DVN 18-AUG-75 16:35 26291

We Should Be Able to Attache Comments to an Author's Idents

I have several times been listing several authors and wanted to attach a comment to explain, e.g., why they are authors. 1

DVN 18-AUG-75 16:35 26291

We Should Be Able to Attache Comments to an Author's Idents

(J26291) 18-AUG-75 16:35;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /FEEDBACK([ACTION]) ; Sub-Collections: SRI-ARC FEEDBACK; Clerk: DVN;

26291 Distribution
Special Jhb Feedback,

BEV 18-AUG-75 19:09 26292

Preface

Hi Ann, Welcome back. I got your message about the Preface, I'm wondering now if you might have time to work on it a little this week, I didn't realize that it hadn't be formatted yet, So I thought maybe we should go ahead and COM it--it would go a lot better with the diagrams and to get print masters we'd have to have a new ribbon again, I'm sure you'll be busy this week, but this would be a help, Talk to you later, (By the way if somehow you got a sendmsg saying essentially what this is, sorry for the repetition, I'm giving up on that blank SNDMSG--something always screws up for me!)--BEV

1

Preface

p.s.--even tho you see this first, Could you make sure documentation files are kept at BBNB? Dick seems pretty firm on this, and it does make it a little more convenient. Thanks.

Preface

(J26292) 18-AUG-75 19:09;;;; Title: Author(s): Beverly Boli/BEV; Distribution: /POOH([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: BEV;

26292 Distribution
Ann Weinberg,

Network Identification System - Comments and Suggestions

The following are some rough, off-the-top-of-my-head comments on what might be useful in a netwide Identification System. Many of these comments are based upon experience gained and problems encountered during several years of maintenance of a public netwide Identification System by ARC and the NIC for the Arpanet: 1

OVERVIEW 2

IDENTIFICATION SYSTEM SHOULD BE DISTRIBUTED 2a

Both the data base and the programming for an Identification System that is to be used netwise would need to be distributed with very dynamic updating and distribution features. A great deal of redundancy and reliability would also be necessary, since this system would contain identifiers for access to the network. If it were down the whole network would be paralyzed. Paul Johnson of BBN wrote an interesting RFC about distributed data bases that might be applicable. The work done by Hopper and White on multi-host distribution of the journal should indicate some of the problems also. Distribution and updating should be as automatic as is possible. 2a1

IT SHOULD PROVIDE INTERFACE TO MESSAGE SYSTEM(S) 2b

Any netwide Identification System should interface to a netwide mail system. Other mail systems (local) should also be able to call upon the Identification System for verification of mailboxes, etc, for message and document sending. This would eliminate many duplicate Identification Systems around the network that have different standards, different idents, and the like. I think each host should be able to use either the whole network ident system or a subset constituting its local users if it so desired, as identifiers for mail sending. 2b1

IT SHOULD HAVE A GROUP DISTRIBUTION MECANISM TIED TO A JOURNAL SYSTEM 2c

Any netwide Identification System should have group distribution for special interest groups and for document or message distribution. I believe SRI-ARC's concept of the Network Journal tied to the Identification System is a good one and should be incorporated into any netwide Identification System. It should be the option of the user whether he wishes to submit an item he is writing to the open journal, to a private journal subcollection, or to a private msg file. The default would be open journal submission. 2c1

As an aside to the above idea of group distribution and document distribution (but somewhat off the track of an ident

system), I believe there should be a feature for hardcopy delivery wherein the files would be shipped to a Network Copy Center and then automatically mailed within 24 hours to the recipient. For this he would pay appropriate charges for copying and mailing. All other mail would be delivered online, with online being the default. Users should be able to request certain subsets of documents for hardcopy distribution (such as group notes), as well as all pieces of mail. 2c2

IDENTS 3

INDIVIDUALS 3a

PROTOCOL 3a1

There should be an ident assignment protocol set up for assigning individual idents. Without using numbers or random combinations (such as is done for license plates) there is no scheme I know of which will produce unique individual identifiers without some fudging. The two most prevalent are: lastnames, and 3- or 5-letter codes usually based on initials or nicknames. My own preference would be for lastnames (or initials lastname where there were two people with the same lastname). My arguments for lastnames are: 3a1a

1. If one is contacting another person, he will almost always know that person's lastname, but may not know the initials of even close associates. (I often have to check idents for people I know quite well). 3a1a1

2. Currently lastnames are the most prevalent system being used on the net for network mailbox address, login, and links. 3a1a2

3. Use of 3- or 4-letter codes necessitates maintaining a separate set of data, whereas lastname will always be a necessary part of an individual's entry into an Identification System. (Same lastnames might require entry of a unique identifier, however.) 3a1a3

SYNONOMY 3a2

Currently there are several identification assignment schemes on the network and a user who works at several hosts may be identified in more than one way (e.g., JAKE, FEINLER, NIC, EJF). A table of equivalencies of the various possibilities for a given individual would need to be maintained in any new Identification System. This would be

accessed only if the original identifier used could not be found. 3a2a

ORGANIZATIONS 3b

Full text entries for Organizations need to be standardized against some accepted standard such as the COSATI Corporate Authority List. Presently, there is a great deal of confusion concerning hostnames since these serve as the acronym for a given computer, but are also used frequently to designate a lab or group of people associated with a given computer. An organization ident can be based upon the largest corporate entity or agency (such as IBM or DOD), but is usually more useful if based upon a smaller entity, such as a particular division or lab of IBM or a particular branch of a government agency, e.g. University of California, Information Sciences Institute is generally more meaningful than University of California since the latter could mean many Arpanet organizational entities. 3b1

T'here are at present three organization designators in our ident system. These are Hosts (subdivided into Server, User, and Tip), Associates (roughly thought of as 'friends of ARPA or organizations involved in network research or contracts who do not have a host on the network or are not actively associated with a host on the network), and Independent (a catch-all for everything that doesn't fit the other two categories such as utility customers who do not have access to the Arpanet, individuals who formerly received hardcopy distribution, foreign companies and universities who have no formal ties to the network but maintain an interest, etc.) The categories of organization designators needs to be reviewed to make sure that a scheme is devised that will reasonably handle a much larger Identification System in a clean manner. 3b2

HOST NAMES 3b2a

As an aside to the Organization Name issue, the whole problem of each host having to maintain recognition of the host name of every other host would be eliminated or at least greatly simplified if all host recognition was done at the point of receiving instead of at the point of sending. This, of course, is not trivial since messages with the wrong hostnames would be roaming around on the network looking for a spot to land and causing problems. However, strictly from the point of view of maintaining host names (and possibly no other), receiver recognition would be much the better way to handle host recognition. 3b2b

Whatever host name recognition scheme is used, the user of the system still needs to know either the name or the number of a host with which he wishes to communicate, and presently the host from which he is sending messages needs to recognize the host toward which a message is directed. Often a given facility is lax in keeping up with host name changes, or it may use a local nickname instead of the official hostname. To remedy this situation, I believe there should be a distribution and updating program that would automatically enter additions, changes, or deletions of host names into the host name table for every host. The official list would be maintained in the central data base. 3b2c

It would also be nice for the poor user if host number recognition were either always octal or always decimal (but not one one time and the other the next). 3b2d

GROUPS 3c

Groups, as currently used in the ARC Identification System, are primarily online distribution groups or local or network special interest groups. The primary reason for creating a group is to distribute information to a select community without having to insert each individual's ident (or for that matter without even having to know each individual's ident). In our system these idents are fairly fluid. In a netwide system I would imagine there would be two categories of groups. One would be formally recognized and fairly permanent network distribution and special interest groups, such as Network Liaison Group, Network Working Group, and the like. The other would be groups that were created and disbanded as needed for private or less global use. 3c1

Creation of a group should be requested by a group co-ordinator, and he should be the person responsible for control over the group membership. This cannot and should not be done centrally, since an editor of an ident system could not be expected to know who would be an acceptable member of a given group. If all groups are open to all people, they soon become very large and unwieldy, especially if they are working groups. Therefore, I think it is important to maintain the concept of group co-ordinators. My own feeling is that these co-ordinators should work through a central editor (that is the co-ordinator could suggest entries or deletions but the editor would verify that the proper information was received and entered.) It would also be possible (especially for large formal groups) to give the co-ordinators write access for their group membership maintenance. I personally would vote against this approach (see CENTRALIZED VS DECENTRALIZED EDITING below) 3c2

IDENT DELETION OR CHANGE 3d

A problem arises concerning the deletion of an ident, particularly if the owner of a given ident has published articles in a network journal, or if a group or organization has had publications or online files associated with it. For instance, if A. Smith (now on the network and in the Identification System) were to leave the net, and his ident were deleted and then reassigned to another individual named A. Smith, it would be impossible at some later date to gather all items writtten by the first A. Smith without getting those written by the second A. Smith also. The worst case arises when an unsuspecting person serarching for all occurrences of A. Smith does not know that the resulting search represents more than one person. For these reasons ARC's policy has been not to reuse idents. Conceptually this should work, but actually it leads to such things as an ident for A. Smith of AS6. (Using lastnames for idents would help this.) Hosts should be required to pick a name and stick with it and changes of any idents for random reasons should be heartily discouraged. It may be possible to devise a scheme for easily reusing idents, but such a scheme would undoubtedly introduce the need for an involved ident management system, and is probably not worth all the programming and maintenance which would be required. 3d1

INPUT 4

COMMAND LANGUAGE 4a

Commands needed at the top level are; ADD, CHANGE, DELETE, UPDATE, VERIFY, SHOW, FIND, AND QUIT. (Others are not ruled out.) 4a1

ADD. After user types 'ADD', he should be interrogated for type of add item, e.g. Individual, Organization, Group, or other. After one of these is selected, the system should prompt the inputter for each data element needed for a complete entry under that type. If no data is available, the inputter would type a carriage return. There should be a '?' feature to describe each data element incase the inputter does not understand what is required. Presently an inputter is not able to abort back to the previous data element, instead he is thrown clear back to the ADD command. This should be changed so that one could abort back to the beginning of a data element prompt. This would delete any entry previously made fro that data element. Editing commands such as backspace litter, backspace word and possibly others are also needed. The above comments in this

paragraph refer mainly to typewriter or offline (DEX type) input which in some ways is preferable for initial entry of data (ADD) because continuous verification of proper format can occur, If input were by display mode (DNLS), the inputter should have a template to fill out for each added entry, This would then be verified in some manner before it was finally transferred to the running ident system, Another annoying feature of the present iient system is that the inputter cannot simply do a carriage return to indicate null data, Instead he must do <SP><BACKSPACE> (It is possible this has been changed), This is time-consuming and interrupts the flow of work, After the ADD information has been entered, the inputter should have the option of updating then or continuing to another entry, (Presently one must update after every entry addition or change and this is extremely time oonsuming on a heavily loaded system, It is not uncommon to be able to make as few as a half-dozen changes or additions in a couple of hours due to having to update after each new entry on a heavily loaded system - clearly not effici 4a1a

CHANGE, This command would be used to alter data already entered into the Identification System, After the inputter typed 'Change' he would type the ident of the entry he wished to change (could be the ident of an individual, organization, or group), The system would then display all current information for that entry, The inputter would then proceed to specify first the data element to be changed, and then the new data, If he knew he only wanted to change one data element he could type CHANGE XYZ ELEMENT n, For typewriter mode data elements would be numbered so the pattern would be 'CHANGE IDENT', followed by a numbered display of the entry, followed by a data element number selection, followed by the data corresponding to that data element, 4a1b

Ideally changing would be done on the display in DNLS, In this mode the inputter would simply do a series of replace word or text, thus replacing the old data with the new, At present all verification and checking is inoperative in DNLS, so writing directly on the ident file or transferring unverified data over from a a copy file is very risky, 4a1c

DELETE, This command were to be used to remove an ident and all its related data from the active file to an inactive file (assuming ident integrity were to be maintained and idents were not to be reused), DELETE should remove not only the data elements and data associated with an individual, but also that associated with an organization or

group. In the event that an organization or group ident is removed the system should automatically remove the ident of that organization or group from the data element 'Organization' or 'Group' under individual entries. If an organization is removed, the inputter should be asked whether all individual entries associated with that organization should be deleted also. On the other hand, when an individual is deleted (along with the corresponding data) each group or organization of which he was a member should have his ident automatically deleted from its membership. 4a1d

There is no automatic deletion feature in the current ident system. Any deletion done is done by hand, usually by doing a series of successive Jump to Contents - another unbelievably tedious job that needs to be automated. 4a1e

UPDATE. This command updates the file and writes the new data into the running system. My feeling is that an automatic verify should be included in any ident system update, and that the user should have the option of whether to update after every entry or to update after several changes or additions have been made. 4a1f

SHOW would be used to display current data for a given ident. 4a1g

FIND would be used for searching throughout the data base. 4a1h

QUIT. Returns the user to higher level such as EXEC or BASE (if using NLS). 4a1i

DATA ELEMENTS 4b

Any number of data elements might be used depending upon the design and intent of the Identification System. Below are representative data elements that might occur in any given Identification System. (The list is not exhaustive nor is the name employed necessarily the best choice of terms; rather the list gives an indication of needed data elements.) 4b1

Input for an Individual Ident 4b2

Individual Ident (could be last name) 4b2a

Name
- Last
- First name or initial
- Middle initial 4b2b

Group Full Name 4b4b

Group Co-ordinator
Address
Network address
Phone 4b4c

Comments 4b4d

Membership 4b4e

Purpose 4b4f

FILE STRUCTURE 5

NLS file structure as it now stands is not adequate for a large data base such as an Identification System. Files should be ASCII sequential files so that they can be utilized by most host machines. NLS could provide the data entry and editing capabilities, but entry should also be available from other hosts, and each host should be able to pull over a subset of the data for its own use if desired. (See CENTRALIZED VS DECENTRALIZED EDITING below) 5a

Structure of a given entry in the file would probably be as a string of data separated by a delimiter with either the sequence fixed or the elements labeled, or both. Again, our current entries take up too much file space and are not organized for efficient file management. Data structure would be dependent upon whether an existing system were used for storage and retrieval (such as say the Datacomputer) or whether a new data management system system will be devised. 5b

EDITING 6

CENTRALIZED VS DECENTRALIZED EDITING 6a

There are three predominant philosophies of editing an Identification System. These are: 1) data is edited centrally, 2) data is edited locally by a locally appointed editor, and 3) data is entered and edited by the person to whom it pertains. None of these is foolproof or ideal, but my own feeling is that central editing wins hands down over the other approaches. Having stated my bias, here is a scenario for what I think would be the most workable system: 6a1

Data could be entered into the RUNNING SYSTEM only at a central location. Here it would be verified and standardized and distributed to all other systems. However, unedited and

unverified data could be entered by either an individual or a local representative from any host. These entries would be transferred to the central editor for verification and standardization. If pieces were missing the central facility could request additional data and so forth. 6a2

Input at any host would be the same as that from the central facility - that is fully prompted data elements, choice of whether entry is individual, group, organization, etc. (For any input system I am suggesting the default system be fully prompted with user-options for less verbose handling, if desired). Any user or host representative could also send his input to the central facility for input there. Hopefully any novice input of data would be carefully guided and prompted by the system so that a minimum of errors would occur. 6a3

In the past the NIC attempted on two occasions to let users enter their own ident data. Both times resulted in a mess which took many months and many man-hours to straighten out. It could be argued that our user interface was abominable (which at the time it was), but even given very good user interface where the inputter understands exactly what data is required many mistakes will be made. These generally take the form of mistakes in using the system which mess up the whole entry in some fashion. (When a novice user makes a wrong choice of command or control character, he frequently doesn't know how to get out of the situation and will begin trying anything that he can find that will get him moving again. It is a fundamental law that every mistake and foul-up that can be made will be made.) 6a3a

ACCESS TO NLS (PREFERABLY DNLS) 6b

Ideally one would want to be able to enter and edit data from a typewriter, offline tape, or CRT. CRT is naturally the fastest for changing entries, but any of the three would be comparable for initial entry. As Marcia Keeney has pointed out, use of DNLS or a CRT editor for making changes would greatly speed up maintenance of an ident system. 6b1

VERIFICATION AND UPDATING 6c

In our own ident system verification is a lengthy process separate from the updating procedure. Ideally more verification should take place upon updating. As stated before, the inputter should have the option of entering several entries before updating the whole file. During input an ident would need to be checked immediately to make sure it had not

been used before. Other data could be checked later with illegal entries not accepted until corrected. 6c1

If new organizations or groups are created, each individual included in the membership of the group or organization should have an entry in the ident system. Under each individual entry would be listed all the organizations and groups to which that individual belonged. The 'housekeeping' of entering, changing, and deleting individual idents with respect to group membership would be done automatically upon updating. 6c2

STANDARDS 6d

It is important that certain file maintenance standards me set up and followed in order to avoid scattering of like data and other similar problems. Candidates for standardization would be: 6d1

CORPORATE AUTHORITY LISTING (Organization Names) 6d2

This refers to the way in which organization names are entered into the file. For instance, M.I.T., Mass. Inst. Technol., Massachusetts Institute of Technology, and MIT, are all valid ways to enter the organization, Massachusetts Institute of Technology. Then there are suborganizations of MIT such as Project MAC, Mathlab, Dynamic Modeling System, Artificial Intelligence Lab., Lincoln Lab., Applied Seismology Group, Multics, and so on. If some standards are not agreed upon for entry of these, a sort of organizations (or other applications where organization names might be usedsuch as searching) will be hopelessly scattered. Suggested existing standard might be the COSATI Corporate Authority Listing. 6d2a

ABBREVIATIONS 6d3

Standard abbreviations should be selected and used throughout. Their use for words such as street, name of state, etc., can save considerable space. Abbreviations should not be used excessively or where their meaning is misleading, nor should they be made up or forced because of space constraints. 6d3a

JOURNAL HEADINGS 6d4

A journal citation header that adheres to current hardcopy published journal items (author, title, journal name, item no., volume no., pages, date) should be the default in my

opinion, with user options as to how the citation would appear in the initial file of any given user. 6d4a

JOURNAL KEYWORD EXCLUSION LIST 6d5

In addition to an exclusion list for use with the production of keyword indices, other lists such as equivalency lists could be built for verifying data. Cross reference lists also could be maintained, e.g., use term X and not term Y. 6d5a

SECURITY 7

Security would be an important part of a netwide Identificiation System as would reliability and immediate distribution. There are two problems associated with verification of an ident as valid. First, before it is entered - who is the person, does he belong in the ident system, how can you know he is who he says he is, if data or communication are handled online. This would need a system of backchecking with an official representative such as the Liaison or PI at each host. Second, there is the problem of identifying an individual after he is entered in the ident system. This is usually accomplished by a password or internal security scheme. Our work at ARC on private journal entry submission as well as BBN's work on the TIP login procedure and MULTICS work on internal security have addressed this problem. (See Jim White's recent memo to MsgGroup) 7a

BBN PASSWORD SCHEME 7b

Paul Johnson of BBN devised an interesting protection and automatic distribution scheme for the TIP login database. This would probably be applicable to a netwide ident system. An individual should be able to change his own password if he chose, and ideally no one person would have access to all the passwords (or maybe any but his own). I know very little about security so will leave this to the experts. 7b1

WRITE AND READ ACCESS 7c

Any network user should be able to query the ident system and read the entry for any other network user with the exception of password and accounting information. However, no one except the central editing staff should be able to change an entry once it is edited unless it is the individual himself. He would not be able to change the running system, but could make alterations that would be eventually entered into the running system by the central editing staff if not conflicting in some manner. I would recommend every network user being able to see the membership of any network group or organization, but some

might disagree with this and want only a member of a given organization or group to be able to view its membership. Either is a valid approach. 7c1

USER FEATURES 8

The following have been discussed above in varying detail but should in my estimation be user features for an Identification System. Group entry write access would be done either by the group co-ordinator or by the central editor: 8a

INDIVIDUAL ENTRY ACCESS 8b

GROUP ENTRY ACCESS 8c

ORGANIZATION ENTRY ACCESS 8d

ONLINE GROUP DISTRIBUTION OF MEMOS AND DOCUMENTS 8e

USER INPUT AND UPDATING OF OF HIS OWN DATA 8f

AUTOMATIC MESSAGE COLLECTION AND DELIVERY TO A SPECIFIED MAILBOX 8g

OTHER USES 9

These are optional features that might be nice as adjuncts to an Identification System. 9a

LETTER HEADINGS 9b

It would be useful to be able to use the ident system to produce letter headers, etc. on a netwide basis. It would also be useful to be able to send form letters whose recipients would be the membership of a given group or organization. Such a system would take the body of the letter and add headers, salutations, etc. for each member of a group or org. Very useful for things like group notices and newsletters. 9b1

ADDRESS LABELS 9c

Any host or individual should be able to produce a mailing label file (suitable for printing or copying onto label stock) of all or selected subsets of entries in the Identification System. This can be done here with the NIC MEMLIST program, but MEMLIST is a separate user program and not part of the Identification System. 9c1

INSTANT ARPANET DIRECTORY OR HOST DIRECTORY 9d

Each host or group should be able to automatically get a mini-directory of its memebership whenever it wanted to do so. This could be retrieved either as an ASCII sequential file, as a simple NLS file, or as a custom formatted for special listings. We can now obtain such a listing in NLS using the NIC MEMLIST program. It should also be possible to produce an Arpanet directory (at least the section containing individual entries) at any time without the extensive editing that is now needed. If data such as that maintained in my file Hostaddress-Master were also an integral part of an ident system, the whole directory including tables could easily be produced when needed. 9d1

WHO'S WHO 9e

In addition to the required data such as name, address, phone, network mailbox, etc., it would be possible to let each individual who cared to do so fill out a template or set of data elements corresponding to a who's who or American Men of Science type entry. These could periodically be published as a formal document (say once a year). All entries should be made by the individual being described with the central editing group supplying the original template and guidelines for filling out. 9e1

Who's Who files might be separate from the ident system itself, but related by a link mechanism of some sort. 9e2

SKILLS INVENTORY 9f

Another off-shoot of an ident system might be a skills inventory or who has what experience (this could be a subset of the who's who information). Again, this should be a voluntary entry on the part of the individual involved, and should be maintained by him. 9f1

BIBLIOGRAPHY 9g

Each individual and organization might be asked to maintain a bibliography of their publications which could be linked to from the ident system. These citations could be collected and published into a collective bibliography periodically. An individual would be highly motivated to keep up a listing of his own work. Again the inputter would be supplied with prompts and guidelines, but maintenance would be his own responsibility. 9g1

CUSTOMIZED FRONT-END INTERFACE 9h

I would recommend providing the database with a default front-end; however, it should also be possible for any host who wished to use the data for his own use to write his own front-end to access the ident data. This access would not permit him to write on the running version, but would permit him to pull subsets of the data to his own host as copies, to send updates and changes to the central editor, to view the data in any way that he saw fit, or whatever. 9h1

Network Identification System - Comments and Suggestions

(J26293) 19-AUG-75 03:02;;;; Title: Author(s): Elizabeth J. Feinler/JAKE; Distribution: /HGL([ACTION]) JBP([ACTION]) SRI-ARC([INFO-ONLY]) GSG([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JAKE; Origin: < FEINLER, IDENT-SPECS,NLS;22, >, 19-AUG-75 02:57 JAKE ;;;;####;

26293 Distribution

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

Weekly Report

18-August-75 1

Last Week 1a

On vacation 1a1

Week Before Last 1b

nsw protocols 1b1

-worked not at all on updating the file package document as agreed to at the june protocol meeting 1b1a

-worked on the "pseudo user telnet" program for old tool interaction, Worked with larry on the program, so that larry can be responsible for it in the future, especially while i am on vacation, friday had a debugging session with larry, charles, and rick schantz, 1b1b

project management 1b2

-Steve Crocker Visit 1b2a

-Attended meetings monday and tuesday with Steve Crocker and Dave Wilczynski about our NSW protocol effort and our role in NSW generally. These meetings essentially gave us the word that Compass & Carlson had decided to throw out DPS and use ad hoc protocols to be specified by Compass. 1b2a1

-Meeting Notes 1b2b

+Discussed how to cope with our new emphasis and role in NSW. 1b2b1

+Protocols: Jim will write up DPS work. 1b2b2

+Front End: Will concentrate on FE-10 until communication protocols are better understood. 1b2b3

+NLS: Support for users at Gunter extreemly important. 1b2b4

+Documentation: Check to see if can help with special user aids for Gunter users. 1b2b5

arpa protocols 1b3

Next Week 1c

nsw protocols 1c1

-complete updating the file package specification documents 1c1a

project management 1c2

-revise and refine milestones 1c2a

-send updated milestones to Compass, re their questions (26194,) 1c2b

-collect the set of design documents, transmit the table of contents to COMPASS 1c2c

-prepare a note relating project account numbers to contract work statement tasks 1c2d

-prepare a "shopping list" of ideas for next proposal round, 1c2e

arpa protocols 1c3

-read INWG notes 1c3a

-read Network Measurement notes 1c3b

-go to DC to discuss DCAs AUTODIN II protocol proposal. 1c3c

Weekly Report

(J26294) 19-AUG-75 03:22;;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /ARC-DEV([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-DEV; Clerk: JBP;

26294 Distribution

Mary Ann Kellan, Andy Poggio, David L. Retz, Jan A. Cornish, Larry L. Garlick, Delorse M. Brooks, Beverly Boli, James E. (Jim) White, Ann Weinberg, Kenneth E. (Ken) Victor, Dirk H. Van Nouhuys, Jonathan B. Postel, Elizabeth K. Michael, David S. Maynard, Karolyn J. Martin, Harvey G. Lehtman, Kirk E. Kelley, Charles H. Irby, Joseph L. Ehardt, Robert Louis Belleville, Don I. Andrews, Richard W. Watson, Douglas C. Engelbart,

JAKE 19-AUG-75 10:04 26295

Arpanet Directories Are Ready

The Arpanet Directories are back and I have put one in each person's office. There are not nearly enough copies and we have devised a rather involved distribution algorithm which means that the NIC must account for all the copies. Consequently there will be no second copies for home use or what have you. Sorry we couldn't produce more. I wanted to produce extras and charge a nominal fee, but ARPA felt that this would not work under the present contract. Please send any comments, corrections, gripes or suggestions to me. Many thanks to Adrian, Marcia, Geoff, Harvey, Dave H., Karolyn, Pam, Priscilla, Jim N, and Doug for their help. 1

JAKE 19-AUG-75 10:04 26295

Arpanet Directories Are Ready

(J26295) 19-AUG-75 10:04;;;; Title: Author(s): Elizabeth J. Feinler/JAKE; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JAKE;

26295 Distribution

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

DVN 20-AUG-75 08:36 26297

<journal,33229,> Alive and Well at Office-1 but not at ISIC or BBN

I sent this journal item on Friday afternoon from Office-1. It has been delivered to various people at Officee-1 and read. I sent three other journal items at about the same time which have been delivered at BBN. But 33229 has not appeared there, neither to distributees nor in my author branch. Attemps to laod it there and at ISIC get the response that the file is not online. It was sent to the distribution DOCPLAN which has given some trouble in teh past, but so was one of the itesm that has been delivered properly. 1

DVN 20-AUG-75 08:36 26297

<journal,33229,> Alive and Well at Office-1 but not at ISIC or BBN

(J26297) 20-AUG-75 08:36;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /JCP([ACTION]) FEEDBACK([INFO-ONLY]) JDH([INFO-ONLY]) ; Sub-Collections: SRI-ARC FEEDBACK; Clerk: DVN;

26297 Distribution
Jeffrey C, Peters, Special Jhb Feedback, J, D, Hopper,

Gunter Report for the week ending 8/17/75

The Week Ending 8/17/75 1

Week Summary 1a

66-1 1a1

By Saturday, we printed out the formatted copies of the two volumes. There was an incredible amount of editing that was done and most of it with TNLS. When we finally got DNLS, the time spent editng was cut imensely. They are very pleased with the results. There are some minor changes to be made before going to print. We have to establish where the figures are going to be and do some simple format changes. Exact deadline dates need to be established for these two volumes as well as the others to come. At present there is no one at the Pentagon to work with Maj. Garrett.. 1a1a

Base Tops: 1a2

The input for this document was captured and simple editing was done. They will submit draft Monday morning. Next week, it will be reviewed by various people and the folowing week, the edits will be made. By September 5 (at the latest) they need to submit a copy that can be printed. It must be formatted to specifications and be ready to go.. Lynne Simms will probably so most of the editing and some of the formatting. 1a2a

PR. Test Document: 1a3

Between troubles with Ofice 1 and not having much time, I did not get as far as I had hoped. Jo continued to input some chapters. The tables are troublesome, but that shoudl be better after Jeanne gives her course next week. Jo is quite pleased at progress and the fact that she can get her printouts back almost immediately. 1a3a

ELF and Printer etc. 1a4

By Thursday late, the DNLS terminal was set up.. The location is not the greatest in that it is in the middle of the computer room. Larry has plans to move it or at least get some barriers that will make it quieter.. Things were pretty stable and the printer was working well. 1a4a

Daily Reports 1b

Monday 1b1

Gunter Report for the week ending 8/17/75

a.m. worked with cindy and jo in pr, continued on input of real property manual,, the going is very slow and tedious and the tables are hard, met with mr, spires et al,, the group that is doing the base tops rewrite,,they hope to have some input by tomorrow afternoon. 1b1a

p.m. worked in lg. they did not have much editing, but did have some ready by the end of the day,, they are to the point of wanting paragraph numbers as well as sid's on,, will run them two printouts,,one a quickprint and the other with the format program, still very short of capable help,,pete lambert is great,, iva hawes leaves much to be desired. 1b1b

Tuesday 1b2

am, worked with Jo and some PR, things,,office-1 down so didn't get much done. 1b2a

pm, sorked in LG where there was lots of editing to do, pretty much able to keep up with input. 1b2b

Wednesday. 1b3

am, more work on 66-1 document,,spent alot of time transfering files so that we could work where there were no problems,,input some of the Base Tops manual. 1b3a

pm, lots more input on 66-1,,editing, editing, editing, worked until 1am, and got all the printouts that they wanted. 1b3b

Thursday. 1b4

am, met with Capt, Wolff who described what he wanted for format of BaseTops manual, quickprint with st. numbers is fine for the first time through. 1b4a

pm, more work on 66-1, input until 11 pm. 1b4b

Friday 1b5

am, finally the display is working so spent most of day doing editing on 66-1 and Base Tops. 1b5a

pm, more work on 66-1 and Base Tops worked on them until 8 pm, now have proces branchs for formatting of 66-1 and for sending them to the printer. 1b5b

Gunter Report for the week ending 8/17/75

Saturday 1b6

am, final inputs on 66-1 and printed out 10 copies of each volumes, printed out 10 copies of each annex for Base Tops, still need to get infor on figures for 66-1. 1b6a

Gunter Report for the week ending 8/17/75

(J26298) 16-AUG-75 14:54;;;; Title: Author(s): Ann Weinberg/POOH;
Distribution: /SRI-ARC([INFO-ONLY]) LAC([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: POOH;

26298 Distribution

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

If Pooh goes to Cuba

Major Garrett is concerned that my plane might be hijacked on its return to California,,and wants to be sure that the 66-1 volumes progress on to final publication, 1

Volumes 1, 2, and 7 are ready to go (except for a few minor changes). Copies of each file are located in the directory AFM at office-1 and in my directory at ISIC,, These are the most updated versions and all the files are updated. No directives are in the files at the time, 2

The naming convention is what is specified in xhelp,afmformat which is roman numeral followed immediately by the arabic chapter number,,ie,II3 is volume two, chapter three, 3

There are a few things that need to be done, 4

Floating headers that appear immediately after the chapter title on the first page need to be spaced better, 4a

There are volume summarys at the ends of each volume that is the last chapter of each volume,,I2, II4, and VII9. The format for these must confrom to the summary as they now appear in the manual. Refer to one of these manulas for the format, Presently they are entered as several top level statements, 4b

For some reason VII5 is not formatting right. This was a new file because the old chapter five was deleted. Some of the directives (,Boldface=;) are being printed out, 4c

Change the effective date in the process branch so that the word "effective" gets written out and the month "October" gets written out, 4d

Volume I, both chapters, needs a search done for instances of the letter "l" being used instead of the number one (1), 4e

Table of contents, 4f

Major Garrett needs to check to make sure the paragraphs are numbered correctly, 4f1

The page numbers that now appear start at one for each new chapter,,these need to be adjusted when the final numbering is done, 4f2

Sections for figures and tables must be inserted. The format for these can be seen on past samples of the volumes, 4f3

A statement needs to be inserted before the beginning of the table of contents. Maj. Garrett has that, 4f4

If Pooh goes to Cuba

The header on the table of contents page is different than the other headers. Refer to past volumes for this 4f5

Being of sound mind and tired body, i hereby decree that if my plane crashes i leave all my wordly possessions and other things to my MOTHER. I leave my Alabama banner and southern hat to ARC. I leave my box of paper clips in my desk to Maj. Garrett. 5

If Major Garret disappears on his way back to the pentagon..light a match to all copies of the volumes of 66-1, contact Gerry Ford and forget that these past two weeks ever existed. Before doing the above, contact Major Mortinson and tell him. He may not be much help, but at least you have contacted someone. 6

If Pooh goes to Cuba

(J26299) 17-AUG-75 15:04;;;; Title: Author(s): Ann Weinberg/POOH;
Distribution: /EFF([ACTION]) EKM([ACTION]) JCN([ACTION])
LAC([ACTION]) SGR([ACTION]) RBTM([ACTION]) ;
Sub-Collections: SRI-ARC; Clerk: POOH; Origin: < WEINBERG,
HIJACKED,NLS;3, >, 17-AUG-75 15:00 POOH ;;;;####;

26299 Distribution
Elizabeth F. Finney, Elizabeth K. Michael, James C. Norton, Lawrence A. Crain, Susan Gail Roetter, Robert E. Mortenson,

EKM 18-AUG-75 08:23 26300

Pickle Crisis

Harvey and I made 42 gallons of dill pickles this weekend. That's about 170 lbs. We desparately need wide mouthed jars. Gallons and 1/2 gallons will be particularly appreciated. Donations will be appropriately rewarded. 1

EKM 18-AUG-75 08:23 26300

Pickle Crisis

(J26300) 18-AUG-75 08:23;;;; Title: Author(s): Elizabeth K. Michael/EKM; Distribution: /SRI-ARC([ACTION]) HGL([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: EKM;

26300 Distribution

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Mary Ann Kellan, Buddie J. Pine, Andy Poggio, David L. Retz, Laura J. Metzger, Karolyn J. Martin, Jan A. Cornish, Larry L. Garlick, Priscilla A. Wold, Pamela K. Allen, Delorse M. Brooks, Beverly Boli, Rita Hysmith, Log Augmentation, Joseph L. Ehardt, Raymond R. Panko, Susan Gail Roetter, Robert Louis Belleville, Rene C. Ochoa, Ann Weinberg, Joan Hamilton, Adrian C. McGinnis, Robert S. Ratner, David S. Maynard, Robert N. Lieberman, Sandy L. Johnson, James H. Bair, Jeanne M. Leavitt, Rodney A. Bondurant, Jeanne M. Beck, Marcia L. Keeney, Elizabeth K. Michael, Jonathan B. Postel, Elizabeth J. Feinler, Kirk E. Kelley, N. Dean Meyer, James E. (Jim) White

RWW 18-AUG-75 11:30 26301

Mes watson,message,txt; 1

(J26301) 18-AUG-75 11:30;;;; Title: Author(s): Richard W. Watson/RWW; Sub-Collections: SRI-ARC; Clerk: RWW;

Mes watson,message,txt;

(J26302) 18-AUG-75 11:38;;;; Title: Author(s): Richard W. Watson/RWW; Sub-Collections: SRI-ARC; Clerk: RWW;

recipe

For all of you gardeners who may have an overflow of Zucchini, here is a recipe for "Chocolate Zucchini Cake."

2 1/2 cps, regular all-purpose flour, unsifted
1/2 cp, cocoa
2 2/1 teas, baking powder
1 1/2 teas, soda
1 teas, salt
1 teas, cinnamon
3/4 cp, soft butter or margarine
2 cps, sugar
3 eggs
2 teas, vanilla
2 teas, grated orange peel
2 cps, coarsely shredded zucchini
1/2 cp, milk
1 cp, chopped pecans or walnuts

Combine the flour, cocoa, baking powder, soda, salt, and cinnamon; set aside. With a rotary mixer beat together the butter and sugar until they are smoothly blended.

Add the eggs one at a time, beating well after each addition. With a spoon, stir in the vanilla, orange peel, and zucchini. Alternately stir the dry ingredients and the milk into zucchini mixture, including the nuts with last addition.

Pour batter into a greased and floured dusted 10-inch tube pan or bundt pan. Bake in a 350 degree oven for about 1 hour or until a wooden pick inserted in center comes out clean. Cool in pan 15 minutes; turn out on wire rack to cool thoroughly. Drizzle glaze over cake, if desired.

Glaze directions. Mix together 2 cups powdered sugar, 3 tablespoons milk, and 1 teaspoon vanilla; beat until smooth. 1

recipe

(J26303) 19-AUG-75 11:42;;;; Title: Author(s): Delorse M. Brooks/DMB; Distribution: /SRI-ARC([ACTION]) DMB([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: DMB;

26303 Distribution

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HGL 19-AUG-75 17:43 26304

New NLS at ISIC

I brought up a new version of NLS at ISIC from <REL-NLS>GNLS. Among its features are the fact that it interfaces with the new output processor which accepts mixed text and graphics as well As the old output processor. Additionally, NDDT is not loaded with the rest of the system, but is instead rolled in as a user program when control-H is armed (thus it is a bit slower, but gives us much more space in NLS.)

1

New NLS at ISIC

(J26304) 19-AUG-75 17:43;;;; Title: Author(s): Harvey G. Lehtman/HGL; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: HGL;

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

RLB2 20-AUG-75 15:49 26305

An invitation to an Uplifting experience,

On Saturday August 23, I will be moving to my new house in mountain view which is only two blocks from my old house. Any assistance which you can provide in the move will be most welcome. 1

RLB2 20-AUG-75 15:49 26305

An invitation to an Uplifting experience.

(J26305) 20-AUG-75 15:49;;;; Title: Author(s): Robert Louis Belleville/RLB2; Distribution: /SRI-ARC([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: RLB2;

26305 Distribution

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

DVN 20-AUG-75 18:32 26306

Format Won't Load at BBNB

If you try to load Format from Programs it goes through most of the motions but ends with a message that it can't load the front end, The anme format appears twice in your list of loaded programs, but you can't go to it, Alternatively it sometimes gives you an error message about somehting like bad DDT search blk, It works fine at ISIC, 1

DVN 20-AUG-75 18:32 26306

Format Won't Load at BBNB

(J26306) 20-AUG-75 18:32;;;; Title: Author(s): Dirk H. Van Nouhuys/DVN; Distribution: /FEEDBACK([ACTION]) DMB([ACTION] dpcs notebok please) JDH([INFO-ONLY]) KJM([INFO-ONLY]) DSM([INFO-ONLY]) DPCS([INFO-ONLY]) ; Sub-Collections: SRI-ARC FEEDBACK DPCS; Clerk: DVN;

26306 Distribution

Special Jhb Feedback, Delorse M. Brooks, J. D. Hopper, Karolyn J. Martin, David S. Maynard, Delorse M. Brooks, Elizabeth F. Finney, Beverly Boli, Joseph L. Ehardt, James H. Bair, Robert N. Lieberman, Pat Whiting O'Keefe, James H. Bair, Robert Louis Belleville, Ann Weinberg, Thomas L. Humphrey, Jeanne M. Leavitt, Kirk E. Kelley, Duane L. Stone, Elizabeth J. Feinler, N. Dean Meyer, Dirk H. Van Nouhuys, Douglas C. Engelbart, James C. Norton, Richard W. Watson, Charles H. Irby,

ANDY 20-AUG-75 16:18 26307

cli syntaxrequest almost working or, some commands can take a long time

cli syntaxrequest is working except for terminating on recursive rules, there is some debate in my mind as to what xtest should do with an s-r, it currently always succeeds, continuing to work on recursive rules.

1

ANDY 20-AUG-75 16:18 26307

cli syntaxrequest almost working or, some commands can take a long time

(J26307) 20-AUG-75 16:18;;;; Title: Author(s): Andy Poggio/ANDY;
Distribution: /ANDY([ACTION]) CHI([INFO-ONLY]) ;
Sub-Collections: SRI-ARC; Clerk: ANDY;

26307 Distribution
Andy Poggio, Charles H. Irby,

SGR 21-AUG-75 12:07 26308

Recovering Partial Copies

Could you send a list of which files need partial copies recovered - I'm assuming they all don't need them... Another piece of useful information would be about when you think they disappeared. Thanks --Susan 1

SGR 21-AUG-75 12:07 26308

Recovering Partial Copies

(J26308) 21-AUG-75 12:07;;;; Title: Author(s): Susan Gail Roetter/SGR; Distribution: /JLC([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: SGR;

26308 Distribution
Johnny L. Crabtree,

SGR 21-AUG-75 15:52 26309

Bell's Audio Visual Presentation about NLS

For those of you who are interested, Anand Kumar of Bell-Canada has journalized an outline of the audio-visual presentation he is preparing for presentation to Bell higher-ups. It's (Ijournal,33289,). 1

SGR 21-AUG-75 15:52 26309

Bell's Audio Visual Presentation about NLS

(J26309) 21-AUG-75 15:52;;;; Title: Author(s): Susan Gail Roetter/SGR; Distribution: /ARC-APP([INFO-ONLY]) DCE([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-APP; Clerk: SGR;

26309 Distribution

Buddie J. Pine, Laura J. Metzger, Priscilla A. Wold, Pamela K. Allen, Joan Hamilton, Rene C. Ochoa, Jeffrey C. Peters, Marcia L. Keeney, Jeanne M. Beck, Geoffrey S. Goodfellow, Rodney A. Bondurant, Douglas C. Engelbart, Jeanne M. Leavitt, Susan Gail Roetter, Raymond R. Panko, Adrian C. McGinnis, James C. Norton, J. D. Hopper, Elizabeth J. Feinler, James H. Bair, Robert N. Lieberman, N. Dean Meyer, Sandy L. Johnson, Martin E. Hardy, Douglas C. Engelbart,

JEW 21-AUG-75 16:07 26310

DPS Distribution List

These individuals received DPS Version 2 documentation, and will receive Version 2.5 documentation.

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GAINS, Stockton (---)
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GOLDBERG, Joel (JG8)
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GOODWIN, Nancy C, (NCG)
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DPS Distribution List

(J26310) 21-AUG-75 16:07;;;; Title: Author(s): James E. (Jim) White/JEW; Distribution: /SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JEW; Origin: < JWHITE, PROTODIST,NLS;12, >, 21-AUG-75 16:05 JEW ;;;;####;

KEV 21-AUG-75 18:05 26312

new x110 compiler

DIA: i forgot if (and where) you wanted me to make the equivalent change to 111, let me know what to do and i will do it

KEV 21-AUG-75 18:05 26312

new x110 compiler

i have brought up a new <arcsubsys, x110,sav,> at ISIC, in this new compiler if you specify a radix to the "STRING" construct, then you may specify an optional third parameter which is a format control parameter, i will specify this third parameter in the next couple of days and will also bring up a new x110runtime package, when i bring up a new runtime package, you will have to recompile any files that use the "STRING" contruct or the third parameter will have some random value. 1

KEV 21-AUG-75 18:05 26312

new x110 compiler

(J26312) 21-AUG-75 18:05;;;; Title: Author(s): Kenneth E. (Ken) Victor/KEV; Distribution: /NPG([ACTION]) ; Sub-Collections: SRI-ARC NPG; Clerk: KEV;

26312 Distribution

Andy Poggio, David L. Retz, Jan A. Cornish, Larry L. Garlick, Robert Louis Belleville, Elizabeth J. Feinler, Joseph L. Ehardt, Jonathan B. Postel, Kirk E. Kelley, Karolyn J. Martin, David S. Maynard, Kenneth E. (Ken) Victor, James E. (Jim) White, Elizabeth K. Michael, Don I. Andrews, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman,

KEV 22-AUG-75 10:01 26313

format control for x110 STRING primitive

I propose the following record be used for format control for the XL10 "STRING" primitive, please make any comments, etc, by weds, 8/27 as i will implement this (or modified version) then, this record would be defined in x110runtime and thus available for use by all. 1

(i neglected to mention in my previous message that you can start your recompilations if you use the "STRING" primitive anytime you like because if no format control parameter is specified, a 0 will be passed which will act as the "STRING" primitive currently acts.) 2

```
(frmtctrl) RECORD                                                    3

   fmncols[7],  % # of columns (including punctuation) / 0: as many
   as needed %                                                       3a

   fmjstfy[1],  % TRUE: right justify; FALSE: left justify %         3b

   fmlfill[1],  % TRUE: leading 0s; FALSE: leading blanks %          3c

   fmtfill[1],  % TRUE: trailing 0s; FALSE: trailing blanks %        3d

   fmlgcl[1],   % TRUE: treat as 36 bit unsigned quantity %         3e

   fmsgne[1],   % TRUE: ignore LH of value and extend sign of RH %  3f

   fmpsgn[1],   % TRUE: print + if val > 0 / being treated as 36 bit
   quantity %                                                        3g

   fmdecm[1],   % TRUE: print terminating decimal point %           3h

   fmcmma[1],   % TRUE: print commas every 3 digits %              3i

   fmovrf[3],   % column overflow control                          3j

      0 = print nothing                                            3j1

      1 = print as many most significant digits as fit             3j2

      2 = print as many least significant digits as fit            3j3

      3 = print blanks                                             3j4

      4 = print astericks in entire field %                        3j5

   fmfloat[18]; % reserved for eventual floating point format control
   %                                                               3k
```

KEV 22-AUG-75 10:01 26313

format control for x110 STRING primitive

(J26313) 22-AUG-75 10:01;;;; Title: Author(s): Kenneth E. (Ken) Victor/KEV; Distribution: /NPS([ACTION]) DCE([ACTION]) RWW([ACTION]) NDM([ACTION]) JCN([ACTION]) ; Sub-Collections: SRI-ARC; Clerk: KEV;

26313 Distribution
Nps Np, Douglas C. Engelbart, Richard W. Watson, N. Dean Meyer, James C. Norton,

messages from watson

(work) temporary work space 1

15-AUG-75 19:29:30-EDT,879;000000000000
Date: 15 AUG 1975 1929-EDT
From: WATSON
Subject: conversation with carlson
To: engelbart at OFFICE-1, norton at OFFICE-1, postel
cc: watson 1a

Talked with Bill today and among subjects that came up were follow on funding, He hopes to have two pots one a combined pot for Nsw system building operation etc, and then side pots from services for applications, He thought total from both available to us would be under $500K, which is about 6-7 peoples worth, He said congress cut 1,5 out of 6 million fiscal 76 budget, He says our current level of funding way too high, He indivated that command and control program or vldb programs might be good other places for funds and that DCA may fund some protocol work, I really hope we can get the 8 peop;es wotrh of NSW funding I have been planning on, but its clear we will have to hastle this fall for funding, Dick ------- 1b

17-AUG-75 17:41:02-EDT,383;000000000000
Mail from BBN-TENEXB rcvd at 17-AUG-75 1741-EDT
Date: 17 AUG 1975 1737-EDT
Sender: WATSON at BBN-TENEXB
Subject: DCA review
From: WATSON at BBN-TENEXB
To: POSTEL
Cc: WATSON
Message-ID: <[BBN-TENEXB]17-AUG-75 17:37:22-EDT,WATSON> 1c

Jon, the DCA review could be important as start of funding source to continue our protocol work, So hope you take part, thanks dick 1d

----
19-AUG-75 20:08:41-EDT,914;000000000000
Mail from BBN-TENEXB rcvd at 19-AUG-75 2008-EDT
Date: 19 AUG 1975 2007-EDT
Sender: WATSON at BBN-TENEXB
Subject: crains message
From: WATSON at BBN-TENEXB
To: irby at ISIC, POSTEL
Cc: WATSON
Message-ID: <[BBN-TENEXB]19-AUG-75 20:07:32-EDT,WATSON> 1e

Crain seems to be on right track in his thinking on fe as I see last message, pllease be sure norton and engelbart see a copy, also if you do not hear from him on gros idea please call him,

messages from watson

Jon, also would you let Larry know we are preparing a shopping list for next followon proposal and find out if our idea of stopping by in Sept seems like ggod one to him to talk about things, Also please chat with Stone and Wingfield about same thing, We have to be alittle careful not to knock carlson in all this but I do feel gunter and radc people understand better, Also Norton should find out what Rassussan has been up to and saying, Thanks Dick ------- 1f

19-AUG-75 20:08:49-EDT,1126;000000000000
Mail from BBN-TENEXB rcvd at 19-AUG-75 2008-EDT
Date: 19 AUG 1975 1959-EDT
Sender: WATSON at BBN-TENEXB
Subject: gros
From: WATSON at BBN-TENEXB
To: crain at ISI
Cc: carlson at ISI, irby at ISIC, POSTEL
Message-ID: <[BBN-TENEXB]19-AUG-75 19:59:18-EDT,WATSON> 1g

Larry, thought your idea of using cml for trying a sros like thing an interesting idea, We have been toying with such thoughts on and off and feel it is one of advantages of our FE approach and a system like NLS with a rich set of primitives that could make such a thing possible with very little work, It was also one of motivations behind DPS to allow set of primitives from which tools are built to be available for new useful combinations and user interfaces, I think a gros like thing could be very quickly put together and would be interesting thing to do, Once language defined it would be a few hours work at most for someone knowing cml and NLS primitives, You should contact Charles Irby about what would be involved, Also appreciated your comments on my FE paper, Enough of this computer addiction must get back to my vacation, Dick ------- 1h

22-AUG-75 11:19:12-EDT,1084;000000000000
Mail from BBN-TENEXB rcvd at 22-AUG-75 1118-EDT
Date: 22 AUG 1975 1111-EDT
Sender: WATSON at BBN-TENEXB
Subject: millstein fe note
From: WATSON at BBN-TENEXB
To: IRBY
Cc: POSTEL
Message-ID: <[BBN-TENEXB]22-AUG-75 11:11:59-EDT,WATSON> 1i

Millstein's fe note doesn't seem to day anything, What are issues from his point that need discussing, Is running disk only considered absolute requirement, if so seems change from original expectations on our part, If so is this because of economics as understood before or after my memo, what does whole steering

messages from watson

committee think not just bill, What does he imagine protocol to fe from host look like? What exactly are peoples, steering committees, or their concerns about a disk, Aquiet side call to crain and wingfield to see where their heads are at would be useful before replying with above type of questions, Also side comment do we have to wait until foreman is ready to put NLS in NSW can't we just go straight to wm? Where's carains head on all that time wise, Would seem useful for Jon to have chat with Larry, Dick -------

1j

JBP 22-AUG-75 13:21 26314

messages from watson

(J26314) 22-AUG-75 13:21;;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /JBP([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JBP;

26314 Distribution
Jonathan B. Postel,

REM 22-AUG-75 18:06 26315

Steering Committee: COMPASS NSW Milestones,

REM 22-AUG-75 18:06 26315

Steering Committee: COMPASS NSW Milestones,

>>>>>>>>>>>> To NSW Steering Committee: 1

Gentlemen: 1a

This is a list of our proposed NSW milestones. These milestones represent both the major achievements that are expected to take place during the course of the project and the immediate shorter-term goals. As the project progresses we intend to add additional minor milestones that will allow for a more detailed tracking of the project. 1b

At this time, due to the many changes of scope that have occurred during the past two months, the assignment of milestone dates is not possible with the exception of item 2A1 (integration in a single TENEX), which we anticipate to be complete on September 30, 1975. 1c

Dates for the remaining items will be available for the next milestone report due on September 15, 1975. 1d

Very truly yours, 1e

Bob Millstein 1f

>>>>>>>>>>>> NSW MILESTONES 2

INITIAL OPERATING CAPABILITY 2a

Integration of initial components in a single TENEX (available for limited use and testing by Air Force, with the understanding that problems and lapses of service will be encountered), 2a1

Includes Front-End, Works Manager, Encapsulator for TENEX tools, Interactive Batch Specifier system, Works Manager Operator, ability to create, edit and format COBOL programs ready for submission to a B4700.. 2a1a

NLS editor and output processor installed as NSW tools, 2a2

B4700 RJE system, 2a3

Login to NSW instead of ELF or TENEX, 2a4

At least one contractor starts to use NSW for development, 2a5

360 RJE system, 2a6

First Multics tool, 2a7

Initial project management tools, 2a8

GCOS RJE system, 2a9

Plan for hardening and scaling of the NSW, 2a10

NSW system software ready for regular operational use, 2a11

PROTOCOLS 2b

Release of preliminary documentation on multi-host interprocess communication protocols (Version 3 of NSW protocols), 2b1

Release of documentation on NSW file movement (formats, conversions), 2b2

TENEX Foreman integrated with Works Manager and a general Foreman specification abstracted from it, 2b3

NSW protocols finalized and available for unlimited distribution, 2b4

B4700 2c

Messages passed from Gunter PDP-11 to B4700 via BBLC, 2c1

AFDSDC B4700 on the ARPANET and able to accept batch jobs under control of the Works Manager Operator, 2c2

PDP-11/B4700 Foreman, including control of interactive B4700 jobs, 2c3

PROJECT MANAGEMENT TOOLS 2d

Draft documentation, 2d1

Initial implementation, 2d2

Full implementation, 2d3

NLS (Operational capabilities, for the most part separate from the NSW in the near term and therefore managed by the Air Force, not COMPASS) 2e

Maintenance of files containing mixed text and graphics, 2e1

Photo-ready hardcopy and microfiche automatically generated in Air Force formats, 2e2

REM 22-AUG-75 18:06 26315

Steering Committee: COMPASS NSW Milestones.

Publication of files containing mixed text and graphics. 2e3

Steering Committee: COMPASS NSW Milestones,

(J26315) 22-AUG-75 18:06;;;; Title: Author(s): Robert E. Millstein/REM; Distribution: /AAB([ACTION]) WEC([ACTION]) LAC([ACTION]) DLS([ACTION]) MAW([ACTION]) REM([INFO-ONLY]) SW([INFO-ONLY]) KS([INFO-ONLY]) ; Sub-Collections: NIC; Clerk: KS; Origin: < WARSHALL, MILES,NLS;2, >, 22-AUG-75 18:01 KS ;;;;####;

26315 Distribution
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JBP 22-AUG-75 18:55 26316

NSW Project Milestones

sent to millstein

(22-Aug-75) NSW Milestones 1

Introduction 1a

This is a statement of milestones for SRI-ARCs NSW effort, these are our current best estimates, we expect that as we progress in the various tasks our estimates may change and this note will be updated. 1a1

Terms 1a2

Base 1a2a

The central core editing commands of NLS 1a2a1

NLS 8,0 1a2b

The existing NLS at Office-1 and BBNB. 1a2b1

NLS 8,5 1a2c

The NLS with the file structure and Graphics initial capabilities. 1a2c1

NLS 9,0 1a2d

The NLS with the front-end back-end split, using the CLI, and integrated into the NSW. 1a2d1

CLI 1a2e

Command Language Interpreter 1a2e1

DPS 2,5 1a2f

The Distributed Programming System as defined in July 1975. 1a2f1

FE-10 1a2g

The Front-End on the PDP-10 Tenex: this is principally the CLI, but is dependent on communication and Terminal Control modules as well as the operating system. 1a2g1

FE-11 1a2h

The Front-End on the PDP-11: this is principally the CLI, but is dependent on communication and Terminal Control modules as well as the operating system. 1a2h1

"char tty" 1a2i

This characterizes the character at a time interaction using hardcopy terminals, withn echoing and prompting provided by the CLI. 1a2i1

"half duplex tty" 1a2j

This characterizes the interaction where the terminal echos the characters actually typed, and the CLI has no information about how much has been typed (ie, line at a time or not) thus the CLI does no echoing or prompting. 1a2j1

"display" 1a2k

This characterizes a full duplex two dimentional alphanumeric display work station incorporating a line processor. 1a2k1

NLS 1b

WM-NLS file interaction design document	1-Aug-75	1b1
DONE 30-July-75 (See -- 26222,)		1b1a
NLS 8,5 ready for experimental use	15-Aug-75	1b2
DONE 5-Aug-75 (Up at ISIC)		1b2a
Identification system specification document	15-Aug-75	1b3
DELAYED -- now expected	10-Sep-75	1b3a
Base in NSW accessed in char tty mode	21-Aug-75	1b4
DELAYED due to debugging problems with MSG communication protocol		1b4a
Journal design document	1-Sep-75	1b5
Delayed -- now expected	1-Dec-75	1b5a
Programs subsystem	1-Oct-75	1b6
Cobol Output subsystem in both 8,0 and 8,5	1-Oct-75	1b7
DONE 22-Aug-75		1b7a
Base in NSW accessed in display mode	15-Nov-75	1b8

Editing Tools for Standard Air Force Manuals:		1b9
modify subsystems in 8,5	15-Sep-75	1b9a
format subsystems in 8,5	15-Sep-75	1b9b
Table of Contents feature in 8,5	15-Sep-75	1b9c
Hyphenation feature	1-Nov-75	1b10
Calculator subsystem	1-Dec-75	1b11
UserOptions subsystem	1-Dec-75	1b12
XXX subsystem	1-Dec-75	1b13
Syntax Generator	1-Dec-75	1b14
NLS 8,5 ready to be used by the utility	1-Jan-76	1b15
Output Processor modifications	1-Mar-76	1b16
modify, format,letter, publish subsystems in 9,0	1-Mar-76	1b17
Sendmail and Journal	1-Apr-76	1b18
Graphics in NLS 9,0	1-Apr-76	1b19
LSI 11 terminal controller	1-Apr-76	1b20
Front End		1c
FE-10 (char tty, new tool) runs	15-Aug-75	1c1
DONE 15-Aug-75		1c1a
FE-10 (char tty, old tool) runs	15-Oct-75	1c2
WAITING on Encalsulator		1c2a
FE-10 (half duplex tty, new & old tool) runs	15-Oct-75	1c3
FE-10 (display, new tool) runs	15-Oct-75	1c4
FE-11 Preliminary Design	5-Sep-75	1c5
FE-11 Final Design	19-Sep-75	1c6
FE-11 Coded	1-Nov-75	1c7

FE-11 Debugged	1-Jan-75	1c8
Debugger Program	1-Dec-75	1c9
Measurement and Efficiency study report	1-Apr-76	1c10
Command Meta Language Evaluation report	1-Apr-76	1c11
New Front End features study report	1-Apr-76	1c12
Protocols		1d
Distributed Programming System ver 2,5 documentation	15-Oct-75	1d1
Documentation of DPS as it existed when development was stopped, Now expected	1-Oct-75	1d1a
Documentation		1e
NLS Base subsystem documentation	1-Oct-75	1e1
Help Data Base builders information	1-Oct-75	1e2
NLS Programs subsystem documentation	1-Nov-75	1e3
NLS Hyphenation Feature	15-Nov-75	1e4
Help Data Base CORE data updated	1-Dec-75	1e5
Editing Tools for Standard Air Force Manuals:		1e6
modify subsystems	15-Dec-75	1e6a
format subsystems	15-Dec-75	1e6b
Table of Contents feature	15-Dec-75	1e6c
NLS Calculator subsystem documentation	15-Dec-75	1e7
Front End user documentation (on line)	1-Jan-76	1e8
Front End user documentation (off line)	1-Jan-76	1e9
Front End system documentation	15-Jan-76	1e10
Front End tool suppliers information document	1-Feb-76	1e11
NLS Graphics Documentation	1-Feb-76	1e12

NSW Project Milestones

Debugger Document	1-Feb-76	1e13
NLS Journal documentation	1-Apr-76	1e14

JBP 22-AUG-75 18:55 26316

NSW Project Milestones

(J26316) 22-AUG-75 18:55;;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /ARC-DEV([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-DEV; Clerk: JBP;

26316 Distribution

Mary Ann Kellan, Andy Poggio, David L. Retz, Jan A. Cornish, Larry L. Garlick, Delorse M. Brooks, Beverly Boli, James E. (Jim) White, Ann Weinberg, Kenneth E. (Ken) Victor, Dirk H. Van Nouhuys, Jonathan B. Postel, Elizabeth K. Michael, David S. Maynard, Karolyn J. Martin, Harvey G. Lehtman, Kirk E. Kelley, Charles H. Irby, Joseph L. Ehardt, Robert Louis Belleville, Don I. Andrews, Richard W. Watson, Douglas C. Engelbart,

JAC3 25-AUG-75 12:42 26317

Conversion of COBOLAID to NLS 8,5

I have not yet completed the conversion of COBOLAID to NLS 8,5; it is erroneously marked as completed in the NSW project milestones <ijournal,26316,1:w>; I will discuss the completetion date further with EKM if I haven't completed it in another week. In any event, I am sure that it will be complete by the milestone date of 1-oct-75. 1

JAC3 25-AUG-75 12:42 26317

Conversion of COBOLAID to NLS 8,5

(J26317) 25-AUG-75 12:42;;;; Title: Author(s): Jan A. Cornish/JAC3;
Distribution: /JBP([ACTION]) EKM([INFO-ONLY]) ; Sub-Collections:
SRI-ARC; Clerk: JAC3; Origin: < CORNISH, SCRATCH,NLS;2, >,
25-AUG-75 12:38 JAC3 ;;;;####;

26317 Distribution
Jonathan B. Postel, Elizabeth K. Michael,

USER SERVICES REPORT: COURSE AT ARC for users of SRI slot 1

1. SHORT SESSION. Date: July 29 by JMB (charged a total of 2 person-hours) 1a

2. Persons (users or not) contacted: 1b

Kathey Mabrey 1b1

This was mostly review for Kathey 1b1a

Beth Sherman (ident BS not associated with any directory) 1b2

Charline Mcdaniel 1b3

Lance Murphy 1b4

He attended as a visitor; he has had no NLS training but may in the future. He is to be working with Pam Kruzic. 1b4a

3. COURSE: 1c

This was planned to be a"Short Session" from the material in the Third Course, but my main goal is to deal with whatever material seems to be the most useful to the members of the SRI group who happen to attend each of these short sessions. Since not all those attending this time were at the third level of expertise in NLS, I tried to direct my information towards what would benefit most of those present, 1c1

MAIL HANDLING was one of the main topics: 1c2

We went over: Journal branch, Author branch, the Print Branch command, the Print Journal command; Journal citations, Jumping to Link on the citations; Deleting and moving journal items to other categories and files, 1c2a

Some of those present need to review how to send a Sendmail item, but this could not be covered in this course due to time and the needs of the others in the group. 1c2b

I also discussed comparisons of Sendmail and Sndmsg. 1c2c

The other topic covered was Editing Pointers--what command to use in what editing situation: 1c3

Insert STRING/STRUCTURE 1c3a

JMB 25-AUG-75 14:11 26318

USER SERVICES REPORT: COURSE at ARC for users of SRI slot: 29 JULY 75

(J26318) 25-AUG-75 14:11;;;; Title: Author(s): Jeanne M. Beck/JMB; Distribution: /JMB([INFO-ONLY]) RH([INFO-ONLY]) SGR([INFO-ONLY]) SLJ([INFO-ONLY]) PKA([INFO-ONLY]) PAW2([INFO-ONLY]) JCN([INFO-ONLY]) RLL([INFO-ONLY]) DCE([INFO-ONLY]) JHB([INFO-ONLY]) DVN([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JMB;

26318 Distribution
Jeanne M. Beck, Rita Hysmith, Susan Gail Roetter, Sandy L. Johnson, Pamela K. Allen, Priscilla A. Wold, James C. Norton, Robert N. Lieberman, Douglas C. Engelbart, James H. Bair, Dirk H. Van Nouhuys,

Output Processor systems on ISIC

The following notes should suffice to get things going in the Output Processor in my absence. They will also clarify which systems the directories in which they live, and the method of getting them to run. 1

The following output processor systems are in existence on ISIC: 2

<XPORGEN>XOUTPRC.SAV -- has all new directives and bug fixes including the new graphics diagram directives. It does not have the George Litho Singer character space tables; they should be added and a program switch introduced-- perhaprs a query after Output Devcie Com would default to one or the other supported device with the user able to specify one or the other. The code would be passed as a new parameter to the OP table set up in oprinit. 2a

<PORGEN>XOUTPRC.SAV -- has all new directives except the graphics/diagram directives. Does not have character tables. This system should be brought up as the running Output Processor as soon as possible both here and at Office-1 as soon as the character space tables are fixed. The running system at ISIC (from GNLS) as well as <NIC-NLS> can accomadate it It has some important new directives which should be documented. All bug fixes not dealing with graphics should go both in here and in <XPORGEN>. All graphics bug fixes should go in XPORGEN; also, any substantially new and dangerous changes/additions should go in <XPORGEN>. 2b

<SRINLS>XOUTPRC.SAV -- Has no new directives or fixes; but it's the only system with the Singer character tables! There is no reason for its existence after character space tables are placed in the other systems. Get rid of it! 2c

<SUBSYS>NOUTPRC.SAV -- the currently running system here and at OFFICE-1. Should be replace as soon as possible by <PORGEN>XOUTPRC.SAV after the COM character space tables are fixed. 2d

To run a version of the OP other than the running one, you should get into NDDT. Then "show string opname_" which prints out the current contents of opname (which should be <SUBSYS>NOUTPRC.SAV) and lets you change the contents of the string to the name of the desired processor, e.g., <XPORGEN>XOUTPRC.SAV. Note that in the running version at ISIC, if you do an Output COM without the graphics system loaded, all user programs will be deleted and the graphics system loaded to service diagrams. If the graphics system is loaded, no user programs will be deleted. (This should be made more graceful than it is!) <NIC-NLS> does not know about the new file system since

Output Processor systems on ISIC

OFFICE-1 will not get it for a while. Therefore, no attempt is made in that system to load the graphics program in Output COM. 3

Output Processor systems on ISIC

(J26319) 25-AUG-75 11:38;;;; Title: Author(s): Harvey G. Lehtman/HGL; Distribution: /RLB2([ACTION]) EKM([ACTION]) JDH([ACTION]) POOH([ACTION]) KJM([ACTION]) KIRK([ACTION]) SRI-ARC([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: HGL; Origin: < LEHTMAN, OP,NLS;2, >, 25-AUG-75 11:37 HGL ;;;;####;

26319 Distribution

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

PREFACE TO NLS TOOLS

Stanford Research Institute

25 AUG 75

Augmentation Research Center
333 Ravenswood Avenue
Menlo Park, California 94025

This version of the preface is being printed by COM. A copy of it is found in <arcdocumentation> and the directives in that version are good for the printer. Those directives will also work for com. Look in the origin statement for a small change in paging that must be made for com.

PREFACE TO NLS TOOLS 1

INTRODUCTION 2

As you work with the various tools of this computer system, you will need to learn some terminology and ways to do things that may be quite new and different. This Preface gives you simple definitions of some basic "jargon" terms (which are shown in quotes the first time they appear). It also explains how files are organized, how commands are organized and, how to get more help. In addition, there is a section on addressing (which is particularly helpful for the typewriter version), and a list of some special characters. 2a

HOW FILES ARE ORGANIZED 3

To work easily and productively, it is important to understand something about how information is organized. Let's start by defining what a character is and build from there. Please refer to Figure 1 while reading this section. 3a

"CHARACTERS" are single elements that can be visible or invisible such as letters, numbers, punctuation marks, spaces, and carriage returns. Holding down the "<CTRL>" key (like the shift key) while typing a letter can also produce a character. <CTRL> stands for control. For example, to type <CTRL-X>, you hold down the control key while you type "x." (On some terminals, this key is labeled differently.) 3a1

"WORDS" are a continuous group of letters and/or numbers bound by spaces and/or punctuation marks. The system recognizes that punctuation marks are not part of a word. 3a2

"TEXT" is a group of continuous characters that you define by indicating the first and last character. 3a3

A "STATEMENT" may be a single character, a word, a title, some text, or a paragraph. Statements are whole units which you can move or copy to some new place, or delete. 3a4

As you write, edit, organize, distribute, and print information, your work will be done on an element called a "file" which you usually create and name. The files you create are kept in your personal "directory." A directory is like a private library of files. Each user has a directory which contains all of her files. 3a5

As you work, you will encounter many references to "structure," or the relationships between statements in a file. They refer to an outline form such as the example shown in Figure 1. Writing things in this basic outline form will be helpful later on. Statements are automatically numbered (as shown) when they are entered in a file. They will be renumbered accordingly when new statements are added or editing is done. Each file begins with a special statement called the "origin" statement (the line numbered 0 in Figure 1). The system creates the origin statement which includes the name of the directory, the name of the file, and some other housekeeping information. The origin statement is called Statement 0 and is above the rest, that is at the highest point of the file outline. 3b

Moving from statement 1 to 1a is called going "down" a "level" so 1a is a "substatement" of 1. Moving from statement 1b3 to 1b is going "up" a "level" so 1b is higher in the outline that 1b3. As you add to a file, you will be able to indicate at what "level" you wish to write. 3c

In this outline, there are several examples of the structure called "BRANCH." A BRANCH is a statement and all its substatements, plus all their substatements and so on. In the example, the branch defined by 1 (Introduction) consists of 1, 1a, 1b, 1b1, 1b2, 1b3, and 1c. Branch 1c consists of statement 1c (Requirements). 3d

HOW COMMANDS ARE ORGANIZED 4

After logging in and deciding to work with a specific tool, you manipulate the computer system by issuing "commands." (See "Introduction to Using the NSW" for information on how to log in and access tools.) Commands are the way you specify what you want to be done, such as which word you want deleted. A symbol (called a "prompt") is printed that indicates what is expected from you. For example, "C:" is the general prompt for a command word such as "Delete." 4a

The general form of a command is called its "syntax." The syntax shows you the steps needed to complete that command. When you use the "Help" facility to learn more about a word used in a command, you will see the syntax for that command. (For more about Help, see below.) Figure 2 shows two annotated examples of syntax. These explanations describe commands where the user has chosen to see only the basic prompts (known as "partial prompting"). Some users chose to see all the prompts available (known as "full prompting"). You may have prompts that are slightly different from the explanations in Figure 2. 4b

HELP SERVICES 5

If you want more information or the answer to a question and there is no one around to ask (or you feel you have already asked too many questions), there are several help services that you should know about. The two described below are the "?" and the "Help" command. 5a

You may find that sometimes you are not sure what you can do next. If you type a "?" at any point, you will get a list of all your immediate alternatives. For example, if you type "i" for insert and then a "?", you will see a list of all the things you can insert. If you type the first character (or in some cases a space and the first character) of one of the alternatives you see, it will become part of your command. 5a1

The "Help" command provides the most complete information about all aspects of the tool you are using. It gives you definitions of all the "jargon" terms and explains each term in context such as showing you the syntax of a command word. Help points out the unexpected consequences of a command term, and Help also refers you to related terms. 5a2

To use Help, type a <CTRL-Q> at any point and you will get information about what you were doing before you typed <CTRL-Q>. For a complete description on how to use Help, see the "Sample Help Session". 5a3

SPECIAL CHARACTERS 6

"Control characters" are single characters with special functions. The notation for control characters is <CTRL-(some letter)>. To produce a control character, you hold down the control key (CTRL on most terminals) and type the letter that follows the dash. Below is a list of some of the more common control characters and their functions or often used synonyms: 6a

<CTRL-A>- Backspace Character <BC> 6a1

<CTRL-B>- OKREPEAT 6a2

<CTRL-D>- Command Accept <CA> 6a3

<CTRL-E>- OKINSERT 6a4

<CTRL-M>- Carriage Return <CR> 6a5

<CTRL-N>- <NULL> 6a6

<CTRL-O>- Stop Process 6a7

<CTRL-Q>- Help Signal 6a8

<CTRL-S>- Show this command's syntax notation 6a9

<CTRL-U>- OPTION character 6a10

<CTRL-V>- Literal escape 6a11

<CTRL-W>- Backspace Word <BW> 6a12

<CTRL-X>- Command Delete <CD> 6a13

TNLS ADDRESSING 7

While using a typewriter terminal, you need to keep track of where you are. With most commands, you work within a file. As the command is being carried out, you move from place to place following the directions you type after the prompt A: (which stands for "address"). No matter what the form of the address, you always go to a single character. 7a

All the examples below refer to the outline in Figure 1. 7b

The Most Common Forms of Address 7c

Statement Numbers: 7c1

All statements have numbers which place them in an outline as on Chart 1. When you type a statement number after A:, you move to the first character of that statement. Thus, if you give instructions to delete statement A:1c, the statement "Requirements" is erased. If you say delete word at A:1a, then "Preface" is erased. If you say delete character at A:1a, then "P" is removed. 7c1a

SID's and Statement Names 7c2

Two other kinds of addresses work exactly like statement numbers: SID's and Statement names. For more information on these forms of address, use Help or see the User's Glossary. 7c2a

Content Addresses 7d

You may be wondering how you can make anything happen at a character other than the first character of a statement. The easiest way is to type in the statement number, and then the text (in quotes) that contains the character you want. This takes you to the last character of the string you put in quotation marks. To delete the character "r" in statement 1, you could say Delete Character at A:1 "ntr". The last character in the string you wrote would then be erased. 7d1

Other Addresses Within Statements 7e

You may also search for a word, restrict the search to a given statement, or move by counting words or characters. A special symbol (+e) exists for the character at the end of a statement. Use Help (type infileaddress) to find more information. 7e1

Putting Addresses Together 7f

As you may have noticed, you can string out addresses after the A:, and each step will be followed. Thus, if you want to specify the second "Requirements" in the example, you could type A:3c "Requirements". This would move you first to the right statement (3c), and then to the right word ("Requirements"). 7f1

Links 7g

If someone sends you a sendmail item, the system often delivers a link to that item instead of the actual item, which may be very long. A link is like a bibliographic citation. It gives the name of the directory which is always the word "journal" with some letter preceding it, the name of the file which is the journal number, and statement one <xjournal, 12345,1:w>. You may read the document by addressing the statement where it was written in your initial file and asking the system to use the link by adding ",1". For example, if the journal delivers to branch 2 of your initial file and this is the top journal item, you could use the address A:"2a ,1". Then the system reads the citation and gets the real document for you. 7g1

Viewspecs in Links 7g2

Besides an address a link may include viewspecs. You may insert them at the end of the link following a colon as in the preceding example. The journal inserted a "w" viewspec to make sure you saw all of the item. For information about viewspecs, see Help (type "viewspecs"). 7g2a

You can always find out where you are with the command "/". Just type the key "/" when the system says BASE C:. 7h

(J26320) 25-AUG-75 14:35;;;; Title: Author(s): Ann Weinberg/POOH;
Distribution: /SRI-ARC([INFO-ONLY]) DIRT([INFO-ONLY]) ;
Sub-Collections: SRI-ARC DIRT; Clerk: POOH; Origin: < WEINBERG,
PREFACE,;6, >, 20-AUG-75 11:17 POOH ;;;;
####;

26320 Distribution

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

weekly report

25-August-75 1

Last Week 1a

nsw protocols 1a1

-worked not at all on updating the file package document as agreed to at the june protocol meeting 1a1a

project management 1a2

-Meeting Notes 1a2a

+Discussed a "shopping list" for preproposal discussions with various potential sponsors, especially NSW sponsors, 1a2a1

-Sent new milestones to Millstein 1a2b

-Intiated work on collecting currently relavent Design Documents, 1a2c

-Continued the work on a shopping list of proposal ideas, 1a2d

arpa protocols 1a3

Next Week 1b

nsw protocols 1b1

-complete updating the file package specification documents 1b1a

project management 1b2

-collect the set of design documents, transmit the table of contents to COMPASS 1b2a

-reallocate the funds among the project account numbers to refelect the new reality (or unreality, depending on your point of view), 1b2b

-prepare a note relating project account numbers to contract work statement tasks 1b2c

-prepare a "shopping list" of ideas for next proposal round, 1b2d

-review reporting reqirements of current contract 1b2e

-prepare to finalize current contract 1b2f

-revise and refine milestones 1b2g

arpa protocols 1b3

-read INWG notes 1b3a

-read Network Measurement notes 1b3b

-go to DC (26&27 Aug) to discuss DCAs AUTODIN II protocol proposal. 1b3c

-write a chapter on protocols for the "arpa book" 1b3d

JBP 25-AUG-75 15:24 26321

weekly report

(J26321) 25-AUG-75 15:24;;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /ARC-DEV([INFO-ONLY]) ; Sub-Collections: SRI-ARC ARC-DEV; Clerk: JBP;

26321 Distribution

Mary Ann Kellan, Andy Poggio, David L. Retz, Jan A. Cornish, Larry L. Garlick, Delorse M. Brooks, Beverly Boli, James E. (Jim) White, Ann Weinberg, Kenneth E. (Ken) Victor, Dirk H. Van Nouhuys, Jonathan B. Postel, Elizabeth K. Michael, David S. Maynard, Karolyn J. Martin, Harvey G. Lehtman, Kirk E. Kelley, Charles H. Irby, Joseph L. Ehardt, Robert Louis Belleville, Don I. Andrews, Richard W. Watson, Douglas C. Engelbart,

JBP 25-AUG-75 16:49 26322

Draft Shopping List

This is a very rough collection of ideas for a shopping list for our pre-proposal discussions. This needs much work still especially in the area of estimated costs (person months). Please review and pass suggestions to me
before our next meeting.

Draft Shopping List

Introduction 1

The following is a list of areas we are interested in doing work. Under each topic is a brief discussion of what we intend to do (if funded) and how much effort we estimate the task to be. 1a

Task Areas 2

Documentation Production Environment 2a

Offline Capture and Edit Ideas 2a1

There just is not going to be enough online computing available to do the initial document input and rough editing online. Current DEX over the ARPANET is to dependent on Network timing and other problems and offers no simple editing capabilities. (Document Harvey and Bob are Preparing) 2a1a

Cluster Terminal and DEX 2a1a1

Fancy DEX 2a1a2

Prototype production only, that is one station produced by arc -- deliverable is the documentation on how to build a copy of a station from "off the shelf" parts. 2a1a2a

Other DEX areas 2a1a3

Better Interface to Other Word Processing Devices 2a1a4

The plans DSM had for a general sequential file interface to NLS seem to be what is required here. There may also be aneed for some special device support although I would hope that protocols handle most of that or at least the device drivers in the FE. There is a problem potentially with having FE support half duplex devices like the IBM Mag Card communicating units. Need to look in to this. 2a1a4a

Document Index and Table of Content Generators 2a2

Up until now we have either had weak programs in this area or have used special purpose ones. There seems a large need to develop some genral purpose techniques and subsystems to work on these key problems. 2a2a

Graphics 2a3

(Bob wrote some stuff for this section that should be updated and originally appeared in first FOllow on NSW Proposal privately Journalized in late March or first week of April) 2a3a

Raster Printer for Proof Copy 2a3b

Illustrators graphics 2a3c

Need to be able to plot stuff generated on other tools and get into NLS. Connection with BASIC or some such thing. 2a3d

Preparation of PDP 11 Line Processor for Production 2a3e

Output Processor 2a4

Many ideas in this area. Footnotes, underlining, edit formatted stuff, property list implementation so can show views without directives, coordinate with DVN. Online page layout or interrogate directive input. 2a4a

Misc Areas 2a5

Comments part of control process I would guess, better Table facilities, with ability of calculator to manipulate. 2a5a

Heading entity 2a5b

Better interface to sequential file world generally 2a5c

Output Processor Rewrite 2a6

Page Oriented 2a6a

Detached Running 2a6b

Other methods of inserting directives. 2a6c

Editing formated page (via textronix display ?) 2a6d

Graphics Development 2a7

Illustrative Graphics 2a7a

(What is this ???) 2a7a1

Inserting graphics produced by other tools 2a7b

Document Control 2b

Control During Document Production 2b1

When large documents are being prepared, checked and reworked by several people possibly in different groups fairly sophisticated control mechanisms are needed,. NLS has some capabilities in this area but more are needed, (Need to list what our experience todate has shown is needed,) 2b1a

Areas where aids are needed for example is a document control subsystem that keeps track of who has what pages of what documents and their state, Need online distribution and version control, Need better tools to compare documents to see what has changed and display it (multi colors eventually), Need distribution system to handle forwarding sign offs etc, Need to look at Tom Humphrey study of SRI report production to get more ideas, probably should be coordinating this section closely with Dirk, 2b1a1

This area is not well understood yet so we dont really want to get into it, 2b2

NLS on other machines 2c

NLS on a 370 or Multics or Standard DEC or Tymshare Operating System 2c1

I think biggest win is if NLS could be run on IBM equipment, Here need to talk about approach, OSI, move of 110 etc rather than reqwrite in another language, During process certain areas like I/ZO need cleaning up, This whole thing really depends on getting good OSI and NLS organized to use it, IBM 370 is the highest impact choice, 2c1a

L10 Compiler 2c1a1

Operating System Interface 2c1a2

bootstrap the whole environment such that no longer dependent on original machine 2c1a3

Document "how to do it", 2c1a4

ISSUE: protocol interface between the modules, 2c1a4a

NLS on a Mini such as 11/70 2c2

There is a question here about number of users that could be supported doing what, 2c2a

PDP 11/70 (This is a mini computer ???) 2c2a1

CLI in a Terminal 2c3

B.B. Bag 2d

Open support to do things as they become clear thy need to be done 2d1

Resources for little things such as: 2d1a

a few output processor directives 2d1a1

a user program or two 2d1a2

Distributed Journal System 2e

Mail and Journal things 2f

Improve the transisition between the SNDMSG world and the SENDMAIL world. 2g

The Army Material Command (AMC) should be interested in this. 2g1

Sequential File <==> NLS File interface 2h

Not much enthuasiam but a important area 2h1

Interface to the Half Duplex World 2i

There are as many points of view on how to do it as there are people willing to consider it. Thus ithis in not an are where we feel ready to do the right thing. 2i1

Documentation aids 2j

(list comming from beverly) 2j1

Support for help data base creation 2j1a

production of offline documentation from help data base 2j1b

making online documentation more useful 2j1c

DOCUMENTATION IDEAS FOR NEXT NSW PROPOSAL 2j2

1. Online Documentation Data Base Maintenance

The Help multi-file data base is an encyclopedic description of NLS tools and NSW procedures designed for quick online how-to reference by the user. To be effective it must be comprehensive and current. Methods to keep the Help data bases up-to-date and keep their extensive cross-referencing accurate are needed. 2j2a

Index generation and maintenance:
Current experience shows that the automatic creation and maintenance of an alpabetic index in a multifile data base is essential if the online Help is to grow and evolve as planned for NSW tools. This index would be generated from all named statements and perhaps all meaningful words. This needs the automatic link maintenance facility described below. This feature is also necessary for #3, below, "Hardcopy Production from Online Documentation." 2j2a1

Back links:
It is essential that automatic link maintenance via back links be implemented in order to reduce the tremendous overhead and inherent mistakes in the current procedure for discovering bad links and updating them manually. This should be implemented as a property of a node. See below. Back links have the added benefit of automatic "forward references", a list of back links to what has been written about a document since it was published. 2j2a2

Comment feature:
The comment feature would allow any arbitrary amount of designated text to dissappear when viewspec capital T is in effect. The text reappears when viewspec capital S is turned on. This feature is important for four separate functions. 2j2a3

-Making user-invisible comments to other Help writers.
This would do away with the current percent sign convention which requires a special sequence generator or content analyzer pattern since it is not a part of the standard Nls capabilities. 2j2a3a

-Making output processor directives invisible in Help.
This would do away with the necessity of having two separate directories of files, one with Output Processor (OP) directives and one without. And it would do away with having to delete directives and

update to the second directory whenever a modification is made, 2j2a3b

-Placing links invisibly next to referenced text.
This is needed to place link syntax in a node to define how that node will be viewed. (See #2, below.) It would also automatically take the user to enriching references. 2j2a3c

-The comment feature would be one way of implementing the backlink property, where the links to a node are invisibly backlinked from that node. 2j2a3d

Simple Boolean expression searches:
Once automatic index maintenance is implemented it will provide the added advantage of being the basis for providing more sophisticated and efficient searching capabilities. This will speed searching. It will also allow standard Boolean arguments such as "x AND y OR z AND NOT a" and eventually, natural language typed in (and spoken?) English queries. 2j2a4

2. Augmenting the Help Command

Several features have emerged as essential in the evolution of the Help command. More effective user control of the information available and a closer integration with other capabilities are two areas that need attention now. 2j2b

Do feature:
The "do" feature is the capability of having Help execute a command for you or a task consisting of a scenario of commands. Should user specification be necessary in the process, the do feature will tell in English sentences what is expected at every step of the way. This is an active tutorial/example/service which whould make Help much more valuable as a teaching aid and provide a new service as a task doer. It would be implemented by writing commands branches which appear as menu items under Help descriptions. A special symbol placed after the right anglebracket of a link will process the commands branch. Uparrow or ^, indicates that Help is to process the commands in the branch addressed by the link. Backarrow or _, indicates that Help is to process the command(s) between the link delimiters. 2j2b1

Point with mouse to words and lines:
Help would be far more flexible if the Display user could point with the mouse. With this feature the user would be able to simply point to words and lines of text, and Help would display the descriptions of the words

pointed to, or the descriptions pointed to by links contained in the lines. 2j2b2

Outline and verbose description views:
This feature would allow users to specify whether they would like to see a brief, outline view of the description and its menu, or see the full description. 2j2b3

Descriptions for two levels of users:
A difficulty with the present Help data bases is that the descriptions must be tailored to a single, mythical, "average user". The result is some descriptions that are too advanced for the very new user and others that are too simple for the more knowledgeable user. This task would be to rewrite portions of the data base to provide two descriptions for major concepts and commands--one for novices and the other for experts. Some minor additions to Useroptions software could be made so that the user could specify whether she wanted to see the simple or more advanced descriptions. The default would be for the novice user. 2j2b4

References to additional online information:
A complete Help system points users to information of various sorts besides how to use tools. For example, hardcopy documentation, source files, mail indices, directories of people, and program lists could all be made available via Help. 2j2b5

3. Production of Hardcopy from Online Documentation

Although online documentation is flexible and immeditely accessible for user reference, hardcopy is preferred by some users, and is helpful for some applications. This endeavor would entail a variety of software and writing tasks to make online documentation such as the Help data bases automatically translatable into readable hardcopy. 2j2c

Features already cited in this document:
Many of the features cited above would aid in making online documentation into hardcopy, including the "Comment feature", "Backlinks" and the "Index generation" features listed under #1; and "Outline and verbose descriptions views" listed under #2. 2j2c1

Text that would make hardcopy more readable:
With the comment feature, documentors would be able to include textual passages, such as transitions, headings, and references, in the online document that would only be

turned on for hard copy. This would help transform the essentially "reference" online documentation into a form which could be read from front to back. 2j2c2

4. New Documentation

Documentation of proposed software or software changes. 2j2d

5. Documentation Maintenance

Existing documentation must be updated to accurately describe changes in an experimental system. Some of the major documents that require much effort to maintain are: 2j2e

Help data bases:
- Base
- Core
- Sendmail
- Calculator
- Useroptions
- Message
- Programs
- Graphics
- Publications
- Letter
- Helpd

2j2e1

User manuals:
- Secretarial Functions Guide
- DEX User's Manual

2j2e2

Systems documentation:
- Tool Suppliers documentation
- FE System Interface documentation

2j2e3

Help 2k

Kirk has file of possible needs here, this probably hard area to sell. 2k1

Production of language documentation from CML 2l

produse for users documentation of commands and argument types directly from the CML. 2l1

Software Workshop 2m

A high powered environment for the production of software for use by small teams (4-8 people) for special projects. Involves

closely cuppled compliers , debuggers, editord, andt source code file management tools, (this topic was of interest to RADC people Wingfield and McNamara), 2m1

Operations Center for Network Environment 2n

The problem of coordinating the processes in a set of computers when one operates a multicomputer system, For example if one runs an office-1, office-2, and office-3 with each having several front ends: then dow does one cope with keeping all the software the same and current and discover and fix bugs ? 2n1

Control center for FE's and NSW more generally 2o

Data Base Management System interface to NLS 2p

The Distributed Programming System 2q

Is there interest in direct support of this protocol effort ??? 2q1

Protocol things 2r

Are we likely to have to implement anything, participate in design etc? 2r1

Comments appended to NLS files/statements using the new file system properties 2s

A Audit trail of recent changes to files by keeping copies of previous versions of statements under a different property, 2t

Build a Data Base Management System in NLS usin NLS file system 2u

COBOL Programmer Support Tasks 2v

In the shopping list we prepared last Oct or there abouts we had a number of things in this area, One thing definitely need is to be able to take output from compiler back into NLS, 2v1

Cleanup and efficiency work on NLS 2w

Need to measure see where time is going, clean up some sloppy places, document the system etc, 2w1

Debugger evolution 2x

Debugger on other small mini 2x1

Frontend Tasks 2y

FE evolution, configuration planning 2y1

CLI in mini mini, Bob B, thinks 11/04 probably not correct architecture, 2y1a

This area a little hard to spec exactly as we are not sure exactly where it is going but there were a number of ideas in April NSW proposal, 2y2

Extensions to CML an Automatic user and system documentation from CML,d increasing its ease of use etc, handling variety of display models etc, 2y3

Draft Shopping List

(J26322) 25-AUG-75 16:49;;;; Title: Author(s): Jonathan B. Postel/JBP; Distribution: /RWW([INFO-ONLY]) EKM([INFO-ONLY]) CHI([INFO-ONLY]) BEV([INFO-ONLY]) JEW([INFO-ONLY]) ; Sub-Collections: SRI-ARC; Clerk: JBP; Origin: < POSTEL, NSW-SHOPPINGLIST.NLS;4, >, 25-AUG-75 16:42 JBP ;;;;####;

26322 Distribution
Richard W. Watson, Elizabeth K. Michael, Charles H. Irby, Beverly Boli, James E. (Jim) White,

SW 25-AUG-75 17:02 26323

Frontend Spec

Received from Warshall at BBNB 25-AUG-75 15:30.

Frontend Spec

1. Introduction

This is a rough draft of the Foreman specification. It was produced in response to the known requirements of NLS. It is often lacking detail, but it should be sufficient to guide the NLS installers. An updated version will appear as soon as Rick Schantz and I have an opportunity to discuss the implementation of a TENEX Foreman.

2. Arguments

ident - ? There clearly must exist a mechanism for differentiating between instances of the same tool. Ident may be an explicit code for such differentiation, or it may be implicit (if a Foreman can be so constructed). Since it is desirable to have a uniform tool builder interface, this issue will have to wait until we have had an opportunity to speak to several TBH people. In the function descriptions below, ident is given as an explicit argument.

qhelp - see WM-PROCEDURES.TXT

entry-name - see WM-PROCEDURES.TXT

output-attcode - see WM-PROCEDURES.TXT

input-attcode - see WM-PROCEDURES.TXT

qset - see WM-PROCEDURES.TXT

filespec - see WM-PROCEDURES.IXT

version-number - INTEGER Version-number is used as in TENEX to differentiate between different versions of a file with the same filespec. That is, the LND is maintained with a list of

local
file names for each filespec,
Version
number indexes that list, 11

qdisp - BOOLEAN Qdisp is T if DELIVER is supposed to make a copy of a file being put in the
NSW file system, thereby leaving file being DELIVERed in the tool's workspace. If Idisp is F, then the WM
may put the file in the NSW file system
by renaming, thereby removing the file from the tool's workspace, 12

qreplace - BOOLEAN If Qreplace is T, then the WM will attempt to replace a previous copy of the file being DELIVERed, Otherwise, the WM will inform the tool/user that a previous copy exists and request further instructions, 13

success/failure-code - INTEGER A success/failure-code is always returned. Details will be forthcoming,
It is not given as an explicit result in the definitions below, 14

semaphore-value Semaphore-value is the value associated
with the semaphore attribute. See CATALOGUE-ENTRY,TXT, 15

qimmediate - BOOLEAN If qimmediate is T, then CREATE guarantees the immediate existence of the new file (e.g., in TENEX; the sequence
open, close, open occurs), 16

3. Foreman Functions 17

These are described in functional notation since the exact details of call and return will surely be vastly different from TBH to TBH. 18

3.1 Files, no movement 19

1) DELETE(ident, filespec, qhelp)
-> NSW-filename

DELETE verifies that filespec designates a unique file to which the user has DELETE access. This access is blocked by a set semaphore. If any assistance is required it is obtained via a HELP return (if qhelp is T) or by a direct FE HELP call (otherwise). Once a unique file has been found, it is put on the delete list. It will no longer be accessible to OPEN, COPY, RENAME, EXPORT, etc., but the actual file catalogue entry and file copies are not immediately deleted. The NSW-file-name of the deleted file is returned. This return could be a HELP return, requiring confirmation before the actual delete occurs. Alternately, since the file does not immediately disappear, UNDELETE could be supported. I invite comments.

2) RENAME(ident, filespec, entry-name, qhelp)
-> old-NSW-flename
new-NSW-filename

RENAME verifies that filespec designates a unique file to which the user has DELETE access. This access is blocked by a set semaphore. If any assistance is required it is attained via HELP return or direct FE call as above. RENAME forms a new NSW-filename using entry-name and the tool-supplied attributes of the old file. It verifies ENTER access and unambiguity. As usual assistance is sought should there by any difficulty. The NSW catalogue is then altered to reflect the NSW name-part and both old and new NSW-filenames are returned.

3) SETSEMAPHORE(ident, filespec, qhelp)
-> NSW-filename

The WM verifies that the tool can use SETSEMAPHORE, that filespec designates a unique file to which the user has DELETE access, and that the semaphore is not already set. Assistance is obtained via HELP return or direct FE call as above. If all is well, the semaphore is set and the NSW-filename is returned.

4) UNSETSEMAPHORE(ident, filespec, qhelp)
-> NSW-filename

The WM verifies that filespec designates a unique file to which the user has DELETE access. Assistance is obtained as usual. If all is well, the semaphore is unset and the NSW-filename returned.

5) READSEMAPHORE(ident, filespec, qhelp)
-> semaphore-value

The WM verifies that filespec designates a unique file. Assistance is obtained as usual. The value of the semaphore attribute in the catalogue entry is returned.

3.2 Files, movement

1) COPY(ident, filespec, entry-name, qhelp)
-> src-NSW-filename
dst-NSW-filename

COPY verifies appropriate accesses, etc., and creates a new NSW catalogue entry and a new copy of the source file.

2) OPEN(input-attcode, filespec, qset, qhelp)

OPEN is used by tools to obtain copies of NSW files. The WM verifies that there is a unique file designated by filespec to which the user has COPY access and which has the attributes implied by input-attcode. Assistance is obtained as usual. Should the user also have DELETE access to the file, then the semaphore is set if either the I/A tool descriptor indicates that it should be or if qset is T. In this event (the user having DELETE access) access is blocked unless the user indicates that he is willing to use an older version of the file if the semaphore is already set and the user cannot get it unset. In any event, if the semaphore is set, the user is informed. The WM makes a copy of the file into the workspace used by the tool, performing whatever conversions are necessary and possible. The LND is updated to reflect the opening of the new file. If the user spcified a new filespec in the course of identifying a unique file, then the LND entry is referenced by the new filespec - not the one supplied as an argument of OPEN.

3) DELIVER(ident, output-attcode, entry-name, qdisp, qreplace, qhelp)
-> NSW-filename

DELIVER is used by tools to insert files into the NSW file system. ENTER access and unambiguity are verified with assistance sought as usual. An entry is made in the NSW file catalogue and NSW copy is made of the file referenced by local filename. The original file is removed from/left in the tool's workspace according to qdisp. The LND is updated appropriately.

[EXPORT, IMPORT, TRANSPORT were not spcifically requested

for NLS, but they will presumably be callable through the Foreman as will any other future tool-callable WM procedure.] 37

3.3 LND manipulation 38

1) CREATE(ident, filespec, version-number, qimmediate) 39

A new LND entry is made if version-number is 1; otherwise an existing LND entry is modified. A new local file is opened and referenced by the LND entry. 40

2) CLOSE(ident, filespec, version-number) 41

The file identified by filespec, version-number is closed and the LND updated appropriately. 42

3) LNDRENAME(ident, old-filespec, old-version-number, new-filespec, new-version-number) 43

4) LNDDELETE(ident, filespec,version-number) 44

5) LNDCOPY(ident, old-filespec, old-version-number, new-entry-name, new-version-number) 45

These three functions perform the obvious LND manipulations. The exact disposition of deleted version numbers is not yet decided. Comments are invited. 46

Frontend Spec

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26323 Distribution
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