D	We have upgraded the archive system to be more symmetrical with the way TENEX handles files.	1
	Each directory will now have a file named: ARCHIVE-DIRECTORY.;	2
	This file is the list of files that have been archived for that directory.	3
	By organizing the archive system this way (as opposed to one master archive directory) we are able to extend standard TENEX file protection to the archive system.	3а
	Note that this file will NOT show up in a directory llisting (unless you are an enabled wheel) as the file is list protected from everybody.	4
	DO NOT DELETE, COPY, OR RENAME THIS FILE.	5
	(Deleting this file is equivalent to deleting and expunging all of your files irretrievably from the archive system. As these functions are provided elsewhere (see below), do NOT, repeat do NOT, manipulate this file.)	5a
	We have upgraded the INTERROGATE command to get rid of know bugs and have added the following subcommands:	6
	UNDELETED ONLY	6a
	interrogate only those files that have not been deleted from the archive system	6al
	this is the default mode for INTERROGATE	6a2
	DELETED ONLY	6 b
	interrogate only those files that have been deleted from the archive system	6bl
	ALL	6c
	interrogate both deleted and undeleted files in the archive system	6cl
	(Subcommand mode is indicated by 2 (two) astericks (**) at the left margin of your terminal.)	60
	(Subcommand mode is entered by typing a comma after the file name	

or file group. A carriage return is not needed, as the comma will directly enter you into subcommand mode.)	6e
(Subcommand mode is terminated (and the interrogate started) by typing a carriage return.)	61
When typing a file name to interrogate, name recognition is in effect for both deleted and undeleted files.	7
However, if you then specify DELETED ONLY (or UNDELETED ONLY) and the file is undeleted (deleted) you will get the message back that the file is not archived.	7a
We have added the following two commands to the EXEC:	8
ADELETE filename	8 a
deletes the named file or file group from the archive system	821
AUNDELETE filename	80
undeletes the named file or file group in the archive system	801
We plan to add an AEXPUNGE command that will expunge deleted files from the archive system to complete the parallel with the TENEX file system.	9
Please address any comments and/or questions or problems to Ken Victor or Smokey Wallace.	10

This is a reminder that Network Software Maintenance is scheduled between the hours of 0700 and 0900 (Eastern Time) on Tuesday, 25 September 1973. Although software releases are checked out as much as possible in the BBN test cell, thre are sometimes problems of scale which are not detected until after a release; hence there is a small but finite possibility that the software will be troublesome for a few hours after the scheduled release.

Sincerely,
Alex McKenzie (for the Network Control Center)

1

I thought you would be interested to know:

1

The project of running NLS on a cheaper dipaly has made consideraable progress. The first live demonstration took place the lath in England. Doug was there at the time and ran DNLS on a Delta Data.

la

The program to get you your journal mail is in the debugging stage. Dean was on vacation last week, but will get back to it this week. It is in (meyer, jprint,). Dean sugested Joe might want to look at it and maybe take a shot at debugging it.

16

Here is a request for consideration of a new feature: a command either at the exec level or in nls that makes the system record what the user types and what the system sends back to him in a file for future use by the user. I have found (as have others) tht use of the telnet.typescript file for making scenarios and for capturing other data is very useful. It means going out via telnet and re-entering the ARC system (or some other) to set up the typescript file. This seems wasteful of network facilities and addes unwanted steps in the process. I'm not sre what difficulties adding such a feature would entail, but offer this sggestion here to get some discussion started.

One more thing: The state of the Forms Generator.

-

Elizabeth felt that if the forms generator was to be able to handle data bases uefully, it should be integrated with the second-generation query language that Harvey and others are building. <mjournal,18468,> She was drawn into desgin of that system. Her part in desgin is done and she is at work on the forms generator proper again. I belive she was right, but I worry about your need for a forms generator. I worry less because you have not gotten a printer. Tell me your thoughts?

la

1

From: Padlipsky.CompNet at MIT-Multics

Date: 09/24/73 1425 edt

Having grudgingly decided to return from vacationing, I feel the urge to get NETED(S?) out into the light of RFC/day. Therefore, I'd like to hear from people within a week as to whether they care very much how we resolve Dave's issue of the name -- and, for that matter, whether they have anything new (or old) for me to worry abt on the draft. Then I'll send it out to whatever's left of the NWG. cheers, map

Dave,	1
We would like to offer any help that you can use in getting IMLAC on the air.	your la
However, I just spoke to John Perry (ARPA office) and he is aware of any plans to give you people their IMLAC.	not lb
Could you please send me either a journal message or a sndms clearing up this situation.	lg lc
Thank you, Ken Victor	lcl

NETWORK GROUPS

Ident	Group Name	Coordinator
ANA	Analysis	Recn, Paul (PR)
ASG	ANTS Support Group	Bouknight, W. Jack (WJB)
ASS	ARPANET Satellite System	Walden, David C. (DCW3)
CBIG	Computer Based Instruction Group	O'Sullivan, Thomas (TO)
FTPIG	File Transfer Protocol Interest Group	Bhusnan, Abhay K. (AKB)
I	I-Colony	Iseli, Jean (JI)
IIG	Inlac Interest Group	Victor, Kenneth E. (Ken) (KEV)
INWG	International Network Working Group	Cerf, Vinton G. (VGC)
INWG1	International Packet Network Working Group	Cerf, Vinton G. (VGC)
INWG2	International Packet Network Working Group	Cerf, Vinton G. (VGC)
ISC	Information Science Community	North, Jeanne B. (JBN)
NAG	Network Associates Group	Crocker, Steve D. (SDC2)
NDIG	Network Dialog Interest Group	Duvail, William S. (WSD)
NGG	Network Graphics Group	Michener, James C. (JCM)
NIC-QUERY	NIC/Query Interest Group	Feinler, Elizabeth J. (JAKE)
NICSTA	Network Information Center Station	North, Jeanne B. (JBN)
NLG	Network Lisison Group	Crocker, Steve D. (SDC2)
NMG	Network Measurement Group	Naylor, William E. (WEN)
NNG	NSRDC Network Group	Lieberman, Robert N. (RLL)
NSAG	Network Station Agent Group	North, Jeanne B. (JBN)
NSC	Network Speech Compression	Kann, Robert E. (REK2)
NWGSC	Network Working Group Steering Committee	Grocker, Steve D. (SDC2)
PI	Principal Investigators	Roperts, Lawrence G. (LGR)
PRG	racket Radio Group	Kahn, Robert E. (REK2)
PTG	Pll TENEX Group	Boynton, Thomas L. (TLB2)
REACG	Resource Accounting Group	Sutnerland, William R. (WRS2)
RJE	Remote Job Entry	Postel, Jonathan B. (JBP)
SURG	Speech Understanding Research Group	Strollo, Tea R. (TRS)
SURSC	Speech Understanding Research Steering Committee	Crocker, Steve D. (SDC2)
TIPUG	TIP Users Group	Walden, David C. (DCW3)
TNG	Tealwing Net Group	Shoens, Charles J. (CJS)
TU	TNLS User Group	Van Nouhuys, Dirk H. (DVN)
TUG	TENEX Users group	Burchfiel, Jerry D. (JDB)
USERS	AkPA Network Users Group	Grocker, David H. (DHC)
USING	ARPA Network Users Interest Working Group	Crocker, David H. (DHC)
WDBWG	Weather Data Base Working Group	Stern, Dale H. (DHS)
XIC3	XIC3	Kahn, Robert E. (REK2)

Tri-Services Conference on the High Cost of Software - Quick Trip
Report

Trip Report

1

Tri-services Conferences on the High Cost of Software Monterey, California Septermber 17-19, 1973

The conference was attended by about 100 people representing the R & D community, industry, DOD users, and DOD research management. I have an attendee list if anyone is interested. There were five workshops running in parallel to consider.

3

1) What is the problem? Why does software cost so much or does it?

за

2) Theoretical areas

3b

Program verification, Knowledge based systems, Program Semantics

3bl

3) Programming methology

3C

4) Ways hardware can help

30

5) Problems with large scale systems.

3e

I participated in number 5. There was also a panel discussion on the problem of technology transfer of which I was a member. Each panel member had 10 minutes to say what he wanted about technology transfer. I used my time to list some things I felt necessary for successful transfer to take place and what ARC was doing to try to explicitly aid the process. The toughest question I got from the floor was to explain what the word augmentation meant. Conference proceedings are to be published around the end of the year. The goal of the sponsors—the Army, Navy, Air Force Research Offices—was to get recommendations for research areas that they should fund to attack the high cost of software problem.

4

How successfully this goal was achieved is not clear at this point, although a lot of healthy interchange did take place in the workshops and outside them. My overall feeling being that the conference was worthwhile for this area alone.

E

I personally had a chance to meet and talk with many people, got brought up to date in several areas, have a better feeling for the importance of a Documentation Production and Control System in the large scale systems process, and could represent ARC's point of view and system in a number of areas.

6

The latest panacea seems to be top-down, design before code,

10

11

12

Tri-Services Conference on the High Cost of Software - Quick Trip Report

structured programming, chief progammer team methodology. Since I have always believed in that approach I was glad to hear so much discussion although I don't think it's quite the panacea its adherents make it out to be. We should look into the literature being published in this area and hold some seminars.

The main conclusion of the conference seemed to be that somehow the software industry was doing things in spite of not knowing what its business is, what its processes are how to determine its requirements and costs, how to upgrade its practitioners, etc. In other words the field is an intellectual fragmented mess with small shafts of light here and there. There was much emphasis on the need for Analysis, as we are using the term in ARC, to begin to find out what we are doing now, how to find and specify needs, understand application areas, etc..

Workshop number 5 spent a lot (too much) of its time trading horror stories of the fiascos of large system projects. Several large systems having to scrap 70% to 95% of all their code and start over after delivery. The problems seemed to fall in roughly two main areas, those having to do with institutional organization, and administrative practices, etc., and more directly technical areas where computer based tools could help more directly.

Everyone agreed that the concept of an integrated system building workshop with nicely integrated sets of tools is vital. There are several efforts moving in this direction at lower levels than planned here.

Configurations Management is the big push in managing large projects. Configuration management works mainly by control and verification of documents, requirement specifications, design documents, user documents, listings, change requests etc. As practiced now, it is very expensive, cumbersome, generally lacking in flexibility: a big source of frustration for everyone, yet, in some form or other, essential in getting anything to work. Documentation plays many roles. One key one is as part of the dialog process keeping all parties informed about what is going on, but an essential question is who needs to know what and in what form?

I think ARC's technology could help a lot in this area, although our current state is rather primitive and something of a toy relative to the size of the problem.

The problem isn't just fast outline text editing for creating documents, although that would help, but it is the creation of readable concise meaningful documents and then keeping them up to

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Tri-Services Conference on the High Cost of Software - Quick Trip Report

,	date in some controlled manner. In a separate document, I will try to talk about the problems in more detail and where we might help.	13
	Determining the users needs and clearly specifying requirements in functional terms totally independent of implementation details seems to be a major area of problems, especially keeping track of changing requirements and their implications to system design, schedules and costs.	14
	Getting cooperation and dialog between all the organizationally and geographically separated parties to a large system is another area of interest to usdiscussed frequently.	15
	A list of problem areas discussed shows the magnititude of the large system problem.	16
	Acquisition methodology.	16a
	People turnover, training, skills upgrading etc.	160
	Time to produce software vis a vis requirements instability and arbitrary deadlines.	160
	Size of production team and its coordination.	160
)	Requirements instability and lack of completeness and imprecision.	16e
	Management control and documentation.	16f
	Geographic and organizational separation and goals of users, buyers, maintainers, developers.	16g
	System checkout and integration.	16h
	Maintaining a "corporate memory" lack of team experiences in face of growth, etc.	161
	Design methodology.	16j
	Buyer motivation to avoid risk, new technology. No good handles on cost estimation.	16k
	No understanding of the system building process.	161
	Lack of corporate memory	16m
	An interesting definition of stages in the System Life Cycle was given:	17

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Tri-Services Conference on the High Cost of Software - Quick Trip Report

Wild enthusiasm
Disillusionment
Total confusion
Search for guilty
Punishment for the innocent
Promotion of the non-participants

17a

1

1a

16

161

1b2

163

lc

ld

101

le

lel

6

PROBLEMS Working with the proposed NLS help-query system reveals possibilites and disadvantages. They can (must now?) be lived with, but it would be unfortunate if they were carried over into the regular Query Language. Some disadvantages are: Too many duplicate statementnames required. Too many command actions required by the user because: 1 There are so many levels she must go through to get to the information. 2 There is no easy way of getting all the information at a

3 There is no capability for easily getting all of the information about one command.

There is no way to use NLS levels to format views of data. Each EXAMPLE contains at least two instances of carriage returns followed by three spaces. The database builders must do manually what NLS was designed to do automatically.

higher level about one topic (e.g., the syntax for all of the

There is no way to define more than one level in a menu. For example the following is not possible:

INDEXES TO NIC JOURNAL ITEMS

1 TO JULY 1972

AUTHOR INDEX

NUMBER INDEX

A-L TITLEWORD INDEX

M-Z TITLEWORD INDEX

2 Since JULY 1972

insert commands).

AUTHOR INDEX
NUMBER INDEX
A-F TITLEWORD INDEX
G-O TITLEWORD INDEX
P-Z TITLEWORD INDEX

There is no convenient place to put supportive information that does not physically fit in a single node of a database and does not conceptually belong in its substructure.

The syntax, function, example, confirm, and additional concept explinations conceptually belong in the statement with the name of the command. The real command alternatives available to the user at that node belong in substructure.

Instead, the syntax, function, example, and confirm statements are made leaves on the end of a tree requiring lots of commands to yield very specific information. The ability to display a cohesive higher level view doesn't exist.

le2

For example, the user can only see the syntax for a single specific insert command. When he gets to the insert node, he should be able to pick the syntax (only) for all of the insert commands in addition to the menu for specific ones.

le2a

Adding levels (beyond the leaves of the tree?) for more complicated commands or for entering subsystems is a conceptual hassle because information that does not physically fit in a single node is put in substructure (if it isn't thrown away).

1e3

The network of definitions, concepts, and commands is cluttered with statements containing only a link with the result that the database has been split in two requiring at least one link with every command.

7 4

POSSIBILITIES

The following is a reworded and updated segment of the proposal I submitted last May. <Current version--Kelley, File,>. The concepts are still the same, the features include capabilities currently proposed by the query implementers for the Query System.

0

The case for user-option links in query language.

The user-option link allows you to choose to access one or more links in a statement (as proposed in -- kelley, file, statements) instead of forcing the use of one statement for every choice (as is currently the case).

3

Sample formats with this proposed system.

3a

Insert
1. syntax 2. functions 3. examples 4. advanced commands
After specifying Insert the following options are available:

3a1

1 STRING
Character
Word
Visible
Invisible
Link
2 STRUCTURE
Statement
Branch
Group

Plex

- 3 Journal submission form 4 Directory
- 5 Archived directory

6 Sequential

3ala

Writing on files
You can 1. create new files, 2. copy all or selected parts of
existing files, 3. insert text by typing into existing files
(after you've loaded them -- 4.), and 5. edit existing text.
Access for these operations may be restricted (6.).
7. files 8. addressing points in files 9. structure of files
10. commands

322

- 1 Editing
- 2 Access to Files
- 3 Creating Files

3a2a

Disadvantage of User-option links.

3b

The user must be capable of knowing that in addition to a word or a number, he can type "number period" (where plainly indicated). Almost any character could be used instead of a period: > 1 ? .

301

Advantages of User-option links.

30

Conceptually doubles the alternatives available to the user at any point in the database.

3cl

Currently this can only be approached by creating an additional branch for each node and adding to the number of items in the menu.

3cla

Provides a convenient place to put supportive information that does not physically fit in a single node of a database and does not conceptually belong in its substructure.

3c2

For example, all EXAMPLES could be in a branch whose parent node is the only place EXAMPLE is used as a statement name. A link to each example would be located in the statement with the name of the command. The real command alternatives are available in substructure to the statement with the name of the command.

3c2a

In other words, there are lower level data statements (syntax, examples, etc. collected in seperate branches). And then there are higher level classifying statements explaining function structured with a unifying meaning to each change in level (command alternatives).

3c2b

HELP Query. Disadvantages and possibilities.

Considerably simplifies the network of definitions, concepts, and commands by eliminating a lot of statements containing only a link. There would be no need to divide the conceptual database in two, one full of nothing but "database oriented names" followed by a link.

3c3

This is accomplished by having the user option links become what would have been the menu in the concepts branch. (With much more latitude since they can be intersperced with the text of the definition or concept.)

3c3a

As a bonus, this system frees the substructure to be used for a unifying purpose. Such as a regular old classical heirarchy of concepts supporting the more amorphous network. 3c3b

Provides the ability to display a cohesive higher level view.

3C4

For example, when the user gets to the statement named INSERT, he has the option to see the syntax (only) for all of the insert commands in addition to the menu for specific ones.

3c4a

Speeds user searching by cutting down on the number of levels between the top level and the information.

3C5

Eliminates the need for duplicate statement names like SYNTAX, FUNCTION, EXAMPLE, and CONFIRM.

306

Does not need to be used by the specialized database builders if they don't want the user to have to worry about it.

3c7

WARPS

The following is a proposed system for handling included text, indirect addressing, automatic links or what ever you want to call them. This rewritten version of (17811,) is from the Query system point of view.

TERMINOLOGY

A warp is the medium through which text specified by link syntax is viewed automatically or "included" as opposed to using a specific command to take the link. To be specific, text seen through a warp is warped text. In the query language links are invisible. I find the terms "include" and "automatic link" too general and confusing for purposes of describing this feature.

hal

There are two modes for using a link. One when warps are on and the other when the user chooses to take a particular link. 4

In Query, warps will most probably always be on, however this system is proposed as a general NLS feature and includes other possibilities not found in Query.	4a2
CAPABILITIES There are two viewspecs that control warps. For the purposes of this proposal, they shall be called viewspec 1 and viewspec 2.	ħр
Warps on: when viewspec l is on, the text at the addresses specified by links (warped text) will be viewed as defined below.	461
If viewspec 2 is alone or viewspec 2 precedes viewspec 1 in the viewspec field of a link, warped text will not be seen when warps are on.	4bla
If viewspec 1 is alone or viewspec 1 precedes viewspec 2 in the viewspec field of a link and warps are on, only one warp will be shown. That is, the warped text will not include more warped text.	4010
If more than one consecutive viewspec 1 is in the viewspec field of a link, one additional level of warped text can be seen for each viewspec 1.	4blc
Warps off: when viewspec 2 is on, no warps will be seen.	462
Jump to Link	463
When you jump to a link with viewspec 2 alone in the viewspec field of the link, warps will be turned off in the new view.	4b3a
when you jump to a link where viewspec 2 precedes viewspec 1 in the viewspec field of the link, warps will be turned on in the new view.	4b3b
When you jump to a link with viewspec 1 alone in the viewspec field of the link, warps will be turned on.	463c
When you jump to a link where viewspec 1 precedes viewspec 2 in the viewspec field of the link, warps will be turned off.	4b3d
When you jump to a link with more than one consecutive viewspec 1 in it, one additional level of warps will be turned on for each viewspec 1.	4b3e

I propose that warps be allowed to include more than one statement and be governed by the viewspecs in the viewspec

HELP Query. Disadvantages and possibilities.

the current viewspecs unless viewspec 1 or 2 is in the link in which case any viewspecs to their left will apply to the warp view. Only viewspecs to their right will apply when jumping t	
link.	404
ADVANTAGES	40
This system gives the database builder much more latitude in using this feature to save duplicating text.	401
Notice that with this system there is no chance of looping as the number of stacked warps are specified by the current viewspecs, not by any viewspecs in subsequent links. If warps are on, and a single viewspec l is in a link, taking that link does not add warps, there will still only be one warp on.	#3C
It is general enough to be used in the NLS editor subsystem. Eventually for viewspec control of warps outside of links, a third viewspec should be added meaning "one less stacked warp"	. 403
COMMANDS The following is a rewritten version of (kelley, file, commands).	5
In an NLS query language it would be appropriate to distinguish two types of links each of which has two specific uses. Both types can be found in a single statement.	5a
One type defines conceptual substructure (see kelley, file, conceptual). Its two uses are:	5al
l. formatting substructure only: contains no address, only viewspecs.	5ala
2. link to a statement that conceptually belongs in substructure but is duplicated somewhere else: uses only one link in a statement.	5alb
The other type accesses information that belongs in the addressed node, but	5a2
1. is duplicated elsewhere: a warp	5a2a
and/or	5a2a1
2. doesn't fit: a user-option link with warp viewspec 2.	5a2b

I suggest that there be two commands to handle the display of these two types of links. One terse command to find things

2

of an entire branch.	50
The terse command would use only the link that defines conceptual substructure with a default of viewspecs ebt (one line, one level more).	501
The verbose command would ignore the link that defines conceptual substructure and would always turn viewspec s on (all lines).	502
Both commands operate as Print Branch with warps on. The search algorithm would find only one occurance unless a special character was input (like *) or content-analyzerset-definition type input was made.	563
Content-graffy Zer - Set-delinitation type Input was made.	
The invisible link defining conceptual substructure should always be the first link in the statement.	504
If there are no links in the statement, the default is invoked.	505
Advantage	5c
Allows the user a way of getting the specific information she wants with the least amount of superflous data in the way.	5cl
Database builders would have the choice to structure the database to exclusively use the Find command if they did not	
want the user to have to worry about two commands.	5c2
would be compatable with the Jump to Mouse DNLs query language.	503
List of helpful features. (For a more complete list, see Kelley, File, Future)	6
1. Capability in TNLS of doing what viewspec B (indention off) currently does in DNLS with viewspecs g and 1 (branch only and	
plex only). Indention remains, but the top level addressed node is flush left. Either introduce a new viewspec or have	
top-flush-left be the default (when viewspec B is OFF and g or 1 are on).	62
2. Origen statement as an addressable (by statement name) node in	
the database. Filename, date, and ident, garbage should be hidden to the query user. It could come last.	60
3. The ability to stack statement names in a link seperated by only a space (not a comma) where the system would search for the second under the first. This should not be too difficult to	

. . . .

implement since the basic routine has already been written. It would allow duplicate statement names to be easily specified in a database.	60
Syntax: <directory, <sp="" file,="" namel="">Name2: viewspecs> Sample: <syntax insert=""></syntax></directory,>	6cl
The above link would work just as if SYNTAX was a filename. The system would find the name INSERT within the branch SYNTAX. This is very useful because there is also the name INSERT under other branches like COMMANDS. I can specify which one I want:	6c2
1) without worrying about them changing if I move the branch or add another branch and	6c2a
2) Without loading the file, finding the statement, and turning on numbers and SID's.	6c2b
The advantage of stacked statement names over SID's as a linking mechanism are:	6c3
The links would have meaningful syntax which would make them	6c3a
faster to create because you don't have to check to see what the SID is;	6c3al
easier for the offline viewer to find the address;	6c3a2
easier for both the online and offline viewer to know what the link addresses without having to go there.	6c3a3
The links would be valid as long as the conceptual structure remained the same, you would not redo them just because you copied statements due to a bad file or other reasons.	6c3t
Disadvantage	6C4
care would have to be taken not to duplicate statement names without checking to make sure the links to the duplicate names would still work.	6сца
It seems a well constructed database would always minimize duplicate statement names anyway by the construction of an appropriate thesarus.	6chal

Stacked names in links could be slower searching but possibly faster in some cases since the search algorithm would be level

by level from the top down rather than walking through the tree one complete branch at a time.

6c5

METACOMMENT
The seperation of the query database builders from the query software implementers has been almost complete. The various ambiguous limitations of the system were dictated by the software implementers without good feedback channels from the database builders. I think this is a mistake that has resulted in a great deal of wasted time and re-doing of work. If anybody's interested, I would still like to work part-time for the query software implementers.

7

JOURNAL REFERENCES

.. . .

KIRK 20-MAY-73 20:39 17815 AN NLS INFORMATION RETRIEVAL SYSTEM Location: (KELLEY, File, 0:w)

8a

KIRK 4-JUL-73 16:40 17636
Proposed system for handling links in NLS query languages.
Location: (KJOURNAL, 17636, 1:w)

80

KIRK 13-JUL=73 20:46 17811
Proposed system using two viewspecs to view warps
(text specified by a link instead of link syntax)?
Location: (LJOURNAL, 17811, 1:w)

8c

KIRK 30-JUL-73 14:37 18122 Comment on the idea of executable links. Location: (LJOURNAL, 18122, 1:w)

84

KIRK 31-JUL-73 15:50 18151 Response to Harveys considerations (18134,) Location: (LJOURNAL, 18151, 1:w)

8e

KIRK 10-AUG-73 15:01 18365 My impressions of the DIRT meetings Location: (LJOURNAL, 18365, 1:w)

8 f

(sm5) 24 September - Monday	1
0830 hrs. Branch Chief's Meeting	la
Remind DiNitto - Form 77 Change A for PRB-4-3230 - Need signature	. lb
Remind Nelson & DiNitto need trip report for Omaha NB trip.	lc
(st5) 25 September - Tuesday	2
Due Date - Wingfield - Technical Evaluation - PR B - 4 - 3219 - AHI Line Printer	2a
Combined Federal Campaign Film - Auditorium - Bldg. 106 - 1400 - 1430 hrs. Remind Tom B.	2 b
(sw5) 26 September - Wednesday	3
0830 hrs. Branch Chief's Meeting	За
Laboratory Activity Reports are due tomorrow.	3b
(sth5) 27 September - Thursday	4
Officers' Commander's Call - 0900 hrs Auditorium - Bldg. 106	11.5
Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600.	46
(sf5) 28 September - Friday	5
Timecards due today.	5a
form 2's (employee time expenditures) are due today.	56
form 6's (projected manpower) are due today.	5c
(oml) 1 October = Monday	6
0830 hrs. Branch Chief's Meeting	62
News Brief items due into Becky Today.	6b
Bobbie: Personnel Strength Rpt. due.	6c
ISIM - Evaluation of report, "Generalized Data Base Management Systems & Selected Air Force Applications"	6d
(otl) 2 October - Tuesday	7

It Col Thomas J. Wachowski, Directorate of Mathematical and Information Sciences (AFOSR) - Will be here 2 & 3 Oct to look at the technology program of RADC/IS(mainly, software research & pattern recognition).	7a
Univac Technical Seminar - At the Beeches	75
(owl) 3 October - Wednesday	8
0830 hrs. Branch Chief's Meeting	8a
laboratory activity reports are due tomorrow.	86
Due Date - Excess Property List - ISIS & ISIM	öc
Lt Col Wachowski - Note statement above	80
(othl) 4 October - Thursday	9
Laboratory Activity Reports due today: Bucciero must have them by 1000, ISM must have them by 1100, and DOT must have them by 1600.	9a
ISC Confessions 0830 hrs.	90
(ofl) 5 October - Friday	10
Bobbie: Travel figures due by noon.	10a

Augmentation Research Center Stanford Research Institute Wenlo Park, California 94025

Robert H. Spencer
Data Dissemination Systems Inc.
11161 West Pico Boulevard
Los Angeles, California 90064

Dear Bob:

I have read your letter of the 17th and the accompanying information for Network users.

I look forward to redestributing the description of your services through the Journal (see--,4).

2

However I believe that cites around the ARPA Network could evaluate your service much more meaningfully we could tell them in much greater detail what is required of their ASCII sequential files. You spoke of certain basic codes standard to the Comp80. Can these be included as characters in the sequential file and interpreted by the Comp80? If so, can we provide them with simple instructions for producing a COMprint file? We are hoping you can supply us with these instructions. I would like to delay distributing your advertising until we are ready to mail out hard copies of the Output Processor User's Guide, so the recipients have a chance to see what we are talking about and until I hear from you specifically about the basic codes, either by your suppyling them, or by your declaring it is inappropriate to do so.

2a

In general your letter draws clear distinctions between what we hope may someday happen and what you are willing to commit yourself to do. That seems all to the good.

3

I find some disappointment and ambiguities under turnaround time. The ambiguities arise from the phrase "Monday Night." Our files move on to tape of ISI in the evening and don't reach you until (Tuesday) morning.

3a

Since we cannot assume UPS will take less than two days, do you plan to mail plates or proofs after no more than 24 or 36 hours in your shop?

3a1

In any event, at present, the greatest barrier to more extensive use of COM through ARC is turnaround time. Mark Brown spoke of three days a year ago; I know of no technical reason why a tape could not arrive at ISI in the evening, be picked up, run on a night shift and proofs mailed in the morning. I hope we can work out a faster exchange in the future.

3a2

Nor is it clear to me whether your item 4 (jjournal, 19292, 4a4d) refers to the possibility of someone from ARC on occasion working at DDSI revising some large job (in which case she would come with a terminal), or to the proposal discussed with John Kroemer of installing a cheap front end here for proof purposes?

36

Part of NLS is a system to support collaboration among scattered workers in a given field by an automatic memo and document dissemination system called the Journal. If a person or organization is known to the Journal system, we can route items to him merely by typing in his 3-letter ident when we journalize any document. Distribution is online to users of NLS, online to machines at other cities on the ARPA Network, and by hard copy through the U.S. Mail. I have taken the liberty of entering you in the Journal system with the ident RHS (idents are usually initials) and DDSI is an organization with the ident DDSI. Distribution will be in hard copy for the present. This journal item is the first sent to you.

4

Freer flow of management information is part of the Augmentation Research Center's research and policy.

4a

With respect to DDSI, I forseee our using the Journal mostly to provide you with information copies of our planning documents.

4b

Being known to the Journal system implies no responsibility on your part.

4c

Sincerely,

Dirk H. van Nouhuys Augmentation Research Center 19283 Distribution

Robert H. Spencer, James C. Norton, Richard W. Watson, Douglas C. Engelbart, Michael D. Kudlick, Elizabeth J. (Jake) Feinler, Jeanne B. North, Elizabeth K. Michael,

Stanford Research Institute Augmentation Research center 333 Ravenswood Avenue Menlo Park, California 94025

Mr. Burns, RADC/PMA Department of the Air Force Headquarters Rome Air Development Center (AFSC) Griffiss Air Force Base, New York 13440

Dear Mr. Burns:

This responds to block 10 of DD Form 1664 with respect to contract F30602-73-C-0285 (SRI #2697).

The table below shows the man hours expended on the subject contract since the last reporting period (four weeks).

Cumulative to 7/28/73		Person Hours Expended During Report
		Period
Supervisor	40	0
Senior Professional	0	0
Professional	456	256
Technical	0	0
Other	0	0
	1196	

We estimate that the percentage of technical completion at the end of July was 20 per cent.

sincerely,

Dirk van Nouhuys Research Analyst Augmentation Research Center

dvn

2a

1928h Distribution
James C. Norton, James H. Bair,

R&D Contract Status Report for July, Project 2697

(J19284) 15-OCT-73 19:57; Title: Author(s): Dirk H. Van Nounuys/DVN; Sub-Collections: RADC SRI-ARC; Clerk: DVN; Origin: (VANNOUHUYS)JULYMOLD.NLS;1, 15-OCT-73 11:45 DVN; Title: Author(s): Van Nounuys, Dirk H. /DVN; Distribution: /JCN JHB; Sub-Collections: SRI-ARC; Clerk: KFB; Origin: (BYRD)R&DCONTRACT.NLS;6, 9-MAR-73 8:35 KFB;

R&D Contract Status Report for October, Project 2697

Stanford Research Institute Augmentation Research Center 333 Ravenswood Avenue Menlo Park, California 94025

Mr. Burns, RADC/PMA
Department of the Air Force
Headquarters Rome Air Development Center (AFSC)
Griffiss Air Force Base, New York 13440

Dear Mr. Burns:

This responds to block 10 of DD Form 1664 with respect to contract F30602-73-C-0285 (SRI #2697).

The table below shows the person hours expended on the subject contract since the last reporting period (five weeks).

C	umulative to	Person Hours Expended
	11/3/73	During Report
		Period
Supervisor	160	120
Senior Professional	0	0
Professional	1539	435
Technical	0	0
Other	0	0
	1699	

During October we continued writing procedures for the new version of the NLS Query Language. The procedures writing will serve to recover information for the Forms Generator we are developing under this contract and make it useful for control and access of small bodies of management information.

During October we installed phone connections in our computer room which make it easier for people at Rome to get help between midnight and 8:00 AM our time.

2a

3

1

2

Page 1

RSD Contract Status Report for October, Project 2697

We estimate that the percentage of technical completion at the end of October was 50 per cent.

Sincerely,

Dirk van Nouhuys Research Analyst Augmentation Research Center

dvn

RSD Contract Status Report for October, Project 2697

(J19285) 14-NOV-73 16:55; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /DLS(fyi) JCN(fyi); Sub-Collections: SRI-ARC RADC; Clerk: DVN; Origin: <VANNOUHUYS>MSR.NLS;3, 14-NOV-73 16:47 DVN; Title: Author(s): Dirk H. van Nouhuys/DVN; Sub-Collections: SRI-ARC RADC; Clerk: DVN;

LANGUAGE CHANGES RECOMMENDED

Some observations while using the new command parser in the experimental system.

(KIRK) Note that we have traded the ability in DNLS to always remember the last command for the inconsistancy in some commands of working FROM-TO, instead of TO-FROM. The ability to automatically remember the last command is very important when you get confused and saves input in some cases. FROM-TO is the culprit because the CONTENT in the FROM portion would not allow specifying the keyword of a different command if the Keywords from the last command were automatically renembered. CFD originally explained this to me. I include it here to make sure everyone knows what is happening.

Keyword K: can no longer be used to prompt Command-terms. (See DCE -- 20145,)

(KIRK) Keyword K: should be changed to Command-term C:. And CONFIRM to DO D:.

(JMB)FULL-PROMPTING PROBLEM:

We have defined ADDRESS, or A:, to be a DAE (\$ CA) in TNLS and in DNLS either a Bug or an optional DAE (\$ CA).

Therefore, in DNLS, the prompt for CONTENT should be T:/A:, or in full prompting with options specified, T:/B:/[DAE].

T:/B:/[A:], as now appears in DNLS XNLS, is in conflict with the definition of the acronyms because ADDRESS (A:) is NOT optional—it includes the Bug; only the DAE is optional.

The reason ADDRESS is defined as it is is so we don't have to have a different command summary for TNLS and DNLS.

Jump to Name Only should be changed to Jump to Name Any. And it needs to be documented in the help database.

NOUN-TYPE keywords should allow adverbs and adjectives where it saves typing.

Lets maintain the convention of having a verb-noun type command, but lets not carry it to such extreme that it forces us to type three extra keys (including a option key) just to keep from using an adjective or adverb as a noun-type. The case in point is the Update command:

Update File [OPTIONS] CONFIRM

OPTIONS = Old (version) or Compact or Rename (filename)

CONTENT

1a1

1a

1a2a

1a3

1 a 3 a

1a4

1a5

1a5a

1a5a1

Since File is a dummy noun, why require an option key for Old, Compact, or Rename? These should be keywords at the same level as File.

1a5b

Also,

1a5c

Split (window) Vertical or

Split (window) Horizontal seems better than

Split Window Vertically or

Split Window Horizontally since Window is a dummy noun.

words in parens are noise words

1a5c1

If we must use only nouns for the noun-type keyword, we need to rename:

1a5d

Delete All (markers), Delete Last (program), Delete All (programs), Jump (to) Up, Jump (to) Successor, Jump (to) Predecessor, Jump Down, Jump Head, Jump End, Jump Back, Jump Next, Jump Return, Copy Sequential, Output Sequential, Output Assembler, Output Renote, Record (session) On, Record (session) Stop, Release Frozen (statement at), Release All (frozen statements), Reset Archive, Set Archive, Show Archive, Expunge Archive, Delete Archive, Reset Temporary,

1a5d1

Not to mention the even greater number of commands with nouns used as adjectives such as Set Tty (window),

1a5d2

Rather than change these commands, I suggest having a verb noun-type command convention where a noun-type can be: a noun, a noun used as an adjective, an adverb, or an adjective. Where it saves typing, a noise word noun could be placed between the verb and noun-type as was done with Record (session) On.

1a5e

Double command accept convention should be maintained.

1a6

In the old system there was a convention requireing two CA's (with optional fields between them) to terminate each command. In the new command syntax, file commands require only one CA and an OPTION character to specify more than one copy or a different file.

1a6a

The Load File command is documented and implemented as Load File CONTENT CONFIRM which means either typing a comma followed by a colon (link syntax) in order to specify viewspecs or else not

being able to specify viewspecs at all (I cannot yet tell which).

la6a1

Commands with a LEVEL-ADJUST require three command accepts see -- level-adjust>. The double command accept convention was unconscious and therefore intultively valuable. I hate to see it go unconsciously.

1a6b

LEVEL-ADJUST

1a7

There is no reason to require an extra Command Accept or Space to terminate the LEVEL-ADJUST field except when changing levels in the Insert STRUCTURE command. Forcing the user to do this other places not only makes the Level Adjust field mandatory instead of optional, it makes the "feel" of Move or Copy STRING much different than Move or Copy STRUCTURE since one extra Command Accept is required if you happen to be playing with structure.

1a7a

If the definition were changed to the following, the command syntax description would remain the same and the user would not have to bother with level adjust unless he wanted to adjust levels.

1a7b

LEVEL-ADJUST: an optional string of u's and d's optionally preceded by integers and terminated by (SP), CA, or the beginning of the next field except when changing levels in the Insert STRUCTURE command where a (SP) or CA terminator is necessary to distinguish the LEVEL-ADJUST from the next field (CONTENT).

1a7c

The prompt at a LEVEL-ADJUST in the TNLS Insert STRUCTURE command might look like: L:/T:/[A:]

1a7d

The prompt at a TNLS LEVEL-ADJUST other than in the Insert STRUCTURE command should look like: L:/C:/[0:]

la7e

F: and I: should be reinstated as prompts. N: would also be helpful.

1a8

Period instead of space should be used in expert recognition to get to second level commands. This has the advantages of being visible in TNLS, easier to type on the keyset in DNLS, easier to represent in recognition mode command summaries, and consistent with the convention for structural-relationships in the DAE. The TNLS command that shows your position by statement number and character count could use comma instead of period. The only dissadvantage is that a period is not as easy

to type as a space on a keyboard. I feel this fails to outweigh the advantages.

1a9

APPEND

1a10

Because bugging text to go between appended statements is more infrequent than not inserting any text between statements (NULL), and in order to make the TNLS Append more closely parallel the DNLS Append, I suggest changing the syntax for the DNLS command to be:

1a10a

Append Statement (at) SOURCE (to) ADDRESS TYPEIN / [BUG/DAE] CONFIRM

1a10a1

Currently it is:
Append Statement (at) SOURCE (to) ADDRESS TYPEIN / <NULL>
/ BUG / [DAE]

1a10a2

This forces the user to type a null character (< N> or (SP>(BS>) whenever appending without inserting any text between the appended statements.

1a10a2a

(KIRK) DNLS top fourth of screen.

1a11

If the name of the current subsystem is going to replace the date and time, then why move the viewspec feedback area?

1a11a

I thought the date and time and maybe even the viewspec area was going to be accessible through the tty simulation window instead of being permanent areas. This was so the two line tty simulation window could be lengthened. If this valuable format is not going to happen, I would rather have the time than the subsystem name. I miss the time.

1a11b

(KIRK) Viewspec b (add one level) when used while viewspec c is in effect (ALL levels), should work as viewspecs eb (current level plus one more) instead of resulting in 0 levels. I thought this was a bug in the old command language that would not be carried over in the new command language. Some bugs with viewspec e and 0 levels were fixed. How about changing this as well? If someone ever really wanted 0 levels, they could get there with viewspecs da. JMB points out that viewspec a at ALL levels should result in the equivalent of viewspecs ea instead of 62.

1a12

When you specify viewspecs eb, (e = the current level at the top of the screen, b = add one more level). the feedback says R+1 (why not e+1?). Sometimes it computes this level and places that in the viewspec feedback area and the level

clipping stays at that value until you enter new viewspecs. At other times, R+1 stays in the viewspec feedback area and everytime you jump, it recomputes a new level. This feature is very handy, but there is no consistant way of knowing which will happen. I propose that whenever the viewspecs are specified in a Jump command, that they recompute R+1 each time until other level clipping viewspecs are added. At any other time, (i.e. Set Viewspecs command and double mouse buttons) I propose that R+1 compute the level once and remain at that level until other level clipping viewspecs are added.

1a12a

(KIRK) Other than these problems, I find the command parser easy to use. I am quite aware of and looking forward to using the changes that are going to occur in the command language and I have already become accustomed to some of them so please don't think that I am just bitching because I don't like change. What I'm concerned with is forcing the user to go to extra trouble in order to satisfy some convention that if stated in a different way would conform to a more efficient convention that saves the user from having to type as much.

1a13

Items to be implemented.

1b

(Control-Q) placement in the HELP DATABASE

1b1

<Control-Q> at K: for a verb Command-term should take the
user to the NLSCOMMANDS branch under CONCEPTS.

1b1a

<Control-Q> immediately after a verb should take the user to
the Command-term in the FUNCTION branch as a show command.

1b1b

<Control-Q> immediately after a noun-type should take the
user to the noun-type under the verb Command-term in the
FUNCTION branch as a show command (e.g. print the path name
including the verb).

1blc

<Control-Q> at any prompt or prompt alternatives other than
K: should take the user to the concept definition of that
prompt.

1b1d

There will be places in the CONCEPTS branch for each possible combination of prompt alternatives where the user can type (Control-Q).

1b1d1

The Help welcome message should appear after the branch indicated by the placement of (Control-Q) has been printed.

1b1e

should it read

1b1e1

.

Type ? to determine your current alternatives.	1blela
or	1blela1
Type (control-q) for help with Help.	1b1e1b
What should ? give at this point?	1b1e2
Show ? to find out more Quit <cr> to return to where you typed <control-q> < <cr> to return to your last point in HELP <control-q> for a detailed explination of HELP query language</control-q></cr></control-q></cr>	1ble2a
? at other points should give more commands? fewer comments?	1b1e3
Careful thought from this point of view should be given for what <control-q> will give at this point.</control-q>	1b1e4
The journal system. Which of the two possibilities (see-kelley, journal, 5b) are we going to do? Are they acceptable otherwise?	1ь2
First level commands not available in second level	1ь3
It was my impression when the concept of typing (SP) in front of a command was accepted, that it was in order to allow the most commands available with the least ammount of typing necessary by the user. Meaning that in expert mode, after a (SP) had been typed, all of the OTHER commands would be available with anticipatory recognition. Instead, I find the command I had just "spaced" out of is still available resulting in extra keys to be typed and buying me nothing. Will one of the recognition modes do what I originally thought would happen?	
ugs	1c
Output quickqrint can be disasterous and ruin a lot of paper. Don't use it.	1c1
JMB) Syntax change suggested	1 d
Change "Quit SUBSYSTEM" to "Quit To SUBSYSTEM" first choices in command then would be:	1d1
Quit CONFIRM	1d1a

Quit Nls ... 1d1b Quit To ... 1d1c 1d2

For reasons see--0124> below

Changes as of November 21 as cited in 20453

(J19286) 26-NOV-73 21:20; Title: Author(s): Dirk H. Van Nouhuys/DVN; Sub-Collections: SRI-ARC DIRT NIC; Clerk: DVN; Origin: <USERGUIDES>OLDCHANGES,NLS;3, 26-NOV-73 21:13 DVN;

Action Toward Personing the Window Office

A friend of Dean's, whom he endorses highly, will come in Thursday. I have asked Liz Martin to run our add through the regular SRI agency on the following weekend. Liz says the secratarial candidates are picking up. I hope she's right.

4

19287 Distribution
Jeanne M. Leavitt, James C. Norton, Kirk E. Kelley, Martin E. Hardy,
Michael D. Kudlick, Elizabeth J. (Jake) Feinler, Mil E. Jernigan, la

Action Toward Personing the Window Office

(J19287) 29-DEC-73 11:44; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /JML(we can cry together on Thursday.) JCN KIRK MEH MDK JAKE MEJ; Sub-Collections: SRI-ARC; Clerk: DVN; Jeanne-I was disturbed to see in the August issue of the ARPANEWS that
several pages were put in backwards in the hardcopy. One of those
pages was the second page of my article, the other was in the site
report on ISI. A careful reading of the entire newsletter would make
one aware of these mixups but the casual reader would only be
confused. In addition the numbering was done incorrectly in my
article. The categories of Concern were started with number 2
instead of number 1, making it look like something was missing. I
don't know that anything cna be done to fix up this mess now, which
leaves me angry and frustrated, but i do wish you people would be
more careful in the future. Thanks, Nancy
P.S. The numbering was correct in my original.
P.P.S. If you put page numbers on the newsletter you would get the
order right.

Copies to North, Kudlick, Cooke

In the interests of communication in the ARPANET I think that PI's should have a copy of NIC 5150 Current Directory of Network Participants. They probably don't have any use for the other books in the station collection, but I frequently get requests from my PI, Frank Heart, for addresses (on-line and off-line) of Network people. If you can't manage to distribute those books to all PI's, Please send one to Frank Heart or else prepare the same information in another booklet form for him and others. Thanks, Nancy

H

My personal preference is for explicit treatment of spaces where they are essential to the syntax of commands. It's really infuriating to have to discover by experiment where spaces are innocuous and where they screw things up. Hence I'd be inclined to vote for "<sp>" or the use of some reserved symbol for significant spaces. You also need some indication of where spaces are optional and where essential. I guess an extra pair of "()" would do. All this makes things harder to read, but I think there's a big payoff in clarity and fool-proofing. Good luck! ... John

FROM: Tom Lawrence/RADC-25 Sept. '73

1

PROBLEM: I can't get my file called DIR to work on the IMLAC/NDNLS. About half a screen's worth of the file will appear and then the IMLAC will CRASH! I have been told that it may be that I have more tabs in the file then the IMLAC can handle. Three to four months ago I used this same file on the IMLAC with no problem.

la

QUESTION: What's happening and can it be cured?

10

1

3

3a

3al

3a2

3a3

3b

3c

State of COM: State of DDSI: New People, Fewer Promises

No softerware problems here or at DDSI are outstanding.

We have not heard from Alphanumeric (journal, 17691,) snce July. As far as we know they are still trying to interpret the sample tape we gave them.

On September 10 Robert Spencer, the new salesman from DDSI who replaced Ernie Engle (journal,14993,) who replaced Mark Brown, called upon ARC. Dean Meyer had setup the meeting. Spencer talk mostly with Dean and I, a little with Jake Feilner. He brought two real pieces of news.

First DDSI no longer wants to be in the printing bussiness. This is a change from their previous position (journal, 14841,) etc. The want only to make the plates that offset printers mount on ther machines. Spencer offered to vend the printig business on a best-effort-basis with respect to price and quote us a price for each job, but he refused to offer standard prices for printing as they did in the past

I believe it would usually be to our advantage to have DDSI send us the plates which we can in turn hand over to SRI to print or vend. Dean Meyer recently figured COM costs <jjournal,19007,> assuming we print through SRI.

Not printing means not mailing out distributions, a service they have offered in the past. SRI or a local printer can do that too.

Not printing means they never deal with our half-tones (journal, 16926,). We simply format in the proper size white spaces and supply the half tones to the printer ourselves.

Second, Paul Johnson, the programmer who set up the system at DDSI, has quit to go to work for an insurance comapny. Spencer asserted that Paul had briefed his assitant, Floyd Dozier, thoroughly and that Floyd would carry on, I hope he is right. Floyd has never shown us anything specail. Johnson's departure means that John Kroemer is the only person left at DDSI with whom we originally negociated, and Kroemer appears to be out of our loop(,3d).

Spencer also mentioned that a new sans serif graphic arts type face, Spectra, is now avaiable. I have suggested to Elizabeth that she get in touch with Dozier to give us directives to call Spectra. Perhaps it is usable as "light" Newsgothic <journAL,13993,)> and <, hake>, but in any event it is a nice face.

Dean and I taxed Spencer some about DDSI's performance; simple things like their faileur ever to mail us proofs by the correct medium to the correct address. Spencer asserted that DDSI had been reorganized so that he was responsible for performance on jobs, and that he would be able to see to it that they did better. Spencer reports the president, not to John Kroemer.

30

In general Spencer promised little, pulled back on past ideas, and, although he was interested in the Network (see --, 4a3) he clearly saw it a no more than a possibliity that might develope. I am comfortable with his attitude in general and hope and expect that it means that he will fulfill commitments.

3e

Dean sent him off with a list of worries. In a few days I recieved a letter in which he respondes to these worries. I list the worries below with links to the appropriate statments in the letter. Which I include as branch (,4).

3f

Worry 1: Gould he promiss to have a draft back by Friday if We sent the file to ISI by Monday night? <,4442>

3f1

Worry 2: What about the proposal to install and LDX at DDSI so we could immediatey see draft output? <, halb>

3f2

Worry 3: Was DDSI going to get a page-size camera which would eliminate the microfilm step in making plates fo us, and so improve quality. Paul Johnson said in the past such a camera was on order. <. 4ahc>

3£3

Worry4: When would they really have light, meduim, and bold availabe in graphic arts type faces? <, hake>

3£4

Worry 5: Would they send drafts and plates to the right address? Dean made him write down the addresses anew. Spencer did not respond specifically to this worry.

3£5

worry 6: What about th request to John Kroemer <journal, 14841, > that he propose to set up a low-quality, dot-matrix terminal here to see drafts? It is not clear whether Spencer's response (, 424d) is to this worry or to our suggestion that when we had a big job at DDSI that required draft corection, we could send some one down there with a TI who could look at drafts, and make corrections via ISI and the net.

3f6

We thought together of doing a favour to DDSI by publicizing their services in general, not just through us. We asked him to send us a write up on what they could do. I incude it here as branch(,5). I plan to journalize it as item (journal,11942,) when

)	we have recieved printed copies of the Output Processors User's Guide that people can see as an example.	36
	I gave Spencer and DDSI idents (see journal, 19283))	3h
	I have drafted a reply to Spencer which is being DEX'd and which I will journalize as (journal, 19283). It includes more pressure for shorter turn around.	31
I	etter from Robert Spencer:	14
	DATA DISSEMINATION SYSTEMS INC. September 17, 1973	ца
	Mr. Dirk Van Nouhuys Research Analyst Stanford Research Center - Bldg. 30 333 Ravenswood Avenue	
	Menlo Park, California 94025	hal
	Dear Dirk:	122
	I am attaching a brief outline of the services available from DDSI, both computer graphics and photo composition, as we discussed last week. I am hopeful that your ARPA network users will find this to be a useful information handling tool and appreciate your cooperation in making this available to them.	423
	Since both you and Dean Meyer asked several questions, I will take this time to answer them:	нан
	1) Turn-around Time:	цаца
	If we receive a tape by Monday night, we will be able to have proofs back to you on the following Monday.	4a4al
	2) LDX Proof:	цаць
	The volumes and other requirements do not justify at this time.	42461
	3) Full-size Page Output:	424c
	Still undecided, but is being evaluated.	4a4c1
	4) Terminal (in-house) for ARPA Users:	4a4d
	If potential volumes grow, will consider.	4a4dl
	5) Availability of LT. MED. BOLD:	hahe

)		Is possible to bold face on Times Roman and News Gothic by double striking - not suggested below 8 pt. type. Spectra (a sans serif type) available in light.	4a4el
		6) Software Considerations:	4a4f
		DDSI can accept all print tapes from ACSII formatted data from S.R.I. COM output processor. Also, can accept all ASCII, EBCIDIC, BCD print tape formats.	hahfl
		If you have any additional questions, please contact me or Floyd Dozier. I would suggest that when you send out the service information to ARPA network user, (sic) you may want them to refer any specific questions or inquiries directly to DDSI for prompt follow up.	4a4g
		Thank you for your time and assistance on this matter. Please feel free to call us at any time.	1a4h
		Sincerely,/Bob Spencer/Marketing Representative	цаці
	Services	Offered by DDSI.	5
	PHOTO	COMPOSITION SERVICES AVAILABLE FOR ARPA NETWORK USERS	5a
)	1)	INPUT:	5al
		Accepts all ASCII, EBCIDIC, BCD print tape formats. Accepts all ASCII formatted data from S.R.I. COM output processor.	5ala
	2)	OUTPUT:	5a2
		35mm, 16mm roll microfilm 105mm microfiche Full-size camera ready copy, off-set masters Xerox copyflo proofs	5a2a
	3)	FONTS:	5a3
		High quality COM type faces (courier, directory) Utility type faces (OCR-B, Film, NMA microfont) Graphic arts type faces (Times Roman, News Gothic)	5a3a
	4)	SIZE RANGES:	5a4
		4 Point to 54 point	5a4a
	5)	SPACING:	585

Mono-spac	ed	or	pr	opor	tional	spaced
Variable	lin	e	spa	cing	availa	ble

5a5a

6) FEATURES:

586

Right and left full justification
Multiple columns
Bold and light typefaces
Upper and lower case, atalics, special symbols
Multiple font selection, mixing
Page headings, page numbers

5a6a

COMPUTER GRAPHIC SERVICES AVAILABLE

5b

1) MiSUR*:

501

High speed scanning and digitizing of illustrations. Text and illustration merging.

5bla

2) ENGINEERING GRAPHICS:

5b2

CalCOMP simulator - Plotters Gerber simulator - Plotters SC 4020, 4060 simulator Graphs, bar charts Engineering drawings Scientific data

5b2a

3) MANAGEMENT REPORTS:

5b3

Technical manuals and publications Parts catalogs Directories Financial and statistical analysis Market surveys and reports Price lists

5b3a

Data Dissemination Systems, Inc., a subsidiary of the Signal Companies, Inc., is a stable, five-year old computer graphics and microfilm service center. DDSI serves a broad national and local market from its facilities located at 11161 West Pico Boulevard; Los Angeles, California 90064 Area Code (213)477-1401. Located adjacent to two major freeways and 15 minutes from Los Angeles International Airport. With a staff of experienced systems analysts and programmers, in addition to skilled production personnel, the company offers many unique services in the area of CRT photo composition, computer graphics and microform systems. DDSI has the professional

know-how	to solve problems, with fast and efficient response applications and requirements.	to	564
Cubomer			

*MiSIR - Reg. trademark DDSI
Microfilm scan update and record 505

As a followup to Connie McLindon's two recent sndmsgs to us concerning the ARPA MIS needs, I called her this morning.

1

We discussed the ARPA needs and mutually decided that NLS support of their personnel records is worth further investigation.

2

She plans to try NLS with the help of Susan Poh (and possibly Gary Bockweg, Keydata?) in the near future. I set her up with an ident: CKM and an ident file in the ARPA directory.

2a

Connie will get a copy of our current ARC/NIC support proposal from John Perry. It should provide some good background on ARC and what we're about. It also contains the Utility proposal. She seems interested in learning more about the ARPA use of the Utility.

26

I plan a trip to the ARPA office in the next few weeks and Will make a point of spending some time with her.

2c

It seems to me that she has been given a role at ARPA that very closely approaches that of the AKW architect role we have discussed with Larry Roberts, John Perry, et al. This needs further discussion with Connie and Perry.

3

Calculator Status Report and Proposals	1
1. Elizabeth Michael has changed the FORMAT command to accept user-instigated settings as well as it's usual "interrogate" mode.	la
Proposal Throw out old format interrogate mode. New is easy	
to use and easy to understand from the prompts.	121
 The calculator grammar has been compiled and executed. Basically, the new scheme is very very nice. 	lb
The calculator, however, has one problem with respect to this conversion we don't have a way to get a number selection at the very top level the parse. In other words, we can't enter BUG CA BUG CA and get two computations done. Same restrictions for literal typeins, of course, which even affects the TNLS calculator. THIS REALLY NEEDS TO BE SOLVED!	161
One Solution a new top-level command	102
COMPUTATION <"Mode"> CONFIRM	1b2a
This would cause control to go to a controlling Calculator execution routine. It is coded ala old NLS: the system looks ahead at the next input character = if the next character represents a legal command at this point, return to the parser. (A legal command would be Terminate ("computation mode") CONFIRM .) Else the system calls LSEL(#"NUMBER") and gets a CONFIRM.	1525
(Of course, typing ? would show the NUMBER/"terminate" as valid entries - but it would be awkward to handle this outside the standard parse framework.)	1b2c
Other (standard NLS) solutions are invited.	163
2. Proposal New commands	lc
Clear <"calculator"> File	lcl
Instead of having the system prompt for this upon entry, allow user to clear calculator file at any point he desires.	lcla
Show <"calculator"> File	lc2
Instead of having system prompt for "Split Which Window?"	

upon entry, allow user to execute the split/load calc-file operation anytime.	1c2a
Retrieve ("old accumulators")	103
Always save his accumulators in his file upon quitting. The next time he enters he gets cleared accumulators by default, and may request the old ones back anytime.	1c3
MotivationSpeed up initialization. Allow user to initiate requests instead of being hassled by questions. It is appropriate now, since we have good help/prompt capabilities.	lc

24 Aug 1973

Center Computer Support/IS (Colonel Thayer)

- 1
- 1. Computer technology is pervading all aspects of our Center's operations in an ever increasing fashion. I am concerned that we are not taking advantage of the knowledge and experience which is available in the Information Sciences Division. I know that your view, as supported by the Division's mission statement, is that your fundamental responsibility lies in investigating the more basic research and development aspects of computer technology--particularly as relating to software. Because of this, and because of your manpower limitations, the Division as a whole has been reluctant or reticent in providing more routine support to other divisions within the Center.

3

2. It is somewhat a dichotomy to profess to be the Air Force Center of excellence in a vital area and not provide the same service to our own people. Thus, because it is both essential and necessary, I want you to prepare a program which will provide the following Center computational support from within the)IS resources. I should like to discuss this program with you on 6 September at 0930.

1

a. Provide the computational support in a guaranteed time period on a daily basis. As a goal this time period would be the normal work shift.

4a

b. Establish a group to provide consulting service to application programmers of other divisions.

шь

c. Perform a periodic analysis of the total RADC requirements for R&D computational support. As a result of this analysis, plan and implement changes to the facility hardware and software consistent with the total requirements.

4C

d. Establish an education and training program for personnel of the other mission divisions.

#q

e. Establish and maintain a Management Information System.

4e

3. The above should insure that the RADC mission divisions will be provided the computational support required in performing their functions.

PHILLIP N. LARSEN

6

Colonel, USAF

7

Commander

8

The Ident system has a rather irritating bug: If I create an Ident for someone, before going and creating the person, the Ident system asks if i want to modify any of the information. If I answer Yes and then try to, I am informed that only the persons themself may modify their record, and I am then Kicked out of the Ident system.

I have received various messages and info on files from several people involved in the radcmis plan. I offer no comment at this time since I have a lot of reading and thinking to do. I do think that any routine correspondence on this topic should be sent to everyone concerned. This includes fjt & jlm. Private correspondence is of course encouraged, but results of caucuses etc. should be made available to all of us. I suggest another meeting on 28 Sep at 1000, in your office this time. Items for an agenda should be submitted to the <stone>radcmis file which is open. Hopefully this meeting will provide additional guidance to reduce anxiety levels.

Jim ... I got this request from Vint Cerf (VGC, and also (SU-DSL)), which I pass on to you (I told Vint I'd do that):
"Please keep me informed about the progress on TYMSHARE NLS system -Kahn has asked me to keep tied into that effort in case we want to get a true internetwork experiment going. Thanks. Vint"

Dear Jeanne,

I would like to print out copies of NIC 18232, "Brief Directory of Network Individuals" (15 August version) on our line printer to distribute around the group. (What I actually want is a list of "mailbox" names.) Unfortunately, I can't find that document on line, although I'm sure it must be available. Locator points to an older version. Can you tell me the correct place to look?

Regards,
Alex McKenzie

Vint ... As you probably noticed, we moved the two files you requested:

(SU-AI)Hostnames.nls and (SU-AI)Pladdition.nls to (SU-DSL).

1

The reasoning behind the cut-off of non-NLS services for Network users is ARC's policy of having its system be as close to an NLS system as possible. File handling, especially, is done in NLS rather than Tenex. This may be changed in the future, but at the present that's the policy. Similarly for subsystems like TECO, etc. I know semicolon is a nuisance during links; but of course there's no immediate alternative given the above policy.

2

Your remark about the eventual legal need for having editing capabilities when linking, while not entirely understood by me, is certainly desireable. I assume you have in mind the problem of recording the information that's transmitted while linking, so that it's available as a transcript for later use.

3

I have passed this idea on to the NLS designers (including Dick Waytson). We are currently in the process of modifying the NLS command language and putting some of the Tenex capabilities (including linking) into NLS, and your suggestion for having a capability to record "link" sessions may thereby become a facility from within NLS. But the emphasis here is on NLS, not on Tenex, Vint.

1

For keeping in touch with the ARC/TYMSHARE developments, the person to talk with is Jim Norton (JCN). I have relayed your message to him (sorry, I'm totally out of that picture).

5

... Mike Kudlick

6

)	UTICA COLLEGE PERSONNEL - CONTRACT F30602-72-C-0326	1
	FACULTY SUPERVISOR - Arlotto, Joseph J. (Bucciero) Indefinite	2
	STUDENTS	3
	IR	3a
	Ackerson, Elaine (Kozak) May 1975	3a1
	Dietrich, Gabriele (Bond) May 1976	3a2
	Dziek, Robert (Maier) May 1974	3a3
	Eastwood, Fay (Kozak) August 1973	3a4
	Florczyk, Gloria (Langendorf) May 1974	3a5
	Gregorin, Dennis (Bush) May 1974	3a6
	Matteson, Susan (Kozak) May 1975	3a7
	Matuszewski, Richard (Mincieli) May 1974	3a8
)	Struth, Robert (Hoffman) May 1976	3a9
	Wallace, Cheryl (DeLucia) May 1975	3a10
	IS	3ь
	Ata, John (Stinson) May 1976	3ь1
	Bacher, Gail (Robinson) May 1976	3ь2
	Beer, Edward (Robinson) May 1976	3ь3
	Hoffmeister, Thomas (Stinson) May 1975	3ь4
	Jerzak, Joseph (Metzger) May 1975	3ь5
	LoRusso, Stevenson (Smith) December 1973	3ь6
	Robilotta, Donna (Cavano) May 1975	3ь7

UC Personnel

For info only

19302 Distribution
Joe P. Cavano, Edmund J. Kennedy, Duane L. Stone,

(J19302) 26-SEP-73 05:31; Title: Author(s): Frank J. Tomaini/FJT; Distribution: /JPC EJK DLS; Sub-Collections: RADC; Clerk: FJT; Origin: <TOMAINI>UC.NLS;1, 13-SEP-73 12:42 FJT;

Dave--

Since it has been several weeks since I released the online version of the charter for comments, and since I haven't received any comments exept for yours for which I made the necessary changes, I would like to release it as a hardcopy USING Note now. Do you have any objections.? As you have probably noted MAP is going to send out NETED as an RFC. Do you think that we should keep that as USING business for a while, or is RFC ing it a good idea? Speak. Salut, Nancy

p.s. I hear Postel is working for your brother. Hmmmmm.

1

(J19303) 26-SEP-73 06:37; Fitle: Author(s): Nancy J. Neigus/NJN; Distribution: /DHC; Sub-Collections: NIC; Clerk: NJN;

19303 Distribution
David H. Crocker,

Judy--

May I have another USING Note number, this time with a NIC number so that I can release the USING charter as hardcopy to the group. I will insert the numbers into the file and then send you its address so that you can distribute it. Thanks very much. Nancy

•

(J19304) 26-SEP-73 06:40; Fitle: Author(s): Nancy J. Neigus/NJN; Distribution: /JDC; Sub-Collections: NIC; Clerk: NJN;

19304 Distribution Judy D. Cooke,

for Ray Luizzi

1. My understanding is that AFSC/ACB wants to replace the present DMS with the Series 2000 on CDC 6600's. We should have ACB's reasons for this to help us in our evaluation.

1

2. In opening paragraph, after second sentence, suggest you make a point of what Deane had to say about buying a DMS with too much power when a cheaper one would do the job. However, in paragraph 4, you might want to bring out the fact that the Series 2000 is suited for growth (i.e. not only more data but also more record-types in a file and that if changes in the existing design are minor, the recompliation of applications program is not a problem).

2

3. Ref. para. (8)- -

3

a. Implementation on the HIS machines was tossed in as an aside. You say the cost of implementation would be "high". I would suggest you put in an estimate. What we consider high may not be considered high by others. Also, we don't want to give anyone reason for not implementing it on the HIS machines. It could be to our disadvantage.

3a

b. Might say something about what it takes for mutiple user capability.

36

(J19305) 26-SEP-73 07:20; Title: Author(s): Roger B. Panara/RBP; Distribution: /RFI; Sub-Collections: RADC; Clerk: RBP; Origin: <PANARA>SER2000.NLS;1, 26-SEP-73 07:11 RBP;

19305 Distribution
Rocco F. Iuorno,

this report is from e. laforge for capt. daugerty

and the family of the

this message describes rade afforts in support of hq esd for the cheyenne mountain improvement program, called system 427m. this system replaces the 425l system currently operational under Norad in colorado springs, colorado.

1

the system consists of two major segments:

the norad computer system, utilizing a 6070 machine

2a

the space computation center utilizing another 6070(studies are under way to consider the advisability of a third machine for redundancy)

2b

approximately two manyears are programmed for the effort in fy 74, with only technical support to be provided by us. the chief areas requiring support and the indiduals assigned are as follows:

3

displays/data processing-a.la forge, l. lombardo

3a

reliability and maintainability-j. fuchs

3ь

emi/rfi-g. long

3c

communications-f. manzo

3d

the job order numbers are 427m0101(ncs) and 427m0201 (scc). the lead division is information sciences and the lead engineer is e. f. la forge. isim is currently programmed for 0.4 my for the fiscal year.

the work consists mainly of monitoring the hardware and system integration contractors efforts. most of the equipment is commercial off-the-shelf stuff modified to meet the special environmental requirements of the mountain. the primary emphasis is on the adequacy of the interface engineering, both from a hardware and software point of view, and from the need for efficient man-machine interactions.

5

this brief summary is for capt. daughtry. prepared by e. la forge.

(J19306) 26-SEP-73 07:39; Title: Author(s): Thomas F. Lawrence/TFL; Distribution: /WPB RFI JLM EJK; Sub-Collections: RADC; Clerk: TFL; Origin: <LAWRENCE>427M.;1, 25-SEP-73 12:45 TFL;

19306 Distribution
William P. Bethke, Rocco F. Iuorno, John L. McNamara, Edmund J.
Kennedy,

Could you please establish an account for NIMH [National Institute for Mental Health]. The coordinator, initially, would be:

Mark Greenspun National Center for Alcohol Education 1901 N. Moore St. Rosslyn, Virginia 22209 (703) 527-5757

Their interests [Mark's organization] include: computer assisted instruction, curricula development and automation, text analysis, teleconferencing, distributed inter and intra organization collaboration.

Please confirm so I can let Mark know, or call Mark directly if that is preferrable.

Best regards, Jean

1

NIMH : NCAE

(J19307) 26-SEP-73 09:00; Fitle: Author(s): Jean Iseli/JI; Distribution: /JI JAKE(please expedite if possible, thanks jake) SSP MDK JBN; Sub-Collections: NIC; Clerk: JI;

19307 Distribution

Jean Iseli, Elizabeth J. (Jake) Feinler, Susan S. Poh, Michael D. Kudlick, Jeanne B. North,

This is a test journal item to compare the amount of CPU needed to do a sndmsg with the amount of CPU needed to send a journal item.

Test of Sndmsg vs. the Journal

(J19309) 26-SEP-73 10:23; Fitle: Author(s): Susan R. Lee/SRL; Distribution: /PR; Sub-Collections: SRI-ARC; Clerk: SRL;

19309 Distribution Paul Rech,

NIMH : NIAAA : NCAE : URC : Update

Mark Greenspun supplied further clarification. The NCAE was set up by National Institute for Alcohol Abuse and Alcoholism of the NIMH. The staff for the NCAE is supplied under contract by the University Research Corporation. The NIAAA contract manager is Don Phelps; Mark turns out to be an employee of URC. Could you please call him for particulars prior to establishing the account.

To further confuse or clarify the issue, Mark indicated that a new organization has been formed, ADAMHA, and constituted from the following National Institutes: Mental Health, Alcohol Abuse and Alcoholism, and Drug Abuse. Sorry for any inconvenience the update may have caused.

Thanks, Jean

NIMH : NIAAA : NCAE : URC : Update

(J19310) 26-SEP-73 10:24; Title: Author(s): Jean Iseli/JI; Distribution: /JAKE JBN MDK SSP JI; Sub-Collections: NIC; Clerk: JI;

19310 Distribution
Elizabeth J. (Jake) Feinler, Jeanne B. North, Michael D. Kudlick,
Susan S. Poh, Jean Iseli,

This is another test message to compare sndmsg with the journal. Soon we will see if there is any difference between sending things on DNLS or TNLS.

(J19311) 26-SEP-73 10:46; Fitle: Author(s): Susan R. Lee/SRL; Distribution: /PR; Sub-Collections: SRI-ARC; Clerk: SRL;

19311 Distribution Paul Rech,

Hi, y'all: What is the status of the Common Command Language? This pertains to Nancy's concern as to whether we should have a meeting soon, or wait for us'n to do more work.

Dave.

1

(J19312) 26-SEP-73 11:16; Fitle: Author(s): David H. Crocker/DHC; Distribution: /AWH RMS KLB; Sub-Collections: NIC; Clerk: DHC;

19312 Distribution

A. Wayne Hathaway, Ronald M. Stoughton, Kenneth L. Bowles,

Hi, Nancy:

I think that releasing the Charter as a Using Note is fine (even an RFC?). I still would like the USING Metting notes as an RFC, but don't suppose that you want to back offffff from your stance (oh, well..)

What is the Protocol meeting waiting on?

I am inclined to think that NETEDS should make another pass thru USING (and USERS??), with a vote or somesuch taken.

The issue with the name, that I have sttled on is that the program's name is, in fact, EDS and we are distributing it thru the Net, so NETEDS should be its name. If we wer creating a new (and I still feel it should be 'better') editor, then Neted would be ok. But this editor has a history, which I think we should acknowledge.

And I think I will not waste more words on the topic.

How have you been? Now that summer is over, the weather has gotten warm here. D/

Of cabbages, cornpone, and the like

(J19313) 26-SEP-73 11:24; Fitle: Author(s): David H. Crocker/DHC; Distribution: /NJN; Sub-Collections: NIC; Clerk: DHC;

19313 Distribution Nancy J. Neigus,

Dean --

I have read over the L-10 fanual and like it much more than the previous one. I have some suggestion which I will make after a more thorough reading.

- 2. In the guide, Statement Numbers are printed only down to a certain level. How did you do that??????
- 3. Some directives may be used as arithmetic usnits (E.G., LBS=LBS+1). This is not mentioned in the Output Processor Guide.
- 4. Is the Guide pretty much up to date (for us to run off some hard copies?). and what is the filename?

Thanks. And I hope things are settling down some. Dave/

(J19314) 26-SEP-73 11:29; Fitle: Author(s): David H. Crocker/DHC; Distribution: /NDM; Sub-Collections: NIC; Clerk: DHC;

19314 Distribution N. Dean Meyer,

NLS Class

Dirk -- Should we start thinking about formally planning an NLS class down here, for shortly after the new interface is released?

It looks like it should be a full week (BBN-format) with 2 classes. People from our project, CCN, and the computer science department all wantto learn (those lucky fogs). Let me have arange of dates that will be convenient for you and I will check it out here.

Thanks. D/

1

(J19315) 26-SEP-73 11:31; Title: Author(s): David H. Crocker/DHC; Distribution: /DVN; Sub-Collections: NIC; Clerk: DHC;

19315 Distribution
Dirk H. Van Nouhuys,

(John) -- Due to an unfortunate oversite, I did not send thie following Journal item to you. I would greatly appreciate your comments, before I send it as a RFC. Thanks.

DHC 20-SEP-73 14:55 19154

Preliminary Draft of RFC to Correct RCTE Option
Location: (JJOURNAL, 19154, 1:w)

*****Note: Author Copy*****

1a

1

(J19316) 26-SEP-73 11:35; Title: Author(s): David H. Crocker/DHC; Distribution: /JD; Sub-Collections: NIC; Clerk: DHC;

19316 Distribution
John Davidson,

. . . .

getting smfs source

Jim -- Archive is too smart, now. I can't do an interrogate on your directory. Would you please pull the appropriate copy of smfs online and let met know what it's name is?? Thanks. D/

1

getting smfs source

(J19317) 26-SEP-73 11:42; Fitle: Author(s): David H. Crocker/DHC; Distribution: /JEW; Sub-Collections: NIC; Clerk: DHC;

19317 Distribution
James E. (Jim) White,

Several people have found that the abstracts of RFC's that are printed in the ARPANEWS are either inaccurate or else do not reflect the main objective's of the RFC. I think it is a fine idea to provide these abstracts for the people who don't usually get those documents, but it is useless if the material is not presented correctly. It is impossible for any one person to understand enough about all the varied aspects of the network to do a good job on the abstracts, so instead of hiring a team of experts maybe you could require that all future RFC's contain an abstract at the beginning, or else a very comprehensive introduction. Short of that maybe you could have the abstracts "proofread" by someone who usually reads the abstracted documents. Nancy

(J19318) 26-SEP-73 12:52; fitle: Author(s): Nancy J. Neigus/NJN; Distribution: /JBN JI; Sub-Collections: NIC; Clerk: NJN;

19318 Distribution
Jeanne B. North, Jean Iseli,