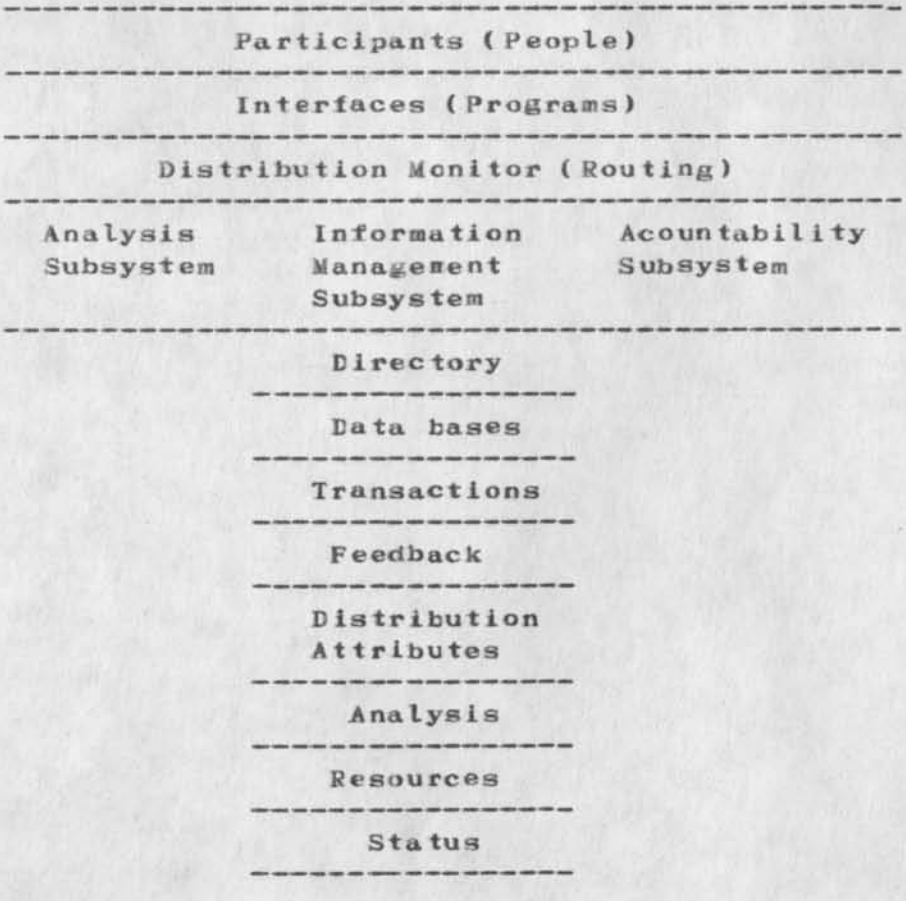
	Interactive	Deferred
One-way		X
Two-way	X	
Multi-way	X	

FEEDBACK SYSTEM ELEMENTS 8

This section presents a generic view of a network feedback system by identifying its major entities and mechanisms. We wish to repeat that we are not concerned, here, with implementation issues, such as whether the mechanisms are centralized or distributed. 8a

This section is composed of a picture of a possible collection and structure of entities and mechanisms and is followed by a discussion of each major envisioned entity and mechanism. Structured approaches to the collaborative injection of specificity will be provided in the next section. 8b

System Pictorial Overview: 8c



Elements of Feedback System Structure 8d

1. Dynamic Resources Map 8d1

This map is envisioned as a status map for the network, systems, subsystems, and humans. The map would provide indications of availability, projected availability, current status, and projected status. 8d1a

For example, if a system were temporarily down for preventive maintenance, the map would so indicate and provide an estimate for when the system would next become available. Also, the map, where possible, should be able to project availability for instances where preventive maintenance is routinely scheduled. 8d1a1

This map resides within the system as a combination of the resource and status data bases, and is accessed through the data base directory by the information management subsystem. 8d1b

2. Data-bases 8d2

Transactions 8d2a

The transaction data base contains information pertaining to the nature of all transactions. This information is used by the Analysis subsystem to monitor and supervise the transactional traffic. 8d2a1

Resources 8d2b

The resources data base consists of a directory of network resources. This information is used by the Distribution monitor and the Resources Map. For each network resource, attributes surrounding the resource are included. For example, responsible person, status of resource, location of resource, etc. 8d2b1

Feedback data 8d2c

The Feedback data base contains the actual message data passed through the system. 8d2c1

Distribution Attributes 8d2d

This data base contains routing information pertinent to network resources and transaction types and is employed to ensure proper distribution of transactions. The data base contains further elements for use by the accountability subsystem to ensure that each transaction achieves an adequate response sequence profile. 8d2d1

Analysis Data 8d2e

This data base contains appropriate summarizations of the transaction data base as filtered by the analysis module that will be parametrically driven. 8d2e1

3. Directory 8d3

The directory will contain entries pointing to other elements of the other data bases in the system repository, their distribution/location attributes, and other characteristics. 8d3a

4. Analysis Subsystem 8d4

The analysis subsystem is intended to be the mechanism employed to perform assorted analyses of network feedback to enable development of measured feedback data to be used in improving network reliability, utility, and responsiveness to users. 8d4a

5. Accountability Subsystem 8d5

The accountability subsystem will perform the monitoring and control functions necessary to ensure that each initiated feedback transaction has a transaction sequence culminating in feedback satisfactory to a user. 8d5a

6. Information Management 8d6

The information management subsystem is intended to supply all the data management functional capabilitiies required by the total feedback system. 8d6a

7. Distribution Monitor 8d7

The distribution monitor is the mechanism that ensures proper distribution of all transaction stimuli and feedback system responses and intra-subsystem communication. 8d7a

8. Interfaces 8d8

This component depicts the assorted collection of interfaces [TIPS, IMPS, terminals, programs, etc.] required to provide participant access to and response from assorted elements of the network feedback system. 8d8a

RECOMMENDATIONS 9

This section of the report presents a set of recommendations for the evolution of a network feedback system. The recommendations are structured into three phases: (1) Near, (2) Intermediate, and (3) Long term. 9a

The near term suggestions are directed towards a quick implementation of assorted components previously described without regard for on-going evolution. That is, the initially implemented capability will be specifically to: 9b

1. provide a reasonable short term vehicle to increase user feedback; 9b1

2. provide a test-bed from which to explore design and implementation alternatives for an integrated system implementation. 9b2

The intermediate term phase, started concurrently with the prior phase but extending over a longer period of time, is directed towards the following sequence of steps: 9c

1. Preliminary System Design 9c1

2. Initial Experimentation and Analysis 9c2

3. Development of a phased implementation plan 9c3

The long term phase, starting concurrently with the other two phases, will be directed towards the incremental implementation of a full network feedback system as generically described in previous sections of the report. 9d

Near Term 9e

1. The near term phase is intended to employ minimum effort in the implementation of preliminary capabilities through the use of existing network capabilities and the creation of inter-subsystem interfaces. 9e1

2. The preliminary capability will be devoid of most elements described in the design of a generic feedback mechanism. 9e2

    1. In particular, a data repository directory will not be developed and a fixed distribution control mechanism will be employed. Further, the capability will accept feedback input from any host on the network supporting the network mail protocol and provide feedback to submitors of transactions, but will not [NOT] automatically direct the input transactions to

their appropriate sources on a distributed basis. Rather, the SRI-ARC NLS capability will be employed to ingest the submitted user transactions into designated NLS files that will be manually perused by designated individuals who in turn will manually develop the feedback to the users. 9e2a

3. To facilitate the implementation of this trial network feedback first increment, the following Idents will be created at the NIC to allow host feedback systems to employ the network mail facilities as the distribution mechanism: 9e3

1. netbugs : For the repository of user transactions reporting subsystem bugs. 9e3a

2. netideas : For the repository of user transactions directed towards the improvement of network subsystems, network user interfaces, or user requirements satisfaction. 9e3b

4. Further, local site systems and TIPS will employ the RSEXEC Gripe (hopefully, renamed to "Comments") command to submit network comments related to system, subsystem, and communications reliability. The following represents a desription of a host feedback command: 9e4

1. Comments<cr> 9e4a

(Date:) [supplied by system] 9e4a1
(From:) 9e4a2
(subject:) 9e4a3
(Type:) [bug/suggest/
gripe [communcations/system/subsystem]/
other] 9e4a4
(network online address:) 9e4a5
(phone number:) 9e4a6
(degree of urgency:) 9e4a7
(response desired:) [none/acknowledgement/action to be taken] 9e4a8
(message:) 9e4a9

2. Message types, bug, suggest, gripe [subsystem], and other will be directed through network mail to NIC journal idents: NETBUGS, NETIDEAS, NETBUGS, and NETOTHER, respectively. All others will be directed to the BBN maintained RSEXEC gripe file. 9e4b

3. An L10 program will be developed to extract and summarize these ident submissions into NLS files, for subsequent analysis, in the directory <USING>. 9e4c

1. The intermediate phase is intended to be productive of a detailed design for the network feedback capability and an incremental implementation plan. It is envisioned that the generic design previously given will be analyzed for appropriateness as data is accrued from use of the trial capability developed in the first phase. The design effort will rely heavily on initial use of the trial capability, especially from the analysis of such usage and attendent patterns uncovered. 9f1

2. The design effort will be guided by a desire to integrate the evolving system with related on-going site development efforts and evolving network resources. Further, special attention will be directed towards a design that allows the evolution of other capabilities without producing serious retrofit requirements on the evolving feedback system or creating any operational disruptions at the user interface. 9f2

3. During this phase, a new category of feedback will be introduced to enable users to supply comments realtive to the evolving feedback system. Further, these comments will continue to receive close scrutiny by the design and implementation team to ensure that the system evolved with recognition of utility to users and facility of their use. 9f3

4. At the terminus of this phase, a full design and implementation plan will be available to initiate the implementation effort within the long term phase. 9f4

5. This design will be reviewed by a committee designated by ARPA/IPT. This review will include checks for efficiency, consistency, completeness, and detail in the specifications. 9f5

Long Term 9g

1. This phase will begin in earnest at the completion of the intermediate phase effort. However, it will be initiated concurrently with the other phases. Until formal completion of the second phase, effort within this phase will be directed towward experimental evolution of the trial capability in response to both user feedback and also to the requirements for accrual of experimental data as an adjunct of the system design and implementation specification effort. 9g1

Preliminar Feedback Committee report [for review]

(J21511) 19-JAN-74 17:59; Title: Author(s): Jean Nmi Iseli, Jonathan B. Postel, Jean Iseli, David H. Crocker, Al J. Rosenfeld, Jim C. Calvin/FEEDBACK; Distribution: /FEEDBACK CF USING; Keywords: using feedback report preliminary; Sub-Collections: FEEDBACK USING; Clerk: JI; Origin: <USING>FEEDBACK.NLS;1, 19-JAN-74 12:11 JI ;

SRW 19-JAN-74 03:08 21512

How do you find POST?

Just a brief message to enquire as to how you are getting on with our POST system. Are you using it, if so any comments, criticisms etc. would be welcomed. Equally, if you have looked at it and rejected it I would be interested in the reasons

Cheers .. Steve Wilbur (U. of London) 1

SRW 19-JAN-74 03:08 21512

How do you find POST?

(J21512) 19-JAN-74 03:08; Title: Author(s): Stephen R. Wilbur/SRW;
Distribution: /ADO; Sub-Collections: NIC; Clerk: SRW;

JGR 19-JAN-74 21:38 21513

note to Charles Irby

This may or may not work, but I'll try anything once
or twice. At least I've fixed up the CR problem, and it only took
me 5:57.7 to do it.
I'll try the letter writer on this note. Thanks for all your
help.

1

JGR 19-JAN-74 21:38 21513

note to Charles Irby

(J21513) 19-JAN-74 21:38; Title: Author(s): Jeff G. Rothenberg/JGR;
Distribution: /CHI; Sub-Collections: NIC; Clerk: JGR;

JI 20-JAN-74 09:35 21514

Review of USING Mtg. Article

Dave,Craig:

Please review the appended article to ensure accuracy and properness for publication in the next issue of the ARPANET News. I will publish this in the current on-line version on Wednesday evening. If you have any objections or suggested revisions, please let me know by then. Thank you for your consideration.

Jean

1

(using) ARPANET Users Interest Working Group

2

The second meeting of the ARPANET Users Interest Working Group was convened on the 3rd and 4th of January 1974 at the Network Information Center, Menlo Park, California. In attendance were:

David H. Crocker [UCLA-NMC]
Jean Iseli [MITRE]
Barbara Noble [UCLA]
Al J. Rosenfeld [CASE]
John Day [Ill-ANTS]
Clayton Greer [UCSB]
Mike Kudlick [NIC]
Harvey G. Lehtman [NIC]
R. W. Watson [NIC]
Craig Fields [ARPA/IPT]
Nancy J. Neigus [BBN]
Bob Braden [UCLA]
Jim C. Calvin [CASE]
Mike A. Padlipsky [MIT-MULTICS]
Alan R. Hill [SDAC-TIP]
A. W. Hathaway [AMES]
Jake Feinler [NIC]
Jim E. White [NIC]
Mil Jernigan [ARPANET News]

2a

After discussion of routine buisness matters, David H. Crocker introduced a guest to the meeting, Dr. Craig Fields, scheduled to join the ARPA/IPT staff. Dr Fields discussed ARPA's ideas for the goals and development of a group such as USING. He challanged the group with the opportinity of rendering value to the ARPA/IPT office in serving as advisors for development of viable solutions to problems currently facing users of the net. The USING response to this challenge was distinct and encouraging. The tenor of the group deliberations converged on the establishment of specific committee's to address outstanding areas of user concern. As each committeee was formed, substantive discussions of their charter and potential scheduled productivity occurred. The following summarizes the committee's that were formed, their chairperson, and the purpose of each committee. In support of this activity, the NIC has created a common directory for the collaborative efforts of the committees, and special group Idents to facilitate committee activities. The committee's are:

2b

In the following list of committee's, the first named person is the chairperson for the committee. All committee's have scheduled deadlines for the fruits of their efforts between now and the next USING Meeting which is currently scheduled for: July 11-12, 1974, at Boulder, Colorado.

2c

Common Command Language Definition Committee

2d

Mike A. Padlipsky, Nancy J. Neigus, Al J. Rosenfeld, Jim O. Calvin, Clayton Greer, and possibly Bob Thomas [BBN].

2d1

First-pass formulation of basic structure and function for CCL.

2d2

Definition of Users Committee

2e

Nancy J. Neigus, Wayne Hathaway, and Jake Feinler.

2e1

Describe the different classes of users and the differences in their needs.

2e2

Feedback Mechanisms Committee

2f

Jean Iseli, Dave H. Crocker, Al J. Rosenfeld, Jim O. Calvin, and Jon B. Postel.

2f1

Describe general and specific mechanisms needed to facilitate communications with "users". Describe factors motivating those mechanisms.

2f2

Help and Documentation Mechanisms Definition and Factors Committee

2g

Alan Hill, Clayton Greer, Harvey G. Lehtman, Al J. Rosenfeld, Jean Iseli, Mil Jernigan, Mike Padlipsky, and Jake Feinler.

2g1

Specify syntax for online documentation; consider its content and types of portrayals to it.

2g2

Review of USING Mtg. Article

Neted Monitoring Committee

2h

Mike A. Padlipsky, Jim O. Calvin, Wayne A. Hathaway, and Dave Grothe [ILL-ANTS].

2h1

Debug Neted document; verify implementation conformities, advertise Neted.

2h2

Performance Measurement Laboratory / Net Consumers Union Committee

2i

Mike A. Padlipsky, Jim O. Calvin, Mike D. Kudlick, Clayton Greer, and Dave H. Crocker.

2i1

Define scope of possible Performance Measurement laboratory; how it should evaluate services currently available on Net; what tools it should develop to make that evaluation.

2i2

Information Management Committee

2j

Nancy J. Neigus, Mike A. Padlipsky, Barbara Noble, and Alan Hill.

2j1

Determine what information services should be available, how and by whom they are to be prepared, advertised, and distributed.

2j2

Service Center Definition Committee

2k

Members: Dave H. Crocker, Mike D. Kudlick, John Day, and Alan Hill.

2k1

What are the parameters important in defining a computer facility as a "service center"? Attempt to set values for those parameters.

2k2

JI 20-JAN-74 09:35 21514

Review of USING Mtg. Article

(J21514) 20-JAN-74 09:35; Title: Author(s): Jean Iseli/JI;
Distribution: /CF DHC MEJ MAP; Keywords: using article review;
Sub-Collections: NEWS MITRE-TIP; Clerk: JI;
Origin: <HELP>USING.NLS;1, 20-JAN-74 08:27 JI ;

KIRK 20-JAN-74 14:01 21516

Jim,
In response to Nancy Neigus' (21427,) I am sending <KELLEY,WAC,>.
Please let me know if any of the contents might be politically
sensitive independant of the outright audacity of the idea in the
first place. 1

(J21516) 20-JAN-74 14:01; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /JCN; Sub-Collections: SRI-ARC; Clerk: KIRK;

ADO 20-JAN-74 14:34 21517

re POST

(srw) Sorry not to report to you sooner. POST seems to work, but to have a few bugs, which I haven't been able to pin down as yet. I have had some fleeting ideas, also, for ways of doing things which might be easier to use; I will send these if I ever can get them written down comprehensibly. The business of having no way to control files is obviously problematic: one idea I had was that a simple way to get a lot of results from a relatively small effort of implimentation would be to add a command to TECO that somehow caused it's argument to be executed as a command (MULTICS has such a command in its editor.) Buz Owen 1

re POST

(J21517) 20-JAN-74 14:34; Title: Author(s): A. D. (Buz) Owen/ADO;
Distribution: /SRW; Sub-Collections: NIC; Clerk: ADO;

Friday I used these directives successfully to print out pages on the right part of the printer paper. Sunday, they didn't work. Instead, everything was one character/line in about the 65th column. Do you know what happened? BRM=131;

1

1

(J21518) 20-JAN-74 21:55; Title: Author(s): Kirk E. Kelley/KIRK;
Distribution: /HGL EKM; Sub-Collections: SRI-ARC; Clerk: KIRK;

RJC 21-JAN-74 05:59 21520

reminder

This is to remind you that when sending message or journal mail to Thayer, his ident is RHT2...or else he won't get it. 1

RJC 21-JAN-74 05:59 21520

reminder

(J21520) 21-JAN-74 05:59; Title: Author(s): Roberta J. Carrier/RJC;
Distribution: /RADC; Sub-Collections: NIC RADC; Clerk: RJC;

RJC 21-JAN-74 06:38 21521

confessions

Again, ISI confessions has been cancelled until next week...I'll let you know then if it will be for real. 1

RJC 21-JAN-74 06:38 21521

confessions

(J21521) 21-JAN-74 06:38; Title: Author(s): Roberta J. Carrier/RJC;
Distribution: /RADC; Sub-Collections: NIC RADC; Clerk: RJC;

RJC 21-JAN-74 06:41 21522

project 5550

Project 5550 funds in regards to travel has been temporarily frozen -
See Tom Bucciero if any questions. 1

RJC 21-JAN-74 06:41 21522

project 5550

(J21522) 21-JAN-74 06:41; Title: Author(s): Roberta J. Carrier/RJC;
Distribution: /RADC; Sub-Collections: NIC RADC; Clerk: RJC;

AAM 21-JAN-74 06:48 21523

Marcia,
I really like the new ARPANET Directory, and I'm pleased that it will be updated at least twice a year. I will have a bunch of additions for you in the future (perhaps a month), but I have a few comments right now about the stuff which is stored on-line.
The group ident "BBN-NET" doesn't include the individual idents "SCB" and "GF" in the "Membership:" entry, even though the entry for each of these individuals shows that they are members of BBN-NET.
I have just gotten an account at BBN-TENEX. Therefore I'd like you to change my individual entry "AAM" to give me both Online and Network delivery - with the network delivery going to MCKENZIE at BBN-TENEX.
However, PLEASE don't remove my account at the NIC, as not many people know about my new address yet.
Regards,
Alex

1

(J21523) 21-JAN-74 06:48; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /MLK; Sub-Collections: NIC; Clerk: AAM;

RJC 21-JAN-74 06:51 21524

due date reminder

Ed, I am remindng you today as I'm sure no one will remind you until after the fact.

RJC 21-JAN-74 06:51 21524

due date reminder

Due Date ISIM/E.Kennedy - Review of Conceptual Systems - Inputs must be in RADC/XP by 21 Jan

1

RJC 21-JAN-74 06:51 21524

due date reminder

(J21524) 21-JAN-74 06:51; Title: Author(s): Roberta J. Carrier/RJC;
Distribution: /EJK; Sub-Collections: NIC; Clerk: RJC;

NWG/RFC# 613 AAM 21-JAN-74 10:28 21525
Network Connectivity: A Response to RFC # 603

Network topology is a complicated political and economic question with obvious technical overtones. I shall not attempt, in this note, to cover all the possible arguments which might be made, but merely to respond directly to the points raised in RFC # 603. 1

1. The important consideration in deciding whether it is good or bad to have a node (AMES) be four connected is not how many circuits are affected by a node failure; rather one should consider how well the network is still connected after a node failure. For example, if ALL the nodes in the network were four-connected I doubt that anyone would argue that this was bad for reliability. The weaknesses are not the three-connected and four-connected nodes but rather the ONE-connected (Hawaii, London) and two-connected nodes. I must agree with Burchfiel's implied argument that it is better to have two adjacent three-connected nodes than to have a four-connected node adjacent to a two-connected node; unfortunately the realities of installing interfaces and common carrier services cause the Network to expand in sub-optimal ways. 1a

2. "Loops" are not good per se, they appear good because the act of making loops increases the connectivity and thereby reduces the effect of multiple failures. Adding more circuits costs ARPA money, both capital cost for IMP interfaces and recurring cost for the circuits. The network group at BBN has suggested to ARPA several times that "connectivity should be increased" but it was only late in December 1973 that we made specific suggestions for the locations of additional circuits. These recommendations were not based on building loops (although they may have that effect) but were based on breaking the long chains of IMPs which have occurred as the Network has grown. ARPA and NAC are now presumably in the process of evaluating our suggestions, and perhaps formulating other possibilities. 1b

NWG/RFC# 613 AAM 21-JAN-74 10:28 21525
Network Connectivity: A Response to RFC # 603

(J21525) 21-JAN-74 10:28; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: / NLG NAG NSAG; Sub-Collections: NWG NIC NLG NAG NSAG;
RFC# 613; Clerk: AAM;

RJC 21-JAN-74 06:53 21526

info

Farewell Reception for Col Hepfer - Officer's Club - 27 Jan - 1600 - 1800 hrs. - See Division Rep for tickets ($2.25) 1

info

(J21526) 21-JAN-74 06:53; Title: Author(s): Roberta J. Carrier/RJC;
Distribution: /RADC; Sub-Collections: NIC RADC; Clerk: RJC;

AAM 21-JAN-74 07:01 21527

McKenzie at BBN

I now have a BBN TENEX account and can receive mail as MCKENZIE@BBN
Alex 1

AAM 21-JAN-74 07:01 21527

McKenzie at BBN

(J21527) 21-JAN-74 07:01; Title: Author(s): Alex A. McKenzie/AAM;
Distribution: /BBN-NET BBN-TENEX SCB GF JBP; Sub-Collections: NIC
BBN-NET BBN-TENEX; Clerk: AAM;

coming or going?

Capps wants me there for the meeting. I don't care one way or the other. Be glad to stay here if you wish (Jomni Mitchell concert here on 28th). But let me know soon. Reservations (tickets to concert) etc. must be gotten.

1

coming or going?

(J21528) 21-JAN-74 07:37; Title: Author(s): N. Dean Meyer/NDM;
Distribution: /JCN; Sub-Collections: SRI-ARC; Clerk: NDM;

FIRST PASS SURVEY OF WORKING HABITS OF NLS USERS 1

INTRODUCTION 2

The following is a compilation of the comments collected during a recent survey of 24 ARCers. The two main subjects covered were: 2a

1) People's work habits - specifically, what kinds of work they prefer to do online as opposed to offline and why. 2a1

2) Advantages and disadvantages of the journal and sndmsg compared to typical office methods of communication. 2a2

This survey is a first look at NLS usage and is therefore primarily valuable for determining general trends and items of general concern for future studies. 2b

COMMUNICATIONS 3

The following items are listed in order of frequency mentioned. 3a

Advantages 3b

1) The journal is an efficient way to notify groups of people. Group idents are fast and no one is forgotten. 3b1

2) The ability to send a message from wherever you are working or to a person who is absent is a time saver and neither person's train of thought is disturbed. 3b2

3) The automatic cataloging of journal items is a much better way of storing information for retrieval. File drawers do not have to be searched and file copies do not have to be saved. 3b3

4) Several people do not have to be involved in sending a memo so the turn around time is less. 3b4

5) An advantage of sndmsg is that in general people read them immediately, while this is not true of the journal. 3b5

6) All of the NLS editing capabilities are available which aid in creating a memo. 3b6

7) The journal and sndmsg are good for communicating something which is not easily verbalized such as a detailed patch. 3b7

8) Such a system is good for keeping people together who are rather disjoint, as in an environment such as ours where many things are going on at once. 3b8

Disadvantages 3c

1) A lot of mail received is not of interest; however, it was pointed out that this was true of all communications systems, and many people said there was no more unwanted mail than in a traditional office. 3c1

One person commented that it was so much easier to use than traditional methods that it offset the unwanted mail. 3c2

Two people commented that the main problem is not the bulk but the fact that there are not sufficient techniques for dealing with the quantity of information. 3c3

2) Slow or no response at all to items sent through the journal is very frustrating. Several people questioned whether people even read items in the journal. One possible reason for this is that people are more wary of writing than speaking ideas, especially in the journal where they are recorded. (A new feature allows checks on the frequency a file is accessed giving an estimate of read rate. A preliminary look has shown the access rate to be 95% of the distribution.) 3c4

3) Online communication discourages verbal communication and lacks a certain personal touch which again decreases the responses. 3c5

4) The journal is too slow and not good for immediate notices, but only for things which need no immediate action. 3c6

5) It is expensive. 3c7

6) The journal takes a long time to learn. 3c8

7) Privacy is needed. 3c9

8) There should be one combined method of communicating rather than two. 3c10

9) It's hard to get old messages. 3c11

10) Quickprints of journal items should include the title and ident of author. 3c12

Linking 3d

Comments about linking as a method of communicating were generally negative. For example: 3d1

It is too slow 3d1a

It is good only if you are on the system a lot 3d1b

It is not easy to advise 3d1c

It is not used enough 3d1d

CNLINE-OFFLINE WORK 4

Many different work patterns and preferences were reported, however there was consensus on a few points. 4a

1) Everyone agreed that they would do more work online if the system were more accessible. 4a1

The whole problem of accessibility seemed to be the most frustrating thing to people and there have been varying responses to this problem. 4a1a

- Some people do essentially all of their work online and have arranged their working hours so as to make use of the system when it is accessible. These are people who resist doing work offline that would be easier on. 4a1a1

- Other people have intentionally not become dependent on the system for their daily work. 4a1a2

- There is a problem of keeping two things going, one online and one offline for people who choose to work regular hours. 4a1a3

- Several projects have not been started and tasks are often left hanging due to a lack of accessibility. 4a1a4

2) Thirty-five percent of the people specifically mentioned that they did not like to do original writing and thinking online. Reasons given were varied: 4a2

- Noise in the display area 4a2a

- Online time is too limited to spend time thinking 4a2b

- Typing is a problem 4a2c

- The screen is too small for a global picture 4a2d

3) Many people prefer to do their reading offline. Eyestrain and the small screen were given as reasons. One person

questioned whether the paper flow was decreased compared to a traditional office since this seems to be a widespread practice. 4a3

4) Adjusting to an online system did not seem to be a problem, however I suspect this is true especially when no major change is required in a person's work habits. A few people indicated that there had been a significant change in their established work habits and that this had taken a long time. 4a4

5) More first drafts were written offline and more editing was done on hardcopy for reports than programs. 4a5

6) When asked if it would be frustrating to work without NLS or a similar system two groups consistently said yes, programmers and secretaries. 4a6

INDIVIDUAL'S COMMENTS 5

There were several comments made by individuals which were interesting and should possibly be followed up to see if there is any consensus. 5a

1) There was a gradual change in programming work habits. Previously, the whole program was written offline, typed on, and debugged; now the entire process is done online and in segments instead of in its entirety. 5a1

2) A different medium results in different quality work. NLS is the first system (after 6 years experience) that is easier to do original programming and reports with - it's a waste of time to write offline because it's so much faster on. 5a2

3) New features are not well documented. 5a3

4) Thinking in the online mode is often an aid to writing. Output quickprint is essential to such a system. 5a4

5) Documents intended for external use are done offline, those for internal use, online. 5a5

6) My writing style has changed and now seems to be more clear and better organized but not as flowing. 5a6

DISCUSSION 6

The general feelings toward NLS as a tool were quite positive. I think this is evidenced by the fact that people in general would like more of it and seem to use it for as much of their work as is

feasible and efficient. This idea is further reinforced by the fact that 65% of the people surveyed said it would be frustrating to work without NLS or a similar system and half of those said they would not consider working without such a system. 6a

I think for most people the positive aspects of the journal outweighed the negative. 6b

SRL 21-JAN-74 08:55 21529

First Pass Survey of Working Habits of NLS Users

(J21529) 21-JAN-74 08:55; Title: Author(s): Susan R. Lee/SRL;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: SRL;
Origin: <LEE>SUR.NLS;7, 21-JAN-74 08:52 SRL ;

Network Working Group D. Crocker (UCLA-NMC)
Request for Comments: 615 3 MAR 74

NIC #21531 1

Proposed Network Standard Data Pathname Syntax

2

There seems to be an increasing call for a Network Standard Data Pathname (NSDP); that is, a standardized means of referring to a specific location for/of a collection of bits somewhere on the Network. 3

The reasons for a standard or virtual anything have been discussed, at length, elsewhere and will not be elaborated upon here. Rather than attack the entire issue of virtual pathnames, I wish only to propose a standardized SYNTAX for specifying pathnames. Such a standard will be useful for 1) users who are unfamiliar with a site or who use several different sites and do not want to have to remember each site's idiosynchracies, 2) programs accessing data at several other sites, and 3) documentation. 4

The syntax allows the user to specify the necessary network, host, peripheral device, directory, file, type, and site-specific fields. Adding other fields, as needed, is expected to be quite simple. 4a

First the BNF: 4b

<NSDP> ::= % <bulk> <cr><lf> 4b1

<bulk> ::= <field> / <field> <bulk> 4b2

<field> ::= <key> <L-delim> <name> <R-delim> 4b3

<key> ::= NETWORK / HOST / PERIPHERAL/ DIRECTORY / FILE / TYPE / SITEPARM / N / H / P / D / F / T / S 4b4

<L-delim> ::= any printable character that is not in the succeeding <name> field and that is acceptable to the object site. For visual aesthetics and to facilitate human parsing, anytime <L-delim> is a left-bracket character (<, [, (, {), <R-delim> must be the complementary right-bracket character (>,],), }). 4b5

<name> ::= any sequence of characters acceptible to the object site. This is the actual data field with the file, directory, device (or whatever) name. 4b6

<R-delim> ::= Either 1) the same character as <L-delim> or 2) if the <L-delim> character is a left-bracket character (<, [, (, {) then its complementary right-bracket (>,],), }). 4b7

<cr> ::= carriage-return 4b8

<lf> ::= line-feed 4b9

And some elaboration: 4c

The syntax allows <name> fields to be an arbitrary number of characters long. Case is irrelevant to the syntax, though some sites will care about case in <name> fields. 4c1

<Key> indicates what part of the pathname the next <name> is going to refer to. The single-character keys are abbreviations for the respective full-word keys. 4c2

<Fields> ARE order dependent, but defaulted ones may be omitted. The order is as indicated for <key>s. That is, Network, Host, ... Siteparm. 4c3

Fields may be repeated, as appropriate for the object site; that is, multiple Directory fields, etc. 4c3a

The validity of any combination of <field>s is entirely site-dependent. For example, if a site will accept it, an NSDP with a Host field, and nothing more, is permissible. 4c3b

<delim> is used to delimit the beginning and end of the <name> field. 4c4

Explanation of <key>s: 4d

NETWORK or N:	Currently, only ARPA is defined.	4d1
HOST or H:	Reference to host, by official name or nickname or number. The default radix is ten; a numeric string ending with "H" indicates hexadecimal, "O"(oh) indicates octal, and (gratuitously) "D" indicates decimal.	4d2
PERIPHERAL or P:	Peripheral device being referred to.	4d3
DIRECTORY or D:	Name of a directory which contains a pointer to the entity (directory or filename) specified in the following <field>.	4d4
FILE or F:	Basic name of the file or data set.	4d5
TYPE or T:	Optional modifier to filename. (Tenex calls it the extension.)	4d6
SITEPARM or S:	A parameter, such as an access specification or version number, peculiar to the object site. The content of the <name> field must serve to identify what Siteparm is involved. Each site will be responsible for defining the syntax of Siteparm <name>s it will accept.	4d7

Some reserved PERIPHERAL <name>s: 4e

DISK or DSK:	Immediately accessible, direct-access storage.	4e1
ONLINE or ONL:	Whatever immediately-accessible (measured in fractions of a second) storage the user accesses by default; usually disk.	4e2
TAPE or TAP:	Industry-compatible magnetic tape.	4e3
TAPE7 or TP7:	7-Track industry compatible tape.	4e4
TAPE9 or TP9:	9-Track industry compatible tape.	4e5
DECTAPE or DEC:	DEC Tape.	4e6

OFFLINE or OFF:	Any tertiary storage; usually tape, though "devices" like the Datacomputer are permissible. The user should expect to wait minutes or hours before being able to access OFFLINE files.	4e7
PRINTER or PTR:	Any available line-printer.	4e8
DOCPRINTER or DOC:	Upper-lower case line printer, preferably with 8 1/2" X 11" unlined paper.	4e9
PAPER or PAP:	Paper tape.	4e10
PUNCH or PUN:	Standard 80-column card punch.	4e11
READER or RDR:	Standard 80-column card reader.	4e12
OPERATOR or OPR:	System Operator's console.	4e13
CONSULTANT or CON:	On-line consultant.	4e14

Defaults: 4f

Defaults will generally be context dependent. Consequently, the following defaults are offered only as guidelines: 4f1

Network:	ARPA	4f2
Host:	The host interpreting the NVP	4f3
Peripheral:	ONLINE (DISK)	4f4
Directory:	The user's current "working" directory, usually set by the logon process.	4f5
Filename:	None.	4f6
Type:	None.	4f7
Siteparm:	None.	4f8

**-FEB-74 14:20 21531
Proposed Network Standard Pathnames Syntax

General Comments 5

The only field that must be considered in relation to any host's current syntax is the escape-to-NVP field (The per-cent sign as the first character of a pathname specification). It is not currently known to conflict with any host's syntax. 5a

Exclamation mark ( ) is the only other character that seems permissible (on the assumption that the character should be a graphic). Its use would cause minor problems at Multics; but more importantly as a graphic, it is too similar to the numeral "1". 5a1

The syntax is intended to be adequate for all hosts, so any given portion of it may be inappropriate for any given host. 5b

A site is expected to permit specifications in a given field iff that site already has a way of accepting the same information. 5b1

I believe that any modifications to the syntax will be graceful additions, rather than wholesale redesign, and thus can be deferred for a while. Currently, any undefined attributes must be specified in a Siteparm field. 5c

Perhaps Version, Access protection and Accounting, as well as other types of information, should be made standard <key>s, rather than buried as Siteparms. I expect that the next version of the NSDP Syntax specification will include them as <key>s, but I would like to wait for some comments from the community. 5c1

The syntax does not currently allow addressing any collection of bits samller than a file. This can be remedied by adding PAGE, BYTE and other <key>s; but, again, I would like to solicit some comments first. 5c2

Disclaimer 6

A pathname specified in the proposed syntax is fairly easy to type but is quite ugly to read. So, at the expense of design cleanliness, the <L-delim>/<R-delim> syntax was modified in an attempt to remedy the problem somewhat. As you will see below, it is only partially successful. 6a

**-FEB-74 14:20 21531
Proposed Network Standard Pathnames Syntax

The first draft of this document had a syntax that was a mix of Tenex and Multics conventions. That is, 6b

(Network)[Host]Peripheral:Directory>Filename.Type;Siteparm 6b1

Though visually more attractive and generally quicker to type, it lacks extensibility. For example, adding Version number or Access protection as standard fields would be difficult. 6c

It is suggested that human interfaces be built to translate to/from NSDP syntax and the user's standard environment. 6d

Some sample pathnames: 7

%H[ISI]D<DCROCKER>F(MESSAGE)T/TXT/S(P770404)<cr><lf> refers to my protected message file at ISI (<DCROCKER>MESSAGE.TXT;P770404). 7a

%H/OFFICE-1/D>JOURNAL>F<18659>T.NLS.<cr><lf> refers to NIC Journal document #18659 (Tenex file <JOURNAL>18659.NLS). 7b

%H/65/D.ARP061.D.LAD.F.DOCUMENT.<cr><lf> refers to a file ARP061.LAD.DOCUMENT at UCLA-CCN. Note the use of multiple Directory fields. 7c

%H[540]D//D>udd>D>CompNet>D>Map>F(Mail)<cr><lf> refers to file >udd>CompNet>Map>Mail at Mit-Multics. Note that the initial NSPD Directory <name> field is empty. This conforms to Multics' method of starting at the top of its directory structure. 7d

I would like to thank Jon Postel, Vint Cerf, Jim White, Charlie Kline, Ken Pogran, Jerry Burchfiel and Tom Boynton for their suggestions. 8

MEH 21-JAN-74 15:04 21533

Terminal comparison, Hazeltine-Delta

Mike: Here is the data we have compiled so far comparing Hazeltine's 2000 display terminal to Delta Data's 5200. 1

CONTENTS: 1a

(RECOMMENDATIONS): -- Delta Data 5200 or Hazeltine 2000 2

We here at ARC prefer the Hazeltine terminal because of COST, SPEED, TV-OUTPUT, and the fact that, to us, the text appearance (aesthetics) is satisfactory, even though it is not as good as Delta's. 2a

(SPEED): -- screen operations 3

Hazeltine's screen operations are very much faster; we have made some meaningful comparisons, and do feel that Hazeltine's faster screen operations are a definite advantage. Both will run up to 9600 baud. 3a

(COST): -- comparison 4

Hazeltine is much less expensive. 4a

(With upper-lower case and remote monitor options and enough memory for a full screen of text): 4a1

Hazeltine 2000: $3,595. $97/mo /yr. 4a1a

Delta Data 5200: $4,950. $220/mo /yr. 4a1b

Terminal comparison, Hazeltine-Delta

(AESTHETICS): -- text appearance 5

1. Delta has the best text appearance. -- Hazeltine's screen is physically smaller and can display only 72 characters across, Delta Data is an nice size screen and can display 80 characters across. The Hazeltine character matrix is 5 x 7 where Delta Data's is 7 x 9, which yields better character registration. 5a

2. Hazeltine's characters are somewhat out of focus at the edges. They use a long persistence tube which further degrades focus and leave a mouse trail when ever the Mouse is moved. 5b

(CURSOR): -- tracking appearance 6

Delta Data has the best cursor tracking. Hazeltine's is sloppier, and has extraneous movements to the edges, but is quite usable. Both have a blinking cursor, but can be ordered non-blinking. 7

(KEYBOARD): -- comparison 8

1. Hazeltine's keyboard is detachable, Delta's is not. 8a

2. Hazeltine's key action feels snappier. 8b

3. The repeat key function for Hazeltine requires the operator to depress a repeat key in addition to the character key. On the Delta terminal it is a time function -- if you hold any key down for more than a half second it sends repeat characters, which is extremely annoying. 8c

(TERMINAL-POWER-UP): -- comparison 9

The Hazeltine power-up sequence is: power on, (shift)CLEAR; Delta Data's, power on, Reset, tty mode, clear mem, online. We plan to incorporate this sequence into the power-up sequence of the line processor, however, so in the future this won't be a consideration for the user. 9a

(NOISE): -- fan 10

The fan noise in the Hazeltine is quiet. Delta tells us their new terminals are also, but we do not have one here yet to test. (Expect one by the end of the month.) 10a

(TV-OUTPUT): -- specifications and monitor requirements 11

Hazeltine uses standard 525 TV line rate with EIA sync, which can drive any standard 525 TV monitor. Delta's line rate is: 720 TV lines. -- This means that in order to display Delta's text on a

remote monitor the remote monitor must be able to sync on 720 lines. Conrac makes such a monitor (RQA series). Costs in the $1,500 range. By comparison, a typical good quality standard 525 monitor cost about $500 or $600. 11a

(LINE-PROCESSOR): -- related capabilities 12

In the Hazeltine there is no bug selection marking capability and we will use a "flashing cursor" technique. Delta Data allows underlining or blinking characters which we will use to show bug selections. We feel that the underlined character is more successful. 12a

Terminal comparison, Hazeltine-Delta

(J21533) 21-JAN-74 15:04; Title: Author(s): Martin E. Hardy/MEH;
Distribution: /SRI-ARC; Sub-Collections: SRI-ARC; Clerk: JML;
Origin: <HARDY>HAZEL.NLS;11, 21-JAN-74 14:39 JML ;

LCN 21-JAN-74 09:36 21534

RFC Inquiry

One of our people has cited some RFCs which you authored in a job application.
Is it o.k. to copy these RFCs and send them to the project member's prospective employer? 1

LCN 21-JAN-74 09:36 21534

RFC Inquiry

(J21534) 21-JAN-74 09:36; Title: Author(s): Lou C. Nelson/LCN;
Distribution: /MDK; Sub-Collections: NIC; Clerk: LYNN;

LYNN 21-JAN-74 09:45 21535

1/21/74 Message to Postel

HI Jon. Lou told me this morning that there is no room at ISI for an Ident for me at this time. So my messages will come from the NIC. Dinner night has been moved to Friday nigh because each of us finds Wednesday too difficult. I'm usually recuperating on that night for the final drive into the end of the week; Linda has to get up at 5:30 in the morning and Bruce has to get up early that day too. Thought I'd tell you about a change in tradition. It's been raining a lot here. I've been working hard the last two weeks and have caught up on my work, a fine way to begin the new year. Rich and I have still been seeing each other but not as much. I like him a lot, Jon, but he'll not be here much longer and I find that very hard to forget and just enjoy myself now. But doing it is learning it; just like on the computer. Flowers. 1

LYNN 21-JAN-74 09:45 21535

1/21/74 Message to Postel

(J21535) 21-JAN-74 09:45; Title: Author(s): Lynn A. Rossiter/LYNN;
Distribution: /JBP; Sub-Collections: NIC; Clerk: LYNN;

draft mis proposal (short form)

Once organizations were small enough to be run by one individual who was an integrated data processing system and was the central source of his own data. Based on his data, he established policies, made plans and arrived at decisions. 2a

As organizations grew, the amount of information became too big for one person.. It became necessary to involve additional people and delegate authority. The result of this process was the construction of walls, both visible and invisible, between functions and differences in jargon that isolated the people , and communication became more difficult at a time when it was necessary for people of differing specialities to work together . This process is readily manifested in AFSC 2b

In a modern organization ,fragmentation due to delegation of authority and separation of duties is something that may have to be tolerated. Nevertheless, management still needs to see a unified picture of the total organization. It is time to reverse the fragmentation process and begin to centralize the organization again, 2c

As AFSC seeks solutions to complex problems, it quickly becomes apparent that the many variables and interrelated factors in such situations are beyond comprehension when under the control of old methods and procedures. Also so many people are involved in the solutions of these problem +that communication between them becomes a problem. Many well-intentioned policies only aggravate the problem because correct relationships among the proper variables could not be maintained or proper communication did not take place. 2d

A system must be able to integrate data and information flows into a central unifying concept that represents the entire organization and at the same time facilitates communication across the functions and between the people. 2e

BASIC PROCESSES

3

What we really are faced with are three transformations: data into information, information into knowledge, and knowledge into actions or decisions. These are the basic processes that have to be incorporated within the Management Information System.

3a

Assume that we have collected all the basic data elements that apply to an organization and have them stored in a database that we can easily access. The data contained in our database is useless unless we can get at it. Reports and computer printouts in predefined formats are one way , but many times they are not sufficient. Selective extractions from the database geared around one question form an output that is a subset of the database and is more appropriate for many uses.

3b

information needs are of two types: A priori are known in advance and may be met by predefined batch reports. The ad hoc or unanticipated information needs are a more serious problem, a manager making decisions under uncertainty needs a way to retrieve data quickly to build up his information pool so that he can better define what he needs. As the manager's knowledge increases, more appropriate information can be requested. Each time this process is repeated, the current needs of management can be more closely satisfied. This process requires an on-line query capability that can be used by an unsophisticated user to obtain information from the database according to changing selection criteria.

3c

Finally, this new knowledge is analyzed by the person in combination with the rest of his knowledge and past experiences and is used to arrive at decisions or form hypotheses or theories. Today we are beyond the state where one person works alone on a single task or sets policy by himself. So an important part of reaching decisions involves communicating with the other people working on the task.

3d

A Management Information System must address all of these transformations and provide capabilities that would help solve

them. The system we are proposing consists of three main components or modules:

(1) A DMS that would control the database

(2) A Communication Subsystem that would facilitate distribution of information, knowledge and decisions

(3) A set of management science techniques that would help analyze information and aid in the management decision process.

These components could operate independently as subsystems to provide their own particular service or together along with the people, hardware, software and procedures that are also part of any Management Information System. 3e

Purpose of an Information System 4

The ultimate goal of such an information system would be to present a unified view of both the organization and its problems. The information system should cut across all the individual functional areas that may now exist. It does this by providing four main services: 4a

(1) provide access to the data of the organization 4a1

(2) support operational functions within an organization 4a2

(3) generate and communicate information 4a3

(4) assist in the management decision process 4a4

Let us look at each of these points in some detail in order to see how a Management Information System could achieve them using the modules we have identified. A Generalized Data Management System (GDMS) is a software system that provides coordinated control of the data in the database. the GDMS serves as the interface between the users and the data and provides access to common databases for many users by representing the data structures in a logical (as opposed to physical) data organization. Thus, it is the Data Management component that provides access to the data. 4b

There is a dichotomy in most organizations in that the people in the lowest levels of an organization generate most of the data yet they have the least need for information. Each successive level in the hierarchy produces less and less data but they have correspondingly greater information needs. Finally, at the very top of the organization almost no new data is generated. This level is completely devoted to making decisions and ,therefore, needs access to all the data about the organization This is

equally true of sub-organizations within larger organizations, i.e. RADC, AFSC, USAF, DOD, etc. 4c

An information system should be able to resolve the imbalances inherent in this dichotomy. People at each organizational level should work on the same system even though they will not be using it for the same purposes. At the lower levels the system would be a tool to augment the work. The data could be captured automatically for use by the higher levels which would selectively extract the information they need from this larger base pool. 4d

A final factor to be considered is that there are two types of data, stuctured and unstructured. A Data Managment System is designed to handle well defined formatted or structured data efficiently, A Management Information System must also provide various levels of management with the ability to store, retrieve and communicate unstuctured data such as ideas, notes, memos, reports and plans. 4e

Efforts have been made to establish standard reports (MASIS, JOCAS, Cost Accounting, Program Status, and Personnel) but these are not effective. Although they may be needed at Headquarters and higher levels, they cannot be used effectively at lower levels. Yet much of the same data is collected separately for local systems and this results in a lot of unnecessary duplication and contributes to the already high overhead in R&D and procurement that has been estimated by Gen. Brown to be as high as one-half to two-thirds. 4f

The Base communications Mission Analysis study makes a very clear distinction between two types of communication. The first of these is characterized by frequency, informality and the means used for communicating (namely, face to face discussion, telephone conversations, handwritten notes, memos, etc.). 4g

The second form of communication entails both the transfer of information and the recording of what information was transferred, when and by whom etc. Communications of this type is characterized by relative infrequency, formality, and record keeping. The modes

of communications used are those that are designed to meet these criteria. These communications include letters , memoranda, teletypes, and printed material including regulations and directives. 4h

The cost of our present communications is astronomical without even considering the need for record keeping. The cost of a single letter has been variously estimated in recent years as ranging upward of ten dollars, in industry. Any communication system must have imbedded in it efficent, simple, automatic and inexpensive means of handling record communications. This is especially important within AFSC where the entire cost of sending and receiving record communications must be born by the organization itself. 4i

In any organization, there are many levels of management that have to communicate up and down a level or two. Each level deals with slightly different data but the types of things they do with the information produced are bascially the same. Therefore, everyone could use the same Communications subsystem. 4j

The first level of management in AFSC, the project engineer, gets things done through other people (some contractors, some in-house) and is the basic source for data. We have to build the Management Information System around him to get the key data. some capability for communicating and documenting his work so that it can be shared by others as we mentioned earlier is the role of the Communication subsystem. 4k

The basic functions of management are to organize, coordinate, plan for, direct, and control the organization with the three resources it controls: people, funds, and facilities. 4l

AFSC's's basic method of managing is via the 5 Year planning, programming and budgeting system. This system is based on a need for sound planning. The overriding consideration of AFSC is to maximize the level of defense for the least possible cost. What this means in a nutshell is that AFSC must implement modern

techniques for selecting, evaluating, and controlling projects with its limited resources. 4m

The introduction of a Management Information System puts AFSC on the threshhold of implementing the greatest innovative management techniques and concepts since the advent of the program management concept. As near real-time flows of structured and unstructured information becomes possible, shared use of management tools is a reality. The role of these management science techniques is to take information generated by the system and perform analyses on it to help the manager in doing his assigned duties. 4n

There are many management science techniques or tools available which can be implemented almost immediately. These tools are analytical devices, e.g. linear programming, used in operations research, risk analysis, the related tool - sensitivity analysis, DELPHI now available on the ARPA net, flow charting techniqes such as PERT or CPM, and cost analysis. 4o

The introduction of the netted Management Information System concept also will permit an organizational capability never before possible; the use of AFSC specialists at different geogpaphical locations banded together as a team to work on a problem. The savings in travel funds could well pay for the cost of the net operation. 4p

Presently there is a method by which development needs uncovered in systems developments are fed back into the research and development programs. This method currently is to submit TN's and monitor past submissions on a semi-annual or annual basis and leaves a lot to be desired. The netted system allows the TN's to become a dynamic continual operation. It would permit for a continual monitoring of progess by those interested parties during the control phase. 4q

Such a system must be implemented. The potential of the system is evident: 4r

As individuals become involved the methods of operation change and become the new norm. Only now, he is able to be free of the drudgery that he experienced and accepted as a matter of necessity. 4r1

Because of near real-time information flow, manangement will find itself free from routine decisions. Controlling resources at the levels below AFSC will be the responsibility of each organization's commander. The Management Information System at his disposal will provide him a tool by which he can determine the effectiveness of his organization. He will be able to develop integated plans for program implementation nd maintain continual maintain an awareness of implementation progress through variance reports . 4r2

As management tcols are introduced into the system, higher levels of management will find themselves dealing with long range planning in a more continuous fashion. 4r3

DESIGN and DEVELOPMENT 5

The introduction of any information system into an organization consists of activity in three areas; System Planning, System Developing and System Life Cycle. None of these can be ignored, they are not mutually exclusive and they will proceed simultaneously after the initial phases are completed. 5a

SYSTEM PLANNING ACTIVITY - to determine the information needs of the anticipated user population and a system concept of how best to satisfy them. 5a1

We must further study the information needs and associated problems of AFSC. We must also survey the environment, the organizational structure, the operating procedures and objectives. After we accomplish this, we should be able to summarize this analysis into a blueprint of what we are trying to achieve. 5a1a

This sounds a bit unnecessary to some people however, they have not been stated with sufficient clarity or in the detail necessary to allow their transformation into system software and internal operating procedures. 5a1a1

Step 1--Information analysis 5a1b

This step will define the information needs and the patterns of information flow which will satisfy those needs in sufficient detail such that they can be translated into system requirements. Specific values for parameters such as response time, areas of data base coverage, user population mix, etc. will be delineated and documented. 5a1b1

Step 2--This represents the last step in zeroing in on

needs and a system concept. It will serve the following purposes: 5a1c

(1) Describe solutions in terms of needs that will be met, working environments, resource requirements, timing, costs, contracts, consultation, and alternative options. 5a1c1

(2) Document the proposal teams' perceptions of the above.; 5a1c2

(3) Act as the formal vehicle for a dialogue with potential system users, operators, interfacers, etc. The end product of this interchange should be an agreement on the basic system development parameters 5a1c3

SYSTEM DEVELOPING ACTIVITY - to develop the system that will satisfy the user's requirements (as determined in step 2 above). 5a2

Step 1--This is a design step, in which specifications for the components are developed, within the limitations of the system concept, and the available manpower, funds and time. The endproduct of this step would be a detailed system design document, which would be circulated among other technical people in AFSC, and finally submitted to management for approval. Until this time management has only a limited committment. When the critical design review is completed, management faces a decision point; namely whether or not tc make a final commitment to implement. 5a2a

Step 2--This is the procurement and/or construction step. It includes the testing of components, construction of component interfaces and comprehensive testing of the total system. 5a2b

Step 3--Concurrent with the testing of the system, a training program must be developed. It is also important at this time to develop operating procedures to insure the smooth flow of information into, through and out of the Management Information System. 5a2c

Step 4--This is the phase-in of the new system. It includes education of the system users, training of the system operators, gathering and loading the necessary operational data bases, and final check out of the system in the operational environment. It will be necessary to run both the old and new systems during this time period. This requires a special kind of tolerence on the part of management to allow time for the training of their employees. The manager must also have a sensitivity to the psychological problems inherent in the introduction of a new "way of doing business". 5a2d

SYSTEM LIFE CYCLE ACTIVITY - to continuously satisfy user's needs with new or improved information systems. 5a3

This activity must provide users with reliable and stable system operation. It also includes maintenance, performance testing, additional training and correction of system deficiencies as they occur. 5a3a

A feedback system must also be implemented, which measures system use and performance. The purpose of this is to provide information to the system designers and operators, so that they might more intelligently introduce refinements. 5a3b

Finally, this activity includes a monitoring of the changing system component technology and user information needs, to facilitate responsive recycling through the system planning and development activities. 5a3c

Technical Approach 6

There are three main alternative approaches that may be used in constructing the Management Information System, these are listed below: 6a

(1) one complete system designed as a single entity and implemented on one central computer system. 6a1

(2) integrating existing components by interfacing them together under the same computer system. 6a2

(3) integrating existing components that are distributed across a number of computer systems by interfacing them together through some kind of network. 6a3

Inherent within each of these approaches are advantages and disadvantages. What one approach does well might be a problem in another approach. The first may be considered the classical approach; that is, redesign the wheel by building one super system from scratch and running the whole world on it. By designing and building it from the bottom up, there will be no duplication or overlapping of capabilities between the components making up the system. The interfacing among these components would be relatively simple because they would all operate on the same computer and the interface, itself, would be part of the original design. Drawbacks in this approach would be the high cost and the long time in development. Furthermore, if the computer system is down, then the entire Management Information System is unavailable. 6b

This centralized approach is dependent upon one central site being responsible for all the information needs for all of AFSC. It is certainly impractical if not impossible for one

universal system to accomplish this. First, there are many functions that can be performed only at the expense of degraded performance of others. One site may need fast response times while not caring about the cost or time for database updating. Another site might want just the opposite, fast, cheap updating but slower response times. This type of conflict is not easily solved. Either you can make one site happy but not the other or else make a trade-off so that neither one is satisfied. This concept also requires a central database that is designed so that all the different sites can use it. This is also difficult to achieve as various sites handle the same functions in different ways. For example RADC has its own procurement division while most other sites use base provided procurement facilities. It would be a severe design problem to resolve all the possible conflicts in this kind of situation. Finally, this approach does not truly provide data sharing and it is doubtful if remote sites will be able to really use such a system . 6b1

The second approach will make use of previous work and will save much development time and money by utilizing existing packages that are already in operation and may have been checked out. There is a limitation in the selection of the components in that they must all run on the same computer (i.e. must be capable of being transferred to the central computer before they can be implemented into the Management Information System). Interfacing will be more of a problem since the various components would have been designed

independently of each other. However, the task will be eased somewhat since they all will be operating on the same operating system on the same computer. One of the drawbacks in mixing and matching the modules that makeup the Management Information System is that there is bound to be some duplication and overlapping of capabilities but although this will contribute to overhead, it shouldn't make much of a difference otherwise. Naturally, you will again be committed to the selected computer and would have the same problems we discussed above with a central computer. Both of these first two approaches also mean that every AFSC site must have the same computer system. 6c

The final approach is similar to the second except that you are no longer restricted to modules that all run on the same computer. This method gives you the freedom to choose the best available components that can supply the necessary capabilities and then integrating them together logically rather than physically. This type of implemtation will be available to more users since it will be distributed across a network instead of being centrally located on one operating system. As in the second approach there will no doubt be overlapping of capabilities contributing to overhead and the problem of interfacing the components becomes correspondently more difficult. Besides trying to match independently created modules, there is the further problem that they run on different computers. However, by using existing network facilities like the ARPA NET, this approach becomes more feasible. 6d

In our initial description of a Management Information System, there was no requirement that the whole system had to be designed together or that the various components had to exist and operate on the same computer. Rather we felt that each component was logically independent of the others in the sense that each had its own function to perform that contributed to the job the Management Information System was responsible for. This parallels the definition of modularity used by Glenford Myers in programming - modularity is not an arbitrary division of a large program into smaller parts or modules. The primary goal should be to have the modules as independent as possible. 6e

We now have a better picture of what the Management Information System would look like. The Communications component would exist at one node of the Network while the DMS would be at another and the management science techniques would be at still others (whereever there might be a useful package at any site on the NET, it would be available for use to the Management Information System). In this kind of configuration, the Communications subsystem plays an even larger role. Besides handling unstructured data and providing communication between the different users of the system, it is now responsible for maintaining coordination between the other components too. It must control transfers of data from the DMS at one site to feed into some kind of management science package at a different site. Finally, it must return the

results of that analysis back to the user who culd be at still another site (see Figure 7). 6f

In fact, as long as the various modules of the Management Information System could be "married" by means of appropriate interface packages, this separation becomes an advantage instead of a hindrance to the total system. For example, a new database could be integrated into the Management Information System simply by suppling an interface package. The database would remain unchanged to the original users and existing programs and operating procedures would not have to be modified. But the database would now be available to many additional users. And again, I envision the use of the protocals of the ARPA NET to simplify this integration of distributed databases and components. 6g

These are three alternatives that could be considered for implementing a Management Information System like we have described. The one we have decided to follow is this last one, an integrated approach utilizing the ARPA Network. This approach not only answers the question of how to build the Management Information System but it also directly solves the problem of having all the sites in AFSC use it. Each site of AFSC (including Hq AFSC) would be connected to the ARPA Network, thereby gaining access to the Management Information System as well as to each other. 6h

The key feature to this approach is its utilization of present facilities as much as possible. Existing DMSs would continue to

operate in their existing local mode of operation. Gradually, their databases must change to meet the central framework that would be established at Hq AFSC level. Each division or laboratory under AFSC would be responsible for building and maintaining a proper database under this framework (by proper database we mean one that is designed to serve both local and AFSC needs) but they would be allowed to choose any data management system they want as long as it can be integrated into this Network and satisfy AFSC reporting requirements. If a site has no DMS presently in operation, they could either select one that is already available on the NET, procure one or use one that some other group of AFSC has. (see Figure 8). 6i

This approach would allow sharing of existing data without redefining or restruturing it. And rather than developing and implementing a new data management system, it would use existing ones. Furthermore, if a new database or DMS had to be integrated into the Management Information System, it could be done simply by supplying a suitable interface package and without disrupting the rest of the network. This means that creativity would not be destroyed since data mangement systems could continue to be developed that would take advantage of innovations or new technology and this would be done without causing any interruptions to necessary operations over the network. Another potential advantage that could also be achieved is a fail-soft

property- when one component on the network fails, it would only degrade service rather than causing the failure of all services. 6j

Finally, it would be easier and less costly to implement a system like this instead of imposing the implementation of the same data management system in different sites. To begin with a new mode of operation wouldn't be required. The transition would be faster because we would be building around existing systems and knowledge. The risk factor with the effort would be correspondently lower. Even when new systems are evolved into, people could still use their current one until they experiment with the new one and see its advantages. 6k

In the future, access to any database would be achieved over the NET by means of a Common Query Language which would be located in the communications module of the Management Information System. This Common Query Language (CQL) would separate the users from concern as to where the data is located and in what form it can be accessed or stored. Work on a query language like this is now underway at SDC under ARPA sponsorship. The form it is taking is to have a user-oriented front end that would be easy to learn and use. Then there would be an intermediate level that would be powerful enough to express any functions desired. In addition, the common language would be based on general enough data structures to allow representations for any database. A Translation Interface would then have to be developed to connect any data management

system to this query language on a one-to-one basis (one translation package for each DMS). 61

IMPLEMENTATION 7

Implementing any system is sure to have a great impact on the organization. Indeed, if it did not, then one should seriously doubt whether it could do the things claimed for it. This immediately implies that such change must take place slowly and gradually...these transitions do not happen simply. As a part of this people must learn to undertake new tasks, not just perform old tasks in a new way. What we propose to do is have a phased implementation that would allow AFSC to evolve gradually into increasing use of a Management Information System as it is built. 7a

Phase 1 7a1

Establish three nodes of the integrated Management Information System at Hq AFSC, RADC and the AFSC Computer Center at WPAFB (the two nodes at the field level were chosen because both these organizations are in the process of building local integrated Management Information System which cover the functional areas we are concerned with for AFSC level). These three sites would be tied into the ARPA Net using NLS as the communications subsystem. The RADC and WPAFB sites could then begin getting MASIS or JOCAS reports to AFSC on-line. Individuals would be identified at each site as focal points for getting requests via the

communcations subsystem, getting the response necessary and feeding it back to the requestee via the system. 7a1a

Meanwhile, develpment work could be started on the Common Query Language. And the other sites could survey their present situation and decide on a plan for constructing their own databases and selecting the DMS they would use. The organization model development would also be started during this phase. 7a1b

Phase 2 7a2

Place additional sites on the Network as they become operational with their DMS. Also implement the Common Query Language under NLS so that any site could join the system as long as it supplies the appropiate interface. 7a2a

COSTS 8

We will examine costs in two ways, First, common costs that would apply to geting sites onto the Net and secondly, costs within each site in implementing their own DMS (we will only provide estimates for what the cost for doing this at Rome would be). 8a

Network Costs 8b

Interfacing to the ARPA Network with a TIP $100-150k 8b1

This might be all some sites have to do. 8b1a

Interfacing a site computer onto the Network $100-150k 8b2

Supplying Translator Interface to CQL $50-75k 8b3

Interfaces to mg't science tech packages $25k each 8b4

Organization Model Development $300-400k 8b5

RADC Costs for implementing a local Management Information System 8c

Information Analysis 25k 8c1

Database Design 100k 8c2

Maintenance Support 160k 8c3

Applications Programming 200k 8c4

Documentation & SOP Preparation 120k 8c5

Nls Utility 1,400k 8c6

Expected Cost Savings 9

It is always difficult to anticipate the cost savings that could arise from such a system. How do you quantify improved service, higher quality of work, less mistakes, etc.? It might be easier to ask if you can affort NOT to go to some kind of integrated information system. Data is starting to be considered as a basic resource and as such, there are direct costs associated with needless duplication (not only from errors and mistakes that arise but also from the additional manpower to handle the administrative necessities). Finally, there is an effort on-going within the Air Force to make do with less and less manpower even though everyone knows that the work load is not to decrease even if the number of people are reduced. The only way we will be able to operate at all is to have some kind of computer augmentation that would allow us to make better use of our prime resources: people (and their knowledge) and money. 9a

EJK 21-JAN-74 11:40 21536

draft mis proposal (short form)

(J21536) 21-JAN-74 11:40; Title: Author(s): Edmund J. Kennedy/EJK; Distribution: /JPC(journaled to save the file space); Sub-Collections: RADC; Clerk: EJK;

messages fourth quarter 1973

(dec) 1

26-DEC-73 1247-PST CAVANO: RADC DMS PROPOSAL
cc: iuorno, panara, liuzzi, daughtry, stone, cavano
Received 26-DEC-73 12:47:53 1a

FT read our paper and discussed it with Al Barnum. It seems that hey are basically pleased with it but from leter talks with Gabe, something new has come up. Namely, that we should include the idea of running FEMIS as a interim system. This shouldn't have too much of an impact on us other than letting a contract to someone for maintaining Femis for us. What we should be preparing for now is to give some kind of honest demonstration using Data Query on our current data base showing what can and cannot be expected from IDS/Data Query in the future. Gabe seems ready to buy off on IDS without the ptich.. so this demo may be the main brunt of the attack now (in military term). 1a1

14-DEC-73 2319-PST KENNEDY: wife
cc: carrier, tomaini, iuorno, stone, panara, cavano, laforge
Received 14-DEC-73 23:19:38 1b

She's healthy as hell, except for one small problem, her gall bladder. It must come out. Decision point - (she's as physically healthy as can be, she's psychologicaly at a point where she is ready) do it now, delay 'til after Christmaas and then go back to the hospital, wait until she is acutely ill and then go in at some later time,less healthy and under duress, and get it done. Her decision, do it as soon as possible and get it over with. I fully concur and hope i do not ever regret it. What this does to the radc mis, I say, at 2:15 am 1b1

13-DEC-73 1435-PST STONE: PRC/IDS meeting
cc: iuorno, liuzzi, panara, daughtry, cavano, tomaini
Received 13-DEC-73 14:35:28 1c

For a quicky summaryof the meting see <stone>prc/ids. Please add comments...send them to me via sndmsg and I will include them in the file. I'll then journal for permanent record. 1c1

13-DEC-73 0834-PST CAVANO: comments on the stone bigpic
cc: stone, panara, iuorno, tomaini
Received 13-DEC-73 08:34:30 1d

1). You have concisely described the problem we are trying to solve for the Center (limited people working in inefficient ways to accomplishment R&D management). I shudder to think what

Gabe's reaction would be to the sad picture you painted of RADC. Obviously, manager's don't want to hear about things like that. If we are to move anywhere in this direction, I ttthink w are going to have hard facts on hand to support the hypothesises you have arrived at (and which I agree with). No one is going to listen to us wild-eyed mad scientists until we do have some kind of prof. 2). The fact remains that the problem that Gabe is addressing is not the one you have aluded to...despte his declaration that you knows what a MIS should do for an organization and that he knows it also, the capabilities he wants do not and cannot meet the test required of them to perform the services we envision. We must finally face the light of day and say "Alright, Gabe, we are going to build a really neat databse for you under IDS for a few bucks and then you are going tc have the best, damn MIS in tha Air Force." 3). As part of any proposal to do what Gabe wants, we should have a 'flyer' attached to it, requesting funds to work toward a longer ranged solution to the problem we think we see but that no one else does. Then our management must stick firm in requiring that we will not undertake the Center DMS (not MIS) unless these other funds are available for development work in other, related areas that we feel are necessary. 1d1

12-DEC-73 1403-PST STONE: executive summary
cc: iuorno, cavano, daughtry, panara, tomaini
Received 12-DEC-73 14:03:52 1e

Take a look at <stone>bigpic for my version of what an executive summary for the commander ...as I read it it looks more like an empassioned apeal, than a summary, but in the selling business, sometimes this works as well as trying to be logical...after the meeting with Gabe, i I'm sure that logic does not prevail in many cases. 1e1

11-DEC-73 1329-PST STONE: Gabe
Received 11-DEC-73 13:29:37 1f

We met for almost 2 hours with Gabe. Alot of the usual slinging of mud, accusations, etc. Gabe only wants to hear about what we might call hase I...at least at this time. He wants a "hard hitting" briefing reared for the commander and staff for pitching sometime in Jan. Also wants a proposal that's less lengthy, and "doesn't address itself to idiots"..Gabe apparently felt that the proosal talked down to him (although he admitted to not having time to read it)..and indeed gave evidence that he had not read it. Also needed is a 3 page executive summary, hopefully also full of "hard hitting" facts and arguments. Concerning Phase I, he wants a more detailed description of how we are going to spend the money

(what for), what capability we'll get, and when we can expect an IOC. We tossed out a figure of $300K and 1 year after contract start date for initial IDS capability. Frank T called Val Marshall this afternoon .. to see if PRC has anyone who we can talk with concerning the nitty-gritty details of implementing such an MIS. The plan is to talk to him this week (the guy with all the smarts) and to make a trip to WPAFB to see an MIS they are building in-house with 28 programmers. 1f1

11-DEC-73 1329-PST STONE: Gabe
Received 11-DEC-73 13:29:37 1g

We met for almost 2 hours with Gabe. Alot of the usual slinging of mud, accusations, etc. Gabe only wants to hear about what we might call hase I...at least at this time. He wants a "hard hitting" briefing reared for the commander and staff for pitching sometime in Jan. Also wants a proposal that's less lengthy, and "doesn't address itself to idiots"..Gabe apparently felt that the proosal talked down to him (although he admitted to not having time to read it)..and indeed gave evidence that he had not read it. Also needed is a 3 page executive summary, hopefully also full of "hard hitting" facts and arguments. Concerning Phase I, he wants a more detailed description of how we are going to spend the money (what for), what capability we'll get, and when we can expect an IOC. We tossed out a figure of $300K and 1 year after contract start date for initial IDS capability. Frank T called Val Marshall this afternoon .. to see if PRC has anyone who we can talk with concerning the nitty-gritty details of implementing such an MIS. The plan is to talk to him this week (the guy with all the smarts) and to make a trip to WPAFB to see an MIS they are building in-house with 28 programmers. 1g1

11-DEC-73 0534-PST CARRIER: appointment
Received 11-DEC-73 05:34:01 1h

Ed, it's 8:35 in the am and I just remembered I was to remind you to leave at 4:45 last night...As Todd would say...I sorry 1h1

10-DEC-73 0555-PST LAFORGE: radcmis
cc: stone
Received 10-DEC-73 05:55:59 1i

i spent some time this weekend going over the radcmis proposal(except for page eight which was missing). it is a little too strong on the philosophy but otherwise seems to be alright. 1i1

messages fourth quarter 1973

7-DEC-73 2352-PST BAIR: A Hi
Received 7-DEC-73 23:52:42 1j

Would say Hi to John Christian for me the next time you see him? Wish him and yours a happy... 1j1

7-DEC-73 2351-PST BAIR: TR
cc: stone, bair
Received 7-DEC-73 23:51:18 1k

Ed: Glad you received it OK. Took long enough to get it reformatted...at least I beat the Xmas rush. I suggest you Xeerox it. That will give you a much better copy and will not put such a tremendous load on the system. (Thats a pretty heavy file, esp. since op looks at every character in the whole thing.) Hope it is useful...I know a lot of people want to have copies of the TR. Have any idea how long it will be before that happens? 1k1

7-DEC-73 0851-PST KENNEDY: Your report
cc: bair
Received 7-DEC-73 08:51:49 1l

Jim I received your report in the mail yesterday, in good condition. I would like to get another copy for Bob Kenyon. Do you have a printfile that we can send to our printer? Pkkease advise. I would like to get one quick and the alternative is to xerox it. It should get out of here pretty quick so relax. 1l1

4-DEC-73 1329-PST STONE: NLS Utility
cc: mcnamara, tomaini, iuorno, thayer, carrier
Received 4-DEC-73 13:29:24 1m

Jim Norton of SRI informs me that they have the Utility contract in their hands for signing. The Utility itself is in place and programs have been loaded and exercised in a preliminary way over the ARPANET. I expect to have a trial run on it this Thursday of Friday. RADC will be one of the first groups to be moved over to the Utility, since we represent the largest single user group. This means that we may also be acting as a test site for the month of Dec..helping to clean up last minute glitches. 1m1

(oct) 2

5-oct-73 1053-pdt thayer: what's going on at mci??
cc: mcnamara 2a

received a call from p vecery last friday madder that hell over

the letter col hepfer sent to dr lovelace concerning our inability to move our r&d in to the field thru user support. we said the spo's wont lissen and dispite a "working agreement" with mci nothing has happened p v said he was going to bg larsen and refruit the state ment and say how wonderfol the work was that mci was giving to radc. p v eeem to thing that just having us on a team organized 6 run my mci was all we should aspire fore. he seemed supprised when i said thatwe wanted the hole job..... do you have any knowledge of wahats going on??? did pv go to bg l???? 2a1

30-oct-73 1701-pst bair: sendprint, hung & otherwise
cc: stone, lawrence
received 30-oct-73 17:01:13 2b

much discusion here revealed that sp is not long for this world, and hat a much better way is coming... in the meantime the pr oblem seems to be with the net. our status here is that we are not receiving the code from the tip saying that the buffer has emptied and that another block (900 some bits) is available. the problem with captured ports has been fixed, the printer port is no longer set wild requiring that it be given back. the tip problem should be, according to smoky, be referred to walden at bbn. they are still giving you all those new software releases just to make your life a little brighter. cc: stone and kennedy , for your info. response to lawrence telecon. 2b1

29-oct-73 0941-pst norton: sorting reverse 2c

ed: to sort in reverse order, you need to load the program sortrev (which resides in <user-progs> do the goto programs get sortrev thing. it will automatically make that program your srotkey extractor (it will institute it for you) when you have it loaded, all you do is say goto sort plex or group and give the address or bug the selection (tnls or dnls) and the reverse sort algorithm will be used. let me know if you have trouble.. jim 2c1

24-oct-73 0549-pdt mcnamara: mis 2d

i read your journal mail with mixed emotions i guess.as usual the air force turns to a outsisder to recommen how they should bulid a system to help them manage since obviously they are smarter they are paid more.ireally wonder if there is any hope at all .well with that i would like to suggest you really hit him with the pitch that the system must be for all ofthe organization not just for management since theworker bee is the guy they think will put the data in the data base.ha ha .i gave

that talk at misuse and i think it is true, that the worker bee just laughs when some new requirements are placed upon him.a system like nls is the first hope that maybe we could get the data at the source and bring the worker bee into the loop.i see you are pitching the center the 7th of nov have you a file i can read i seem to be finally settled down and and would like to see what is going to be said. see you later 2d1

23-oct-73 2242-pdt norton: help re progs 2e

you got the funny message loading outside of allowed..etc because you had loaded more programs than will fit in the default buffer space the system sets up for you. it's 4 pages i believe. to check your status, try a goto programs status and see. it will tell you how much you have used with the programs you have loaded (have gotten). if you want to load more, use the goto programs buffersize command and increae to, say 10 pages..that usually is enough for a few programs. in the case you report you might (?) have "got" the f program more than once? or the other? that would have for sure eaten up the buffer space.. the illeagal program spec message comes when you try to institute a program with a name that is not the name of a loaded program...like you might have made a typo when you went to institute or you had reset (oh, note that..it's useful to get rid of unwanted programs that you have loaded)... anyway, i'm not sure just what your trouble was, but those are some possibilities. the reason i like my f program is mainly the statement names it makes...so i can jump to name on stuff collected in my rather large toread or tofile branches...after i sort them by author ident... i guess the main thing is to pick one and stick with it so you dont get a mess of each format.... i clean out my tofile branch each month..to archive and refer to the journal catalogs for such....it's just the most recent stuff i was sent that i really need closeby. i guess we went over the links to the journal catalogs....right? in (norton,jcn,jindex) branch (or some such name). well it's getting late better go..bye jim 2e1

22-oct-73 0648-pdt norton: reformatting journal stuff 2f

ed: the program i was using to reformat items in my initial file...journal citations.. was my owm program. one can use it by: g [oto] p [rograms] g [et] <norton>f cr then g p i f cr c cr and it's instituted. then when you print a branch or plex with viewspec i on, it will reformat those statements. there is another format the is available in the <user-progs> directory. it is <user-progs>jform2. that program has a format like authorident title then lower lines for number, date, link. i don't like it as welll, hence my own format. i like

mine best because i get a statement name at the start that can be referenced and also most of the keys i may be using in browsing for the document.... and a little of the title. anyway... try them both on some sample stuff before deciding which you like. oh, a clue: try printing out the file <user-progs>-contents.nls. that file gives a lot of clues about programs of interest..good luck jim ps we are trying to develop ways to better get our tricks to users...hard to do when everyone's so busy. the -contents file is a start, tho. another thing....try a goto sort plex on some journal reformatted items when you are done. it puts authors all together nicely... j. 2f1

18-oct-73 1509-pdt bair: my "tr"
cc: mcnamara, stone, iuorno 2g

granted the thing is long, but it does represent over two years work on my part. it can be shortened -- and i can tell you how, and will agree-- but i dont understand why. if you want it on fewer pages, we can comm it here in a professional, any typeface, single space format. i know of no limitation to length of trs 2g1

18-oct-73 1505-pdt bair: borden and access 2h

you may have that i havent been on very much during the day...things are actually worse here...especially for me since i am in the allocation with dce jcn dvn, and others called staff your response to the borden consult is to be expected. however, icant see why you cant use some of them...maybe if you could get some of the bloodies guys off their asses. anyway, we will try to help from here but you must make yoour needs and questions known. address then to dvn and myself and we will we do our best. ok? incidentally, score one.... 2h1

17-oct-73 1230-pdt iuorno: akw
cc: stone 2i

i had just read cavano's file futility and couldn't agree with him more. the unavailability of the system lately has driven me back to good old paper and pencil....ral 2i1

12-oct-73 2247-pdt bair: bordens report
cc: stone, mcnamara, iuorno 2j

i would very much appreciate your reaction/comments to dr. borden's final report. i can see where they might be mixed.... incidentally, did you get it? 2j1

messages fourth quarter 1973

4-oct-73 0707-pdt cavano : ejk guidance on radcmis
cc: stone, panara 2k

(1) although we can tap joe femia and even roger weber for discussions of femis and its present role in the scheme of things, one of our own boys should present what we decide to present on femis. (2) the transaction procesor (tpe) has given an on-line capability and multi-user capability to dm-1. it is a separate software package available from honeywell and could be hooked up to ids the same way it was hooked up to dm-1. it is not ,however, called wwdms and it has nothing to do with wwmccs. wwdms = world wide data management system = it is based on an evolution of advisor and ids and its final form is not certain yet (atleast to me). wwmccs = world wide military command & control system = is an operating system (like tenex or gcos). 2k1

(nov) 3

30-NOV-73 0911-PST LAWRENCE: RADC-AFSC AND THE ARPA NET
cc: stone, cavano, panara, tomaini, thayer
Received 30-NOV-73 09:11:17 3a

As you well know AFSC or rather 4 or 5 AFSC organizations intend to become part of the ARPA Net. They will in fact become a subnet whose purpose over some period of time will be to study and define network problems and objectives as they apply to AFSC. The network plan thus developed would then be more generally applied to AFSC. RADC has been encouraged to become an active site in this initial subnet. If RADC takes advantage of this situation it may provide a solid vehicle by which internal networking expertese can be greatly extended at the same time providing service to a recognized AF requirement. The AFSC effort may also be a source of funds for RADC net activities. Participation in this net may provide a means by which RADC sponcored technologies such as AKW and data management systems may be introduced to the greater AF community. It appears that such participation would require significant manpower resources. All of the above items are speculative but should be kept in mind. 3a1

29-NOV-73 0634-PST CAVANO: Rough Draft on AFSC MIS proposal
cc: stone, panara, liuzzi, iuorno, tomaini, daughtry, laforge,
Received 29-NOV-73 06:34:28 3b

- - - - You will shortly find yourself with a zerox copy of a rough draft in thetrueist sense of the words. Please read it carefully and respond with your immediate reactions. Any

comments would be appreciated, esp those about points I may have overlooked, things I may be stressing too much, etc. We might repeat this process a couple of times because I really need all the help I can get. Thanks... 3b1

28-NOV-73 1216-PST BAIR: Protection and limit
cc: bair
Received 28-NOV-73 12:16:40 3c

I'll try to respond toall the question you posed: The allocation system has been changed, but I cant find out for sure what it is. ...somewhere between 3.5 and 4.5 5min ave. This admittedly low, butyou are reminded that only the allocated slot(s) is guarenteed. I gave you the wrong figures for tthe protection code: it is 52 not 55 to set the grooup protection. Thus a file that woould be unavailable to anyone but you for read or write would be P770000, or just your group: P775252; if I have missed anything, please remind me and I will try to answer it. Send copies of system questions to Vannouhuys and Norton so they are aware of the problem(s). 3c1

27-NOV-73 1358-PST BAIR: TR
cc: stone, laforge
Received 27-NOV-73 13:58:53 3d

Duane: In response to your question: the report is being printed in single space form to shorten the overall appearance. TThis requires changing all the preset page nos. in the contents and eslsewhere as well as recopying the off-line charts, etc., in the appendices -- they havee the incorrect pns. It should be in the mail this week -- if it comes out right this time (2nd try). Thank you for your time during our visit...it was good to see you again. Your timely summary of the meeting is very helpful and is being used as the basis for action. I regret not being able to see Mac, or the Eds on a substantial basis. 3d1

23-NOV-73 0505-PST STONE: IMLAC's andother things
Received 23-NOV-73 05:05:08 3e

The keyboard on #2 IMLAC is subject to repeating..causedd I think, by key bounce. #1 IMLAC has a better keyboard. Deleting the partial copy of a screwed up file is often the only way to get back in business..without going to SMOKEY. There is no backspace key on the IMLAC (neither is ther on the TI) so use good old contol H, or use the right most button on th mouse. Backspacing in TENEX is done with the conntol A, of course. How did the Turkey day go, with only half the family there, it must have been pretty calm. We have my bother-in-law

up from Conn, with 4 kids (added to our 4)...anything but calm 3e1

21-NOV-73 0302-PST STONE: RADCMIS Pitch
Received 21-NOV-73 03:02:36 3f

The pitch went poorly last Friday..from Franks view anyway, but Monday it was much better..Joey got aaa little wordy, and Col T left the room several times and never did here the money and manpower bit. Roger stood in for you and did a decent job..short and sweet. If you want more info see <stone>min How are you feeling these days?? Not so hot I presume, since I haven't seen messages etc eminating from uppe Turin Rd. Take it easy and heal your body. Things are under control..as much as they ever are in this place Am also starting a file visit which will try to summarize JIM & JIM's vist here. Feel free. 3f1

19-NOV-73 0034-PST KENNEDY: Col Hill visit
cc: mcnamara
Received 19-NOV-73 00:34:32 3g

Col Hill, Col Anderson, and McVicar from MITRE were here Wed and Thurs. When I say here I mean RADC. Although they were scheduled to be at our place fo a demo at 1330 they never made it at all. First, they went to see the commander, then they went to 240. At 1800 I said screw it and went home. The next day Charlie Strom and Bob Kenyon were over explaining the diffficulty and the delays caused by the comdr. who spoke too long at the lucheon and then spoke too long in his office. I told them the nly thing that bothered me was the lousy communications ability demonstrated by the comm division. The message to you was on their behest and I wanted to show off alittle anyway. 3g1

16-nov-73 0659-pst tomaini: terminals
cc: cavano, daughtry, liuzzi, lamonica, panara, stone, laforge,
received 16-nov-73 06:59:57 3h

- - - - please be advised isf/marilyn rossi/x7009 is focal point for maintenance of all terminals in isi. any problems with your machine, give her a call. dalso, lou comito/isf/x2242 is now responsible for ordering the paper for our terminals...bobbie 3h1

16-nov-73 0624-pst mcnamara: bcma
received 16-nov-73 06:24:26 3i

i don,t know anything about a visst from col hill when did that

messages fourth quarter 1973

happen.no i did not meet with harvel,i heard part of his pitch which as the typical esd plan.they would draw on the labs for something but it is not sure what.i have talked ot other xr types and intend to establish some plan of attack to deal with harvel.maybe someone like thayer may have to meet iwth them as well. 3i1

15-nov-73 1312-pst radc-dor at usc-isi: afsc(acdo 131630znov) msg,afsc use of arpanet facilities
cc: radc-dor, thayer at sri-arc, tomaini at sri-arc,
received 15-nov-73 13:12:45 3j

- - - - i am this date in receipt of the subject message which i quote. "1 a decisionto proceed with afsc usage of arpanet communications facilities for enhancing afsc adp support capability has been made. the requirement for early definition of an afsc plan to enter and use facilities of arpanet results in the need for potential participants toassist in development of the master plan. the plan will address requirements for hardware, software and communications, time phased from fy74 thgough fy78 , and will reflect cost and effectiveness. accordingly, an awareness of anticipated work loads, applications and requirements is necessary. fy74 funding and fy75 budget requirements must be identified and defended by nlt 7 dec 73. 2.request that one of two representatives from your organizations, knowledgeable of support requirements and implications of joining the arpanet, be made available the week of 26 nov 73 for assisting in development of the master plan. 3. lt col ernest madril, autovon 858-6400, project officer, will render assistance as required" end of quote. i will be forwarding the original of this message to is for action. it seems only appropriate to use the net to let you know about it, especially since it has been in do since yesterday. good luck j. runninger 3j1

15-nov-73 0836-pst cavano: dry run
cc: stone, panara, daughtry, liuzzi
received 15-nov-73 08:36:15 3k

since this is only a dry run, would it be a good idea toinvite people like bucciero or giardano to the pictch in the hopes of getting some feedback from them onhow they view this concept (after all, it would be people like this who do mcuh of the work that a mis should do for them). anyway, its just an idea. 3k1

9-nov-73 0754-pst cavano: merit promotion program
cc: iuorno, tomairi, mcnamara
received 9-nov-73 07:54:57 3l

with the introductcn of new appraisal forms, i am sure you are all anxious to try them out. if you need any assistance from me, please feel free to call on me. p.s. have any of you figured out why the is division is one of only three in ythe whole center to have its grade point average lowered since jun 30 (ref radc corporate review) - incidently, we had the greatest drop of all. 3l1

9-nov-73 0635-pst radc: cobra dane meeting next week, date not yet specified. lt clark from esd cale called tp request radc participation at a display panel layout design meeting with the rayteon troops. i did not commit us to attending the meeting but it probably is a good idea. we are providing only a limited amount of support to the program in order to keep earl filer from screaming. this system is a part of the missile warning net theat ultimately feeds data into the cheyenne mountain.
received 9-nov-73 06:35:03 3m

3m1

8-nov-73 1414-pst kennedy: radcmis dry run - message two
cc: stone, cavano, panara, iuorno, bethke, tomaini
received 8-nov-73 14:14:14 3n

this message supersedes the other one of the same subject. due to trying to hold a conversation with lou comito at the same time there are errors. so the dry run (walk-through) will be held on friday 9 nov at 1500 in roc7's office. read roc's instead of roc7's. 3n1

6-nov-73 1135-pst cavano: grade point averages
cc: tomaini
received 6-nov-73 11:35:13 3o

could one of you please explain to me why the radc corporate review shows that is is one of onlly two divisionns that have lowered their grade point averages snce june 73. it seems to me that somebody must be gtting promoted somewhere for the grade point averages to go up. how can this be??? 3o1

6-nov-73 1106-pst cavano: proposal outline
cc: stone, panara, iuorno, bethke, cavano
received 6-nov-73 11:06:27 3p

since everyone knows that messages travel faster than jounal mail, i'll take this opportunity to tell you of the delights that await you when you read <cavano>plan or my journal of the file.. for therein lies a plan or outline that we can follow if there are no objections (or maybe even if there are).

anyway, we decided yesterday that we needed this , so lett me know bY wed noon if you disagree. otherwise, we can settle on this for better or worse. i'll try to give you a hardcopy of the damn thing as well ... it doesn't pay to take chances. 3p1

6-nov-73 0538-pst stone: 0 & 0
received 6-nov-73 05:38:19 3q

yesterday sri had visiting dignitaries from the state department..apparently the state dept takes precidence over dod..or at least i would hope so..anyway the is a visiting group of chinese communists (computer scientists, and dos chose the arc as one of the places to let them see, i suspect they would have prefered norad, but i guess dos felt that doug would be sufficiently safe. joe suggests that we might send dona up for a couple of days to your place (hazard duty pay of course) to help bring you around. we had a meeting yesteday on the radcmis, and it sems to be reasonably under control. the new pitch date is 14th at 14:00 we are proceding under the assumption at this time that you will not be doing the pitching, so are preparing one of our own. if you can make it i'm sure that you will be welcome to give the pitch, but don't feel that you have to rise from your sick bed to do it. we will be meeting again wed afternoon at 15:00 to see how things are shaping up. i'll get intouch then. 3q1

messages fourth quarter 1973

(J21537) 21-JAN-74 12:28; Title: Author(s): Edmund J. Kennedy/EJK; Distribution: /; Sub-Collections: RADC; Clerk: EJK;

journal mail fourth quarter 1973

(hdec) 1

(DLD2) 4-DEC-73 08:17 20699 Journal mail to Daughtry 1a

Message: If you wondering about the where abouts of Daughtry he is in room 34 bldg 3. I still am not receiving journal mail due to system problems so if there areany messages please call me at intercom #7. I'll be glad to talk to you...signed dave 1a1

(DLD2) 18-DEC-73 05:29 20939
(MJOURNAL, 20939, 1:w) 1b

(DLD2) 18-DEC-73 06:34 20942 1c

Message: Bobbie, The tickler file seems to be useful in that items related to functions of ISI (higher level management) are shown only. It would be much more useful if a procedure is established so that individuals within ISI, ISIM, ISIS ccan update the file as it is constructed; that is, many times engineers have due dates, meeting notices, visitor notices, etc that should be inserted in the tickler. Perhaps Stoney can suggest a way of sharing the tickler for updates with all people in the branch. What do you think?....Dave Daughtry. 1c1

(DLD2) 20-DEC-73 05:41 21035 1d

Message: Ed, Best wishes and hope that Mrs. Kenneky makes a speedy recovery. Take care of yourself and loved ones. In spite of everything, have a Merry Christmas...CHEERS .. Dave Daughtry. 1d1

(DLS) 19-DEC-73 05:13 20966 Suggestions for Tickler
(MJOURNAL, 20966, 1:w) 1e

Comments: in response to DLD's message 1e1

(DLS) 19-DEC-73 05:45 20967 Executive Summary for Initial RADC-MIS
(MJOURNAL, 20967, 1:w) Proposal 1f

Comments: Who knows, maybe we can dig this up in a couple of years and shove it back into the system. 1f1

(DLS) 19-DEC-73 06:22 20968 Notes from Meeting with John
(MJOURNAL, 20968, 1:w) Nicholas--PRC 1g

Comments: for the record 1g1

journal mail fourth quarter 1973

(DLS) 19-DEC-73 06:28 20969 The Initial RADC MIS Proposal
(MJOURNAL, 20969, 1:w) 1h

Comments: This is the way the proposal finally looked (for those of you who have not seen it). Its 50 pages, so see me for hard copy if interested. This is the one that Gabe rejected, wlthough he did not see it. I am journaling it in the hopes that we can use it later in the game...like maybe 20 years 1h1

(DLS) 19-DEC-73 08:50 20973 Instructions on how to use the IMLAC
(MJOURNAL, 20973, 1:w) 1i

(DLS) 26-DEC-73 07:08 21179 Initial Directories for RADC at
(MJOURNAL, 21179, 1:w) OFFICE-1 1j

(DLS) 26-DEC-73 07:44 21180 End of the Year Wrap-up
(MJOURNAL, 21180, 1:w) 1k

Comments: Thanks for the support and attention you have all given RADC during the pat year. 1k1

(DLS) 26-DEC-73 13:49 21199 Potential L-10 Programmer
(MJOURNAL, 21199, 1:w) 1l

Comments: Should I persue this any further, or is it impossible? I promised I would let her know one way or the other. 1l1

(DLS) 27-DEC-73 07:23 21215 Emulating Command Form in SNDMSG
(MJOURNAL, 21215, 1:w) 1m

(JCN) 9-DEC-73 15:21 20819 Note to RADC Users: Transfer of AKW
(MJOURNAL, 20819, 1:w) Online Services to OFFICE-1 1n

(JHB) 16-DEC-73 10:23 20912 Notice of NLS Training at RADC
(MJOURNAL, 20912, 1:w) 1o

Comments: Duane, Would you please see that everyone has a copy of this in hardcopy form if they are not likely to receive it on-line. Thanks. 1o1

(JMB) 4-DEC-73 22:25 20400 DNLS USERS' GUIDE
(IJOURNAL, 20400, 1:w) 1p

(JPC) 12-DEC-73 13:44 20860 I MAY BE WRONG BUT...
(MJOURNAL, 20860, 1:w) 1q

Comments: These are my thoughts on our current situation after the meeting with Gabe on Dec. 11 on MISes (for RADC & AFSC). 1q1

(JPC) 19-DEC-73 07:31 20970 PRC/PACER MEETING 1r

Message: I was not particularly impressed in what Mr. Nichols of PRC had to tell us under such short notice. Out of 4 main poits that he brought up, we had stumbled on three of them ourselves with our local ranch effort:
1) Detailed analysis or study before any IDS design - we tried to do this as much as possible and have recommended it for all proposals although nobody else seems interested.
2) Back-up procedures for recovery of database - the procedure for recovery in our system were een more detailed, i.e. a back-up database, a data entry log to record updates, and a number of file saves as well as testing programs out on the back-up data base.
3) data base experts for "chain-chasing" to maintain validity of database- I knew we needed this type of support but we were never able to get it.
The final point was the most noteworthy and I had only begun to suspect it.
4) that IDS itself was incapable of supporting an operation like PACER withou modifications to IDS and GCOS. One important type of mod was the directory for faster retrieval. We might be able to use that idea in our current effort to provide more responsiveness to our system. Howver, I have serious doubts now whether stand-alone IDS in an unmodified GCOS can handle the job.

One final thought: the Pacer effort currently uses upwards of 50 people ...maybe our guessitimate is too small. 1r1

Comments: These are a few of my comments abot what we learned from PRC. 1r2

(JPC) 26-DEC-73 08:06 21182 Some Very Early Impressions of IDS
(MJOURNAL, 21182, 1:w) 1s

Comments: This was writte well over a year ago when everyone wa a lot younger. Anyway it gives you some of my early impressions. Make of it what you will 1s1

(RJC) 6-DEC-73 06:52 20731 tickler for week of 3 Dec - 14 Dec
(MJOURNAL, 20731, 1:w) 1t

(RJC) 10-DEC-73 06:07 20825 Tickler for week of 10 December
(MJOURNAL, 20825, 1:w) 1u

journal mail fourth quarter 1973

(RJC) 17-DEC-73 06:54 20922 Tickler for week of 17 Dec
(MJOURNAL, 20922, 1:w) 1v

(TFL) 18-DEC-73 06:32 20941 RADC TIP EXTENSIONS
(MJOURNAL, 20941, 1:w) 1w

(hnov) 2

(DLS) 21-NOV-73 05:28 20430 Norton and Bair Visit RADC
(IJOURNAL, 20430, 1:w) 2a

Comments: Jim & Jim..please add, subtract, multiply or divide wherever you see fit. 2a1

(DLS) 29-NOV-73 10:25 20625 Trip to SADPR, ESD
(IJOURNAL, 20625, 1:w) 2b

(DLS) 30-NOV-73 06:16 20645 Summary and Comments on IR
(IJOURNAL, 20645, 1:w) Proposal..INSTANT 2c

(Dld2) 16-Nov-73 05:46 20329 Radcmis 2d

message: i have given some though to our proposal related to contracting for maintenance and applications programmers. we should bare in mind that we have valuable experience in writing programs within a time frame that proves exceptional by comparison to other programmers. certainly we would be getting ourselves into the same old bag of relying on contractors to do work we may never be able to understand. in other words contracting 30 to 40k dollars to me seems a mistake. i have given suggestions in a file (radcmis) that i have prepared. please read it and consider some of the thoughts there. as i have said before, use consultants to advise programmers but please not to actually do our programming....how can you debug contractor work that may be misunderstood? also the concept of updating such a large data base may not be feasible. case in point....we have written a program to update theree records (travel, trip, trip-info) on a field basis. it turns out that the code necessary amounts to as much as other programs updating as many as six records (depending on the number of fields per record). the idea deserves more though, as well as our accomplishments so far. daughtry 2d1

(FJT) 19-NOV-73 06:45 20370 Tickler - 19 Nov - 30 Nov 73
(IJOURNAL, 20370, 1:w) 2e

Comments: Please NOTE that CONFESSIONS are this Wednesday - 21 Nov 2e1

(FJT) 29-NOV-73 07:08 20621 mess 2f

Message: I would appreciate it if you guys - when you send messages to Frank's directory, please send copy to Carrier's directory as sometimes I don't have a change to log on as both Carrier and Tomaini, if you know what I mean. And if the message should be important, please make sure you do that...Thanks much...Bobbie 2f1

(JMB) 28-NOV-73 11:27 19200 TNLS Users' Guide 2g
(IJOURNAL, 19200, 1:w)

(RJC) 20-NOV-73 06:44 20385 Preparation of Form 2 2h
(IJOURNAL, 20385, 1:w)

(RJC) 20-NOV-73 11:55 20395 Phone Hook-Ups 2i
(IJOURNAL, 20395, 1:w)

(RJC) 21-NOV-73 05:49 20432 tickler for the week of 26 Nov 73 2j
(IJOURNAL, 20432, 1:w)

(RJC) 26-NOV-73 05:24 20495 tickler for week of 26 November 2k
(IJOURNAL, 20495, 1:w)

Comments: Please note that Form 2s are due this week 2k1

(RJC) 26-NOV-73 07:34 20499 trip report form 2l
(IJOURNAL, 20499, 1:w)

Comments: I am sending to you all the trip report format. You can make a copy of it and keep it in your directory or copy it from my directory whenever you want to use it. The directory name is trip. Also, in Block 1d - Also put in the project number that was used on your travel orders and who directed the trip (AFSC, RADC, etc.etc.) 2l1

(RJC) 27-NOV-73 06:16 20548 Tickler for week of 26 Nov - Additional 2m
(IJOURNAL, 20548, 1:w) Info

(RJC) 27-NOV-73 07:54 20569 RE - TRAVEL VOUCHERS 2n

Message: PLEASE BE ADVISED THAT PERFRANK TOMAINI NO TRAVELVOUCHERS ARE TO BE HANDCARRIED. THEY MUST BE SUBMITTED THROUGH THE BRANCH OFFICE WITH TRIP REPORT. PLEASE COMPLY 2n1

Comments: Info Cy - Col Thayer 2n2

journal mail fourth quarter 1973

(RJC) 28-NOV-73 05:56 20618 travel vouchers 2o

Message: In regards to travel vouchers, send them to the Branch Office along with your trip repot and IF YOU WISH TO HANDCARRY, PLEASE attach a note saying so and I will call you when they are ready. Is that okay with everybody. The reason for this action is because some people handcarry their travel vouchers over and they never bother doing their trip report. And this FJT do not LIKE 2o1

(RJC) 28-NOV-73 07:20 20598 Tickler for 26 Nov Thru 7 Dec 73
(IJOURNAL, 20598, 1:w) 2p

Comments: Am remindng you guys about the Procurement Meeting Thursday at 10:00 2p1

(dls) 6-nov-73 05:58 20064 fy-75/76 writeup for 5550, task 06, on
(ljournal, 20064, 1:w) line decision aids 2q

comments: this writeup was not finalized, as moneys in 5550 were severly cut back during its preparation. it does represent, however, the centeral thrust of what we plan to do, if moneys do become available. 2q1

(dvn) 9-nov-73 09:56 20135 now you can reach some one at arc early
(ijournal, 20135, 1:w) in the morning 2r

(fjt) 1-nov-73 06:06 19989 tickler for 29 oct - 9 nov
(ljournal, 19989, 1:w) 2s

(fjt) 5-nov-73 05:33 20043 tickler - 5 - 16 november
(ljournal, 20043, 1:w) 2t

(fjt) 7-nov-73 08:09 20081 additional info on tickler
(ljournal, 20081, 1:w) 2u

(fjt) 9-nov-73 11:42 20139 tickler
(ijournal, 20139, 1:w) 2v

(jmb) 9-nov-73 11:34 20138 addendum to (,20075); how to use
(ijournal, 20138, 1:w) tenex's interrogate subcommands 2w

(jpc) 6-nov-73 10:57 20069 a proposed outline for the mis proposal
(ljournal, 20069, 1:w) 2x

comments: give this your attention and feed back to me any

journal mail fourth quarter 1973

objections, dissatisfactions,or conradictions, otherwiase, i'll take it to be acceptable to all by wed noon. 2x1

(kev) 7-nov-73 10:20 20075 summary of interrogate sub-commands
(ljournal,20075,1:w) 2y

(hoct) 3

(arcg) 9-oct-73 07:25 19573 authorizationa
(kjournal, 19573, 1:w) 3a

(arcg) 10-oct-73 05:47 19588 seminar
(ljournal, 19588, 1:w) 3b

(arcg) 10-oct-73 13:32 19594 request for support to the base communications technology development
(ljournal, 19594, 1:w) program 3c

(dls) 19-oct-73 07:50 19770 response to (19743,) nls crunch
(ljournal, 19770, 1:w) 3d

(dls) 19-oct-73 08:27 19772 paper for asm 517 (course 4)
(ljournal, 19772, 1:w) 3e

comments: prepared this paper under some time pressure, in three nights. i stole heavily from cavano, bair, norton, etc. 3e1

(dls) 19-oct-73 09:05 19774 count us in for qbvm data collection 3f

message: we at radc would be most interested in dnls user statistics collected via qbvm. if you can conveniently include us in your analysis, please feel free to do so. we would be interested to see how our use of dnls compares with other types of users at the arc. 3f1

(dls) 25-oct-73 05:23 19850 letter to burns 3g

message: ref (19847,), letter to burns. i think such an idea might "blow their minds in procurement. however, i would be interested in seeing how they react to it. we are currently proposing an radc management information system, which would include nls and a local data management system. there would be terminals scattered around radc, including some in procurement. i they were to start receiving routine mail from a computer or from our local printer, this might start getting them prepared. go ahead and send it...let me know how they react. 3g1

journal mail fourth quarter 1973

(dls) 25-oct-73 10:51 19855 maintenance requirements for akw
(ljournal, 19855, 1:w) project 3h

comments: stinson seems to agree with this, but dondero has some reservations, wondering where the manpower is goin to come from. he feels that t buccerrio should still preform the administrative part of the package, and that they would provide a "service coordinator" who would contact local or contractual piople to do the actual maintenance. 3h1

(dvn) 24-oct-73 16:21 19846 interrogate requires more typing before
(ljournal, 19846, 1:w) beginning dialog 3i

(fjt) 25-oct-73 06:31 19852 tickler for week 22 oct - 2 nov
(ljournal, 19852, 1:w) 3j

(jpc) 17-oct-73 12:17 19743 system utilization/efficiency
(ljournal, 19743, 1:w) 3k

comments: maybe i'm just super-frustrated today or maybe this is a valid item for hotaction. 3k1

(tfl) 31-oct-73 07:40 19975 message to radc akw printer users-31
(ljournal, 19975, 1:w) oct '73 3l

(tfl) 31-oct-73 12:39 19978 akw printer message-an update
(ljournal, 19978, 1:w) 3m

(wpb) 19-oct-73 05:07 19766 i-d-s in the radcmis 3n

message: there is a file entitled <bethke>radcmis that you should read in your spare time. i have a hard copy if you desire it. also you may attempt to print <bethke>ppmis.1;1 , that way you get your own hard copy or "hard" he-he-he.
note .. the file is not repeat not complete. 3n1

arcg 5-oct-73 11:19 19531 r & t selection of the month

location: (kjournal, 19531, 1:w)
3o

arcg 5-oct-73 12:19 19533
data for emb news brief and personnel reports
location: (kjournal, 19533, 1:w) 3p

EJK 21-JAN-74 12:31 21538

journal mail fourth quarter 1973

(J21538) 21-JAN-74 12:31; Title: Author(s): Edmund J. Kennedy/EJK; Distribution: /; Sub-Collections: RADC; Clerk: EJK;