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NOTE

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Introduction

Current Network Protocols, NIC 7104, is a functional document established to bring together all currently active documents on ARPA Network Protocols.

NWG/RFC# 190 LPD 28-DEC-72 16:39 7135
DEC PDP-10 -- Imlac Communication System

This report describes an operational system for communicating textual display information between a main-site computer and a remote display processor. 1

The main-site machine is a DEC PDP-10 with the BBN paging hardware (henceforth TENEX). 1a

The remote machine is a IMLAC PDS-1 (henceforth IMLAC). 1b

Section (I) briefly describes the IMLAC hardware configurations. 1c

Section (II) describes the display facilities presented to the user. 1d

Section (III) describes the system calls (JSYS) calls) implemented in the TENEX monitor to provide these facilities. 1e

Section (IV) describes the formats of the messages used for communication between TENEX and the IMLAC. 1f

Section (V) analyzes the division of responsibility between the two machines. 1g

(I) Hardware configurations. 2

The standard IMLAC is a 16-bit minicomputer with 4K of 2 microsecond core, a cycle-stealing display, an input keyboard, and an asynchronous serial communication interface. 2a

The display is normally programmed to draw characters using very short vectors. 2b

The display comes in two major configurations, depending on the presence or absence of hardware for drawing long vectors. 2b1

In the sequel, specifications depending on the configuration will be flagged LVH or non-LVH respectively. 2b2

The I/O system normally does not provide for interrupts when characters arrive from the serial interface. 2c

However, the IMLAC is barely able to keep up with the PDP-10 without this feature, so we were able to persuade the manufacturer to implement it. 2c1

While no special hardware is required for the software

described here, the character interrupt and the SRI-ARC "mouse" and "keyset" are highly recommended, and the software is oriented towards their use. 2d

(II) Facilities. 3

Each display console in the system may be in "display mode" or "teletype simulation mode". 3a

In display mode, the information desplayed consists of text strings at arbitrary positions on the display face. 3a1

In teletype simulation mode, the display shows the last 20-30 lines which would appear on a teletype listing. 3a2

**A given console may switch between these modes, under program control, without losing any information. 3a3

Regardless of mode, each display has a cursor string which follows the position of the available pointing device. 3b

The implemented system uses a "mouse" generally, but one console uses a tablet. 3b1

The cursor string may be set by a program, for examle to indicate at what sort of object the user is expected to point. 3b2

In display mode, the screen of a given console is allocated to users in rectangular blocks called "display areas". 3c

This allows users to communicate via a single display split into multiple aras. 3c1

When a user (program) requests a display area, he specifies how many text strings he will want to display in it. 3d

Each string has its own X-Y location, character size, font (italic, underline, ...), and an arbitrary number of characters. 3d1

Each of these components is settable without disturbing the others. 3d1a

Each string may be manipulated without affecting the others. 3d2

(III) JSYS calls. 4

(ADA) Assign a display area. 4a

JSYS ada; [440B] allocate a display area 4a1

Accepts: 4a1a

r1: 4a1a1

upper-left-y-cord[10], upper-left-x-cord[10],
max-no-strings[11] 4a1a1a

r2: 4a1a2

lower-right-y-cord[10], lower-right-x-cord[10],
default-c-size[2], default-h-inc[6],
default-font[5] 4a1a2a

Returns: 4a1b

+1 Unsuccessful 4a1b1

r1: error code 4a1b1a

+2 Successful 4a1b2

r1: da-id[18] 4a1b2a

Function: 4a1c

This jsys allocates a display area given the cooordinates of the diagonal, the maximum number of strings to be displayed, and the default ssettings for the character size, font, and horizontal increment. An 18-bit da-id is returned which should subsequently be used to refer to this display area. 4a1c1

(DDA) Deallocate a display area. 4b

JSYS dda; [441B] deallocate a display area 4b1

ACCEPTS IN 4b2

1: da-id 4b2a

RETURNS 4b3

+1: if unsuccessful, error number in 1 4b3a

+2: if successful 4b3b

This jsys deallocates a display area given the associated da-id. 4b4

(STRDA) String display: add, delete, or change. 4c

JSYS strda; [442B] Manipulate (move, Write, replace, delete) a string in a display area 4c1

ACCEPTS IN 4c2

1: string-id[18], da-id[18] 4c2a

2: first byte pointer or 0 or -1 4c2b

2: second byte pointer or 0 4c2c

4: y-cord[10], x-cord[10], font[6], c-size[3], h-inc[7] 4c2d

RETURNS 4c3

+1: if unsuccessful, error number in 1 4c3a

+2: if successful, string-id[18] in 1 4c3b

This jsys writes a new string, replaces, deletes, or moves (optionally replacing) an extant string within a display area. In addition, the font, character size, and horizontal increment may be specified for the string. 4c4

The string may be specified by two byte pointers or by one byte pointer with the string terminating with a zero character. 4c4a

If first byte pointer is zero then 4c4a1

if a new string is being written then 4c4a1a

an error code illstr is returned. 4c4a1a1

Otherwise, the string already exists so 4c4a1b

delete the string from the display area. 4c4a1b1

If the first byte pointer is -1 then 4c4a2

if a new string is being written then 4c4a2a

an error code illstr is returned. 4c4a2a1

Otherwise, use the old string. 4c4a2b

If the first character of the string is a zero character, the string to be displayed is null, but the string is not deleted. 4c4a3

The cordinates (optional unless the string is new or being moved) are relative to the upper left corner of the display area. 4c4b

IF the jsys is to effect an extant string, a zero coordinate means use the old value. 4c4b1

For the font, c-size, and h-inc fields a field of all one's indicates that the display area default value (set in the ada jsys) is to be used. A 0 means use the value which was previously used for the (extant) string. 4c4c

If the string is new, then an 18 bit string identifier is returned. 4c5

(SCSR) Set the Cursor StRing. 4d

JSYS SCSR 450 display a string (vectors later) as the cursor 4d1

ACCEPTS IN 4d2

1: first byte pointer or 0 or -1 4d2a

2: second byte pointer or 0 4d2b

3: font[5], c-size[2], h-inc[6] 4d2c

No defaults allowed 4d2c1

RETURNS 4d3

+1: if unsuccessful, error number in 1 4d3a

+2: if successful 4d3b

This jsys is used to set the cursor string. Later, a set of vectors will be allowed also. If the string length is zero or the first byte pointer is 0, nothing will be displaced for the cursor. If the first byte pointer is -1

then the old string will be used. If a cursor did not previously exist, an illcon error return will be executed. 4d4

(SDDA) suppress all display in a display area 4e

JSYS SDDA 444 suppress all display in a display area 4e1

ACCEPTS IN 4e2

1: da-id[18] 4e2a

2: 1 or 0 4e2b

RETURNS 4e3

+1: if unsuccessful, error number in 1 4e3a

+2: if successful 4e3b

The display image is removed from the display area but is not destroyed if 2 = 0. 4e4

(RDDA) restore all display in a display area 4f

JSYS RDDA 446 restore all display in a display area 4f1

ACCEPTS IN 4f2

1: string-id[18] 4f2a

RETURNS 4f3

+1: if unsuccessful, error number in 1 4f3a

+2: if successful 4f3b

The display image is restored in the display area. 4f4

(SSDA) suppress display of a given string in a display area 4g

JSYS SSDA 445 suppress display of a given string in a display area 4g1

ACCEPTS IN 4g2

1: string-id[18], da-id[18] 4g2a

RETURNS 4g3

+1: if unsuccessful, error number in 1 4g3a

+2: if successful 4g3b

The display image for the given string is suppressed in the display area. 4g4

(RSDA) Restore display of a given string in a display area 4h

JSYS RSDA 447 Restore display of a given string in a display area 4h1

ACCEPTS IN 4h2

1: string-id[18], da-id[18] 4h2a

RETURNS 4h3

+1: if unsuccessful, error number in 1 4h3a

+2: if successful 4h3b

The display image for the given string is restored in the display area. 4h4

(TSNDA) Teletype Simulation oN. 4i

JSYS TSNDA 451 turn tty simulation on 4i1

ACCEPTS nothing 4i2

RETURNS 4i3

+1: Always in 1 4i3a

1 if was in work station mode, 0 otherwise 4i3a1

Restores the tty simulation display area, and suppresses all others (except the cursor). Turns wsmode (work station mode flag) off for this console and returns previous value of wsmode. 4i4

(TSFDA) Teletype Simulation ofF. 4j

JSYS TSFDA 452 turn tty simulation off 4j1

ACCEPTS nothing 4j2

RETURNS 4j3

+1: Always 4j3a

Suppresses the display of the tty simulation display area, restores the display of all other display areas, and set wsmode on. 4j4

(RSTDA) Reset display areas. 4k

JSYS RSTDA 453 Reset display areas 4k1

ACCEPTS nothing 4k2

RETURNS 4k3

+1: Always 4k3a

Deallocates and removes images from all display areas associated with this console except the tty simulation and cursor, the display of which is restored. 4k4

(IV) Message formats. 5

Messages are sequences of 8-bit characters, of which 7 contain useful information. 5a

The high-order (200B) bit should contain even parity on IMLAC input and is set to even parity on IMLAC output. 5a1

If the IMLAC receives an odd parity character, it halts at present. 5a2

In the remainder of this document, the parity bit will not be discussed. 5a3

A message may be either a character or a command. 5b

Single-character messages from the PDP-10 to the IMLAC represent program output intended for the teleltype. 5c

Commands from the PDP-10 represent display information. 5d

Commands from the IMLAC represent characters or other input information. 5e

Every command is prefixed by an internal escape character (code 33B) and a character count. 5f

The escape character will henceforth be referred to as ESC: it has the same code as the ASCII escape character 33B. 5f1

Messages sent from TENEX to IMLAC: 6

Characters 40B-117B are directed to the teletype simulation area. 6a

Character 12B (line feed) starts a new line in the teletype simulation area. 6b

An ESC indicates that display or control information is coming, as follows. 6c

Every message beginning with ESC contains the number of following characters as its second charater. 6c1

Certain constructs appear in several command messages. 6c2

(da) A display area identifier is a pair of characters containing 12 bits of information: 6c2a

1st: bits(0:5) + 40B 6c2a1

2nd: bits(6:11) + 40B 6c2a2

(NSTRS) A sting count is a single character between 0 and 177B. 6c2b

(RETAIN) The retention flag, if non-zero, specifies that an existing string should be retained rather than overwritten. 6c2c

(CSIZE) A character size is a single character between 0 and 3: 6c2d

The character sizes are respectively x1/2, x1, x2, x3. 6c2d1

(HINC) A horizontal increment is a single character. 6c2e

In the present implementaion, HINC is ignored and a standard spacing is supplied as follows. 6c2e1

LVH: 6c2e1a

0: 3 units 6c2e1a1

1: 6 units 6c2e1a2

2: 12 units 6c2e1a3

3: 18 units 6c2e1a4

non-LVH: 6c2e1b

0: 4.5 units 6c2e1b1

1: 9 units 6c2e1b2

2: 18 units 6c2e1b3

3: 27 units 6c2e1b4

(FONT) A font specification is a single character. 6c2f

In the present implementation, the font is stored but does not affect the display. 6c2f1

(outxy) An output X-Y coordinate pair is encoded in four characters as follows: 6c2g

1st: X,bits(0:5) + 40B 6c2g1

2nd: X,bits(6:11) + 40B 6c2g2

3rd: Y,bits(0:5) + 40B 6c2g3

d4th: Y,bits(6:11) + 40B 6c2g4

(inxy) An input X-Y coordinate pair is encoded in four characters as follows: 6c2h

LVH: see (outxy) above. 6c2h1

non-LVH: as above, except that each 12-bit coordinate is actally of the form 1400B+40B*[v/9]+(v MOD 9), where the actual coordinate is 0<=v<=719. 6c2h2

This means there are actually fewer points on each axis. 6c2h2a

(string) A string is just the requisite number of characters. 6c2i

Control characters will be displayed as a distinctive blot. 6c2i1

Each display operation has a corresponding message. 6c3

01B - ADA (assign display area) 6c3a

Followed by (da) NSTRS CSIZE HINC FONT. 6c3a1

02B - DDA (delete display area) 6c3b

Followed by (da). 6c3b1

04B - STRDA (string display) 6c3c

Followed by (da) STRID RETAIN (xy) FORMAT [CSIZE] [HINC] [FONT] (string). 6c3c1

FORMAT specifies whether each of CSIZE, HINC, and FONT is to come from the display area default, the current value for the string, or the message. 6c3c1a

The bits are: 0 0 STF STI STC RDF RDI RDC. 6c3c1a1

RDF=1 means read the FONT from the message. 6c3c1a2

RDF=0, STF=1 means use the old value from the string. 6c3c1a3

RDF=0, STF=0 means use the display area default. 6c3c1a4

The pairs RDI-STI and RDC-STC specify HINC and CSIZE in the same way. 6c3c1a5

05B - SCSR (set cursor string) 6c3d

Followed by RETAIN CSIZE HINC FONT (string). 6c3d1

06B - SDDA (suppress display of da) 6c3e

Followed by (da) KILL. 6c3e1

KILL#0 means delete all strings in this display area. 6c3e1a

KILL=0 means retain the strings. 6c3e1b

07B -- RDDA (restore display of da) 6c3f

10B - SSDA (suppress display of string) 6c3g

Followed by (da) STRID KILL. 6c3g1

KILL#0 means delete the string. 6c3g1a

KILL=0 means retain the string. 6c3g1b

11B = RSDA (restore display of string) 6c3h

Followed by (da) STRID. 6c3h1

12B = TSNDA (turn teletype simulation on) 6c3i

13B - TSFDA (turn teletype simulation off) 6c3j

14B - Long input mode 6c3k

Puts the IMLAC into the mode where it sends coordinate information in a message with every character. 6c3k1

This is the normal operating mode for the IMLAC. 6c3k1a

15B - Short input mode 6c3l

Puts the IMLAC into the mode where it outputs characters literally, just like a teletype. 6c3l1

The IMLAC starts out in this mode when turned on. 6c3l1a

A string of 10 ESC characters, followed by a non-ESC, indicates an emergency - the IMLAC reinitializes itself and goes into short input and teletype simulation modes. 6c4

All other (control) charaters are ignored. 6d

Messages sent from IMLAC to TENEX: 7

Short input mode: 7a

Every character typed on the keyboard is transmitted literally. 7a1

Long input mode: 7b

Every message begins with ESC and a count of subsequent characters. 7b1

Codes 40B-177B represent keyboard input. 7b1a

Note that the IMLAC does not eecho these characters on the display. 7b1a1

Codes 00B-37B, except ESC, represent typed-in control characters. 7b1b

The present implementation allows the user to generate all of these codes from the keyboard. 7b1b1

ESC may be followed by a keyset-mouse code or a control character. 7b1c

Code 00B represents and ESC typed on the keyboard. 7b1c1

Otherwise, a code 40B-77B and a code 100B-107B follow. 7b1c2

This type of message is sent whenever the mouse buttons change or a character has been typed on the keyset, and the IMLAC cannot convert this to an ordinary character. 7b1c2a

The IMLAC converts recognizable keyset chords and mouse changes to characters: see SRI-ARC documentation for a full discusion of this hardware. 7b1c2a1

The codes 40B-77B represent accumulated keyset chords. 7b1c2b

40B means no complete chord has been struck. 7b1c2b1

The codes 100B-107B represent the state of the mouse buttons after a change: a 1-bit corresponds to a depressed button. 7b1c2c

Other codes should not appear. 7b1c3

All codes are followed by the (inxy) coordinates of the mouse. 7b2

This means 7 or 8 characters are sent for each character typed. 7b2a

(V) Division of responsibility. 8

The first criterion in design of the system just described was to allocate sufficient validity checking to the PDP-10 to make it unnecessary for the IMLAC to send a response for each command. 8a

Thus, the PDP-10 allocates and checks display area identifiers and string numbers. 8a1

In the present implementation, display areas are numbered system-wide whereas strings are numbered from 1 to N within a display area. 8a1a

The only errors not detectable by the PDP-10 are transmission parity errors and overflow of the IMLAC's memory. 8a2

The former are presently not corrected, but could be handled by any standard technique. 8a2a

The latter are in principle detectable by the PDP-10, since the amount of space required to store a given display is fairly simply computable. 8a2b

If the IMLAC runs out of space, it deletes lines from the top of the teletype simulation display, until only three are left, before giving up. 8a2b1

A secondary criterion was to hold down the number of characters required to represent a display command. 8b

We have found two problem areas and two areas in which we expect to expand the IMLAC's capability. 8c

Echoing was relegated to TENEX since we desired to avoid the well known complications associated with remote echoing. 8c1

The question of identifying a device as an IMLAC to TENEX gave us a great deal of trouble. 8c2

We settled on the convention of a TENEX Executive command which causes TENEX to send the "Long input mode" message. 8c2a

The IMLAC starts out in short input mode. 8c2a1

The TENEX character input routines also may be set into either long or short mode. 8c2b

Their state is changed by the TSNDA and TSFDA system calls. 8c2b1

In short mode (TSNDA last), short input is passed literally, and only the character is passed from long input. 8c2b2

In long mode (TSFDA last), short input is padded with all-zero coordinates, and long input is passed literally. 8c2b3

This arrangement allows TENEX programs which do not use the special features of the IMLAC to operate correctly with either an IMLAC or a teletype. 8c2b4

The user may restore the IMLAC to short mode with another command or with a special key on the IMLAC keyboard. 8c2c

Code is ready to allow the IMLAC to collect entire literal strings with some internal editing before sending them to TENEX. 8c3

We have not resolved the disposition of characters typed by the user between the typed command initiating literal input and the receipt by the IMLAC of the "Collect literal" message. 8c3a

With 8K of core, the IMLAC can handle a significant fraction of the command parsing and feedback functions of the SRI-ARC On-Line System (NLS), for which this effort is principally intended. 8c4

NWG/RFC# 190 LPD 28-DEC-72 16:39 7135
DEC PDP-10 -- Imlac Communication System

(J7135) 28-DEC-72 16:39; Title: Author(s): Deutsch, L. Peter/LPD;
Distribution: Wallace, Donald C. (Smokey)/DCW; Sub-Collections: NIC;
RFC# 190; Clerk: JDH;
Origin: <KELLEY>DEC.NLS;14, 20-DEC-72 20:35 KIRK ;

NWG/RFC# 191 CHI 28-DEC-72 16:43 7136
Graphics Implementation and Conceptualization at ARC

Overview: 1

This document is a brief description of the way in which graphics terminals are conceptualized and used at the Augmentation Research Center. All things described are implemented and have been operational for several months. Although our attention has initially been centered about the display of textual material, we are now about to turn our attention toward pictoral displays (hopefully much enhanced over our previous 940 line drawing capabilities). 1a

This document will discuss only those facits of display use which have been implemented and are currently operational, namely only those dealing with textual display. 1a1

Included is a discussion of the use of multiple file viewing display areas in NLS to provide cross file editing capabilities. A description of our display and terminal input equipment will be issued as a separate document. 1b

NOTE: RFC 190 includes a functional description of the implementation of the interface to our displays and is a description of the way this interface was extended to include "Processor-displays" (an IMLAC PDS-1, in this case) to our system, thus enabling one to use Display NLS over any of our teletype lines (including the network). 1c

A "processor display" is a display with processing power which can be controlled by character strings. 1c1

Description of the "conceptual display" implemented at ARC 2

The allocatable output unit for our display terminals (which include our local terminals and all remote processor-displays) is a rectangular "display area". A program treats this display area much like it would a file which it has opened with write access. 2a

When requesting the allocation of a display area, a program specifies its attributes, including where it is to be on the screen. The program is returned an identifier which it subsequently uses to manipulate images within the display area and the display area itself. Each string which the program writes into the display area is also given an identifier, which can subsequently be used to move, delete, replace, or change the characteristics of that string. 2b

The currently implemented characteristics are character

size, horizontal spacing between characters, and font of the characters (e.g. blinking, italics, intensity, etc.). 2b1

The position of items in the display area are given relative to the 0,0, which is the lower left corner of the display area. The horizontal coordinate increases to the right and the vertical coordinate increases toward the top. 2b2

In addition to above described manipulation of strings within display areas, a program can suppress the display of individual strings within display areas or suppress whole display areas. 2c

Also, a program can switch the terminal's state from teletype simulation to display mode and vis versa. 2d

When in display mode, the teletype simulation display area is suppressed and the coordinates of the cursor are input with each character. When in teletype simulation mode, all user owned display areas are suppressed and the coordinates of the cursor are not input with each character. 2d1

At TENEX startup time, display areas are allocated for a teletype simulation and a cursor for each local display terminal. Programs can change the string being displayed as the cursor to give the human feedback as to the programs state. 2e

Within NLS: 2f

The NLS subsystem deals only with the cursor and the display areas it has requested from the system for output to the user. The display area formatters assumes that the display has 64K by 64K addressable points (with 0,0 at upper left), several different character sizes and fonts, and 7-bit ASCII. 2f1

The display area formatters use format parameters during the format process and post-processors to convert the vertual format to one that is acceptable to the device for which the formatting was being done (a display area on the screen, a page for a printer, a microfilm device, or a teletype). 2f2

NLS allows the user to specify arguments to commands by selecting items from the current display image. This is accomplished through the use of a data structure, which describes the current display image, to map the cursor

coordinates, which are input with each character, into the proper selection. 2f3

Multiple text display areas in NLS 3

When the user's device is a display, NLS allows him to subdivide the file-viewing display areas (the one in which he views his file) and view (and edit across) several different files at once. Following is a discussion of the commands and capabilities associated with this new feature. 3a

New commands 3b

Horizontal split 3b1

splits a file-viewing display area horizontally (into an upper and lower segment) at the selected location moving the image of the original display area to the upper or lower segment depending on whether the cursor is above or below the bugged position when the final Command Accept is input. 3b1a

No display area will be created which is smaller than 2 lines by 20 columns (using the character size of the original display area). 3b1a1

Vertical split 3b2

splits a file-viewing display area vertically (into a left and right segment) at the selected location moving the image of the original display area to the left or right segment depending on whether the cursor is to the left or right of the selected position when the final CA is input. 3b2a

No display area will be created which is smaller than 2 lines by 20 columns (using the character size of the original display area). 3b2a1

Move boundary 3b3

The selected boundary is moved to the new position. A boundary will not be moved past a boundary of a neighbor. A boundary is moved for all display areas for which it is a boundary. Any resulting display area which is smaller than two lines by twenty columns will be deleted. 3b3a

Character size 3b4

The current character size of the display area which currently contains the cursor is displayed, and the user may type a number (0, 1, 2, 3) for a new character size. The final Command Accept causes the character size to be changed. The horizontal and vertical increment are automatically adjusted. Different display areas may simultaneously have different character sizes. 3b4a

Clear display area 3b5

The selected display area is cleared, i.e. the image is erased, the return and file return rings are released, and the association of a file with that display area is removed. The display area itself is not deleted. 3b5a

One may freely edit and jump using several display areas. The position of the cursor is used to resolve ambiguities. 3c

For example, if one executes a Jump command, the position of the cursor when the final Command Accept is entered determines in which display area the new image is to appear. 3c1

Also, if one changes viewspecs using the leftmost two buttons of the mouse, the viewspecs of the display area containing the cursor when the buttons go down are used as the initial values and are displayed in the viewspec area. When the buttons are released, the display area containing the cursor receives the new viewspecs. 3c2

NWG/RFC# 191 CHI 28-DEC-72 16:43 7136
Graphics Implementation and Conceptualization at ARC

(J7136) 28-DEC-72 16:43; Title: Author(s): Irby, Charles H./CHI;
Distribution: Wallace, Donald C. (Smokey)/DCW; Sub-Collections: SRI-ARC;
RFC# 191; Clerk: JDH;
Origin: <LANE>IRBY.NLS;2, 26-DEC-72 10:56 LLL ; .0

The sending process should be capable of allowing the user to indicate the control codes associated with the transmission of a mail item. The control codes can be used with any mail box number. 15a

Mail Box Number 15b

A site may find, as is the case at NIC, that it is useful to have more than one receiving mail box, each to be associated with a different process. 15b1

The mail box number for material to be printed by the standard mail printer is mail box number 0 and is used by default. 15b2

Code X'D0' 15b3

Meaning: A seven bit binary number in an eight bit field with the high order bit set to zero is to follow indicating the receiving mail box number. 15b3a

Transmisssion Code Type 15c

The default code type is 7-bit ASCII in an 8 bit field, high order bit set to zero. 15c1

'Code X'A0' 15c2

Meaning: A Data Type signal indicating that the transmission code is 7-bit ASCII in an 8-bit field, high order bit set to zero. 15c2a

Code X'A1' 15c3

Meaning: Transparency, i.e. a stream of 8 bit bytes. 15c3a

Code X'A2' 15c4

Meaning: EBCDIC 15c4a

Other character codes could be added in the future. 15c5

Printer Control Codes 15d

The default settings are a print line of 72 characters and a print page of 66 lines. 15d1

Code X'D1' 15d2

Meaning: Set line width to 72 characters . 15d2a

Code X'D2' 15d3

Meaning: Use the full width of your printer. 15d3a

Code X'D3' 15d4

Meaning: Set page size to 66 lines. 15d4a

Code X'D4' 15d5

Meaning: Set page size to infinite. 15d5a

Other virtual printer control codes can be added in the future. 15d6

Other classes of control codes can be added as the need arises. 15e

JCN 4-JUN-71 16:04 7209

Note to Sites Participating in NIC Course at ARC

JCN 4-JUN-71 16:04 7209

Note to Sites Participating in NIC Course at ARC

On Wednesday and Thursday, June 16 and 17, Dick Watson and John Melvin expect to give a brief introductory course on the use of the Network Information Center to 1 or 2 technical people from ILLIAC, ROME (RADC), RAND, SDC, UCLA, and UCSB (8-12 people). We expect the course to run for most of both days, from 9 a.m. to 5 p.m. 1

We will arrange for accomodations at a nearby motel that is within walking distance of SRI and will make arrangements for transportation to and from the airport, if desirable. On Wednesday, June 9th, John will contact the technical liaison from each site to find out who will be coming and to finalize the arrangements. 2

The purpose of this course is to familiarize a small group of knowledgable users with the NIC capabilites that will be made available to the larger network community in the coming months so that suggestions resulting from actual network use can be incorporated into the system prior to its general availability. 3

The course will concentrate on those functions of particular interest to network NIC users: 4

logging into NIC via TELNET 4a

creation of messages and documents, and their transmission to the appropriate members of the network community (e.g. RFCs and items such as this small document, which was created and distributed via NIC mechanisms) 4b

JCN 4-JUN-71 16:04 7209

Note to Sites Participating in NIC Course at ARC

<JOURNAL>7209.NLS;2, 7-JUN-71 11:51 HGL ; (Expedite) Title: Author(s): John T. Melvin/JTM; Distribution: Richard W. Watson, Douglas C. Engelbart, Jeanne B. North, Thomas F. Lawrence, John McConnell, John F. Heafner, Robert E. Long, Ari Ollikainen, James E. White, Steve Crocker, Steve Crocker/RWW DCE JBN TFL JXM JFH REL AXO JEW SC SC; Keywords: ; Clerk: JCN;

7210

Baseline per Person

The following is a printout of two views all the task branches from the Baseline Data in which your name appears. In order to get a reasonably accurate picture of what should or will occur in ARC during the next several months, we need help from you in several ways. 1

1. If you are the pusher (if your name is the first after the < in the top statement of a task) for the task, you should make an estimate of the dates for the start and completion (unless "ongoing") of the task. It is realized that such estimates are usually inaccurate, but the guesses will be useful in the balancing process. Please be conservative. 1a

   You may want to discuss the estimated dates with the task's buyer and/or the other workers and/or if its a software task the Software Personnel Coordinator (me -- Bruce) as you make them. 1a1

2. Update or note any erroneous or incomplete information you see. 1b

3. Let me know about any tasks that aren't in here or have been completed. 1c

To do this, you should mark this hardcopy with the above information and return it to me - by Tuesday 6/7? -- I will take care of getting all the updating into the file itself. (by the way the file is now (MSR, Basedata,) and no longer Baserec) Feel free to come and talk with me about any of the information or process. 2

The first view has only the top statement of each task and only 1 line of that statement. The second view has the entire task branch in all its gory detail. Mark either view. 3

There is a new convention for dates in Basedata. There can be two forms: 4

6:2 = 2nd week June -- June 12th 4a

6/12 = June 12th -- last day in second week of June 4b

Some correspondences follow: 4c

wks by mo/day: 6/5 6/12 6/19 6/26 7/3 7/10 7/17 7/24 7/31 8/7 4c1

wks by mo/week: 6:1 6:2 6:3 6:4 7:1 7:2 7:3 7:4 7:5 8:1 4c2

Service'Developement! 21

TENEX! 22

Work'Station'I/O> ??? ??? <John Charles Don?
software 0 22a

Information: 22a1

Change the way work station I/O is done so that it will be faster and is cleaned up and nice. 22a1a

Restrict'Exec'Commands> 5/3 6/3 <John WHP Charles
software NIC 1 22b

Information: 22b1

We need a way to restrict the Exec commands a network user can use. 22b1a

The following set of commands would be allowed to all users. 22b1b

login, logout, auto-logout 22b1b1

copy, delete, expunge, and rename files 22b1b2

directory (simple version), sysstat 22b1b3

all control characters 22b1b4

Requirements: 22b2

(see -- Journal, 6229) 22b2a

Buyer(s): 22b3

(,NIC'Stage'1) 22b3a

Tasker'Test'Pattern> ??? ??? <Martin Charles
software 1 22c

Information: 22c1

Be able to display a test pattern. 22c1a

NIC! 23

NLS! 24

Display'NLS> 3/2 4/3 <Charles Mimi WHP
software 0 2ha

Information: 2ha1

Get NLS running on the displays. 2ha1a

At the completion date above, NLS will include all the NLS features of the 940 with the exception of: 2ha1b

the calculator 2ha1b1

the vector package 2ha1b2

the keyword system 2ha1b3

executable text 2ha1b4

Major new features that will be implemented by that date are: 2ha1c

partial copies 2ha1c1

two checkpoints 2ha1c2

Jump to Word 2ha1c3

Buyer(s): 2ha2

(,NIC'Stage'2) 2ha2a

Subtasks: 2ha3

Tabs> ??? ??? <Mimi
software 2ha3a

Information: 2ha3a1

Implement tabs. 2ha3a1a

Buyer(s): 2ha3a2

(,Baseline'Tools) 2ha3a2a

Fast'Create'Display> ??? ??? <Mimi? Charles?
software 2ha3b

Information: 2ha3b1

Debug fast Create Display (when only a portion of the display, not the whole thing, is reformatted). 2ha3b1a

CD'Fonts> ??? ??? <Mimi? Charles? software 2ha3c

Information: 2ha3c1

Underline, overbar, boldface, italics fonts in display nls--requires some thought on implementation. 2ha3c1a

Journal'Commands> ??? ??? <Harvey software 2ha3d

Information: 2ha3d1

Implement journal commands in display nls command parser. 2ha3d1a

Collecter-Sorter'Commands> ??? ??? <Harvey software 2ha3e

Information: 2ha3e1

Implement Collecter-Sorter commands in display nls command parser. 2ha3e1a

Catalog'Commands> ??? ??? <Harvey software 2ha3f

Information: 2ha3f1

Implement Catalog commands in display nls command parser. 2ha3f1a

Identification'Commands> ??? ??? <Harvey software 2ha3g

Information: 2ha3g1

Implement Identification commands in display nls command parser. 2ha3g1a

Cross-file'Editing> 5/2 5/2 <Charles software 0 2hb

Information: 2hb1

This means having several files open and displayed on

the screen at the same time and then being able to freely edit. 2hb1a

User'Program'Monitor> ??? ??? <Mimi Charles WHP Ken? Don?
software 0 2hc

Information: 2hc1

Develop tools for taking measurements, e.g., number of times each subroutine is executed, CPU time used by each subroutine, run-time required to execute a command, of user programs, e.g., NLS. 2hc1a

Reenter'NLS> 5/2 5/3 <Charles
software 0 2hd

Information: 2hd1

Allow User to Reenter NLS after doing an Execute Quit. 2hd1a

Device'Command> ??? ??? <Charles
software 0 2he

Information: 2he1

Provide an Execute Device command that would enble a user to switch back and forth form DNLS and TNLS. 2he1a

One'Command'Background> ??? ??? <Charles
software 1? 2hf

Information: 2hf1

Enable user to specify a command and then have it executed in a background mode while he goes on and does other work. The file on which the command is being executed will be locked until the command is finished. It is intended for things like the compilers and the Output Processor. 2hf1a

Cross'Reference> ??? ??? <WHP? Charles? Mimi?
software 2? 2hg

Information: 2hg1

Generate cross references for L10 source files. 2hg1a

Buyer(s): 2hg2

MSR 2hg2a

EXEC'NLS> 4/2 ??? <Dave? Mimi? WHP? Charles?
software NIC 2h

Information: 2hh1

Put (some) EXEC commmands into NLS. 2hh1a

Requirements: 2hh2

(see -- Journal, 6229) 2hh2a

Fast'Sort> ??? ??? <WSD? Charles? Mimi? WHP?
software NIC 2hi

Information: 2hi1

The Collector-Sorter needs a faster sort. 2hi1a

Buyer(s): 2hi2

(,NIC'Stage'2) 2hi2a

Collector'Sorter'Branches> ??? ??? <WSD? Charles? Mimi? WHP?
software NIC 2hj

Information: 2hj1

Ennable the Collector-Sorter to sort branches in addition to/instead of statements. 2hj1a

Buyer(s): 2hj2

(,NIC'Stage'2) 2hj2a

Mixed'Text'Graphics> ??? 8/1 <Charles? Dick Walter?
software NIC 2hk

Requirements: 2hk1

Ways to specify from typewriters drawings in NICTNLS which, when output through Output Processor, would create line printer drawings; we need a proposal. 2hk1a

Buyer(s): 2hk2

(,NIC'Stage'2) 2hk2a

Remote'DNLS'Spec> ??? 8/1 <Charles?
NIC 2h1

Information: 2k11

A spec for coding for what a site would have to do to access NIC DNLS from their graphic terminals 2k11a

Control'File> ??? ??? <Charles? Mimi? WSD software 2km

Information: 2kml

Each user is to have a "control file" that contains various information about himself and his files. 2kmla

Graphics> ??? ??? <Charles? Mimi? WHP? John? Dave? software 2kn

Information: 2knl

Make a graphics package. May be intimately related to the calculator. 2knla

Signature'Display> ??? ??? <Mimi? Charles? software 2ko

Information: 2kol

Be able to display signatures. 2kola

Command'Backup> ??? ??? <Charles? WHP? Mimi? software 2kp

Information: 2kpl

Allow user to undo one or more commands that have been executed. 2kpla

Man-time: 2kp2

1 man-week /Charles/ 2kp2a

Portrayal'Generator> ??? ??? <Walter Bruce Charles software 2kq

Information: 2kql

Make one program that performs all the current functions of Create Display, the Output Processor, TNLS Print command, and Quickprint. 2kqla

Dialogue'Support! 25

File'Library'Meeting> 6/1 6/1 <WSD Bruce Charles WHP Mimi software NIC 1 25a

Information: 25a1

Hold a meeting to decide roughly how to do the file system. 25a1a

File'Library'Stage'0> ??? ??? <WSD software NIC 1 25a1b

Information: 25a1b1

Implement the first version of the File Library System. This will probably only involve a facility for loading Journal entries as a read only "Tree". A Tree is a branch the uppermost member of which is considered to have statement number zero. 25a1b1a

Master'Catalog'Organization> ??? ??? <WSD NIC 1 25a1c

Information: 25a1c1

Propose a design for the organization of the Master Catalog. 25a1c1a

File'Library'System'Design> ??? ??? <WSD NIC 1 25a1d

Information: 25a1d1

Work out a design for the final, grandiose File Library System. 25a1d1a

Journal'On-line'Distribute> --- ??? <Charles Harvey software NIC 1 25b

Information: 25b1

Automatic distribution of Journal entries on-line to ARC and NIC users. 25b1a

Buyer(s): 25b2

(,NIC'Stage'1) 25b2a

Costs: 25b3

6 man-weeks (WSD) 25b3a

Sub-Contracts: 25b4

maybe (,Control'File) 25b4a

maybe (,Network'File'Transfer) 25b4b

Management'Systems! 26

Roles'Developement> --- ??? <Jim Doug Ed Bruce Charles WHP ARC
1 26a

Information: 26a1

Developing the internal organization of ARC and defining what kinds of roles there are to play. The idea is to design an organization and then implement it, considering the whole thing as an experiment. 26a1a

Subtasks: 26a2

Describe'All'Roles> ??? ??? <Jim Doug Ed Bruce Charles WHP ???
1 26a2a

Subtasks: 26a2a1

Software'Coord> ??? ??? <Jim Bruce Charles WHP Doug ???
* 26a2a1a

Pusher'Buyer> ??? ??? <Jim Doug ???
* 26a2a1b

Assign'All'Roles> ??? ??? <Jim Doug Ed
1 26a2b

Documentation! 27

NLS'Users''Guide> ??? ??? <Dirk Charles? Mimi? WHP?
2 27a

Information: 27a1

A full-blown users' guide for NLS on TENEX. 27a1a

RINS! 28

Software'Engineer'Augmentation! 29

Hardware'Upgrade! 30

Collaboration! 31

NET'Graphics'Meeting> ??? ??? <Charles
NIC * 31a

Information: 31a1

There is to be a meeting of NET people on graphics. Charles has to prepare a paper to take to it. 31a1a

Imlac'Interface'Spec> ??? ??? <Charles? WSD? Peter
NIC 1 31b

Information: 31b1

Specs for interfacing a remote Imlac to NLS. 31b1a

Miscellaneous! 32

Service'System'Operations! 33

NLS'Maintain> --- --- <Mimi Charles WHP WSD? Bruce?
software 0 * 1 2 33a

Subtasks: 33a1

Head'Flag'Bug> ??? ??? <WHP
software 33a1a

Information: 33a1a1

Ouput File sometimes turns off the head flag in the origin statement. -- Bruce WHP 33a1a1a

Name'Hash'Bug> ??? ??? <WHP Bruce
software 33a1b

Information: 33a1b1

Certain combinations of statement names and Name delimiter commands don't end up with the name being hashed right. 33a1b1a

Buyer(s): 33a1b2

(,Baseline'Tools) 33a1b2a

Index'Creation'Bug> ??? 5/1 <WSD? Ken? Charles? software 33a1c

Information: 33a1c1

This is the problem which has led to innumerable crashes and prevented us from easily creating titleword indexes 33a1c1a

Buyer(s): 33a1c2

(,Catalog) 33a1c2a

Bug'Mark'Bug> ??? ??? <Charles? Mimi? software 33a1d

Information: 33a1d1

The bug mark does not appear when something in column 72 is bugged. -- Bruce 33a1d1a

CONAN'Bugs> ??? ??? <Charles? software 33a1e

Information: 33a1e1

When the display is recreated with CONAN on, the first statement that passes is often lost. Also if a statement and its first substatement pass, the substatement is lost. Also if a statement that passes is edited (and still passes), it is lost in the next full (not fast) recreate display. Also the Output Processor crashes when the Content Analyzer is on. USUALLY if a statement and its successor should pass, only the first one makes it. Also the last statement in this file keeps coming thru even though it doesn't fit the pattern. -- Bruce 33a1e1a

Break'Statement'Bugs> ??? ??? <Mimi? software 33a1f

Information: 33a1f1

A large number of Break Statements eventually results in an Exceed Capacity message. After the message its OK for a while. The sequence BS, JI, BS always produces the message (on a 'd I was giving as a LEVADJ). -- Bruce 33a1f1a

Set'Bugs> ??? ??? <Mimi
software 33a1g

Information: 33a1g1

debug the set command 33a1g1a

Transpose'Branch'Bug> ??? ??? <Mimi?
software 33a1h

Information: 33a1h1

In the old system (5/28) Transpose Branch looped.
-- Bruce 33a1h1a

Output'Sequential'Bug> ??? ??? <Mimi?
software 33a1i

Information: 33a1i1

Output Sequential doesn't work. 33a1i1a

Information: 33a2

Bug fixing, cleaning up, speeding up programs. 33a2a

TENEX'Maintain> --- --- <Ken John Dave Charles
software 0 * 1 2 33b

Subtasks: 33b1

PMAP'Bug> ??? ??? <Ken
software 0 33b1a

Information: 33b1a1

Bill Duvall thinks he discovered a bug in PMAP
when there are lots of files open. 33b1a1a

Index'Creation'Bug> ??? 5/1 <WSD? Ken? Charles?
software 33b1b

Information: 33b1b1

This is the problem which has led to innumerable
crashes and prevented us from easily creating
titleword indexes 33b1b1a

Special'TTY'I/O> ??? ??? <John Ken
software 33b1c

Baseline per Person

Information: 33b1c1

Fix so 15 and 30 character/second terminals don't drop characters. Also straighten out upper/lower case problems. 33b1c1a

GET'JSYS> ??? ??? <Ken software 33b1d

Information: 33b1d1

The JSYS that does GETS doesn't work if there are overlapping pages in the running process and the file the GET is performed on. 33b1d1a

NOUT'JSYS> ??? ??? <Ken software 33b1e

Information: 33b1e1

The NOUT JSYS (number output) sometimes clobbers register 3. 33b1e1a

OPENF'JSYS> ??? ??? <Ken software 33b1f

Information: 33b1f1

OPENF set byte size doesn't make it to the FDB. 33b1f1a

Information: 33b2

Bug fixing, cleaning up, speeding up programs. 33b2a

Index'Creation'Bug> ??? 5/1 <WSD? Ken? Charles? software 33b2b

Information: 33b2b1

This is the problem which has led to innumerable crashes and prevented us from easily creating titleword indexes 33b2b1a

Information: 33b3

Bug fixing, cleaning up, speeding up programs. 33b3a

['1] OR % gets headings % 33c

(Done'Tasks) 3h

BER 4-JUN-71 16:21 7211

Current Tasks for Mimi

The following is a printout of two views all the task branches from the Baseline Data in which your name appears. In order to get a reasonably accurate picture of what should or will occur in ARC during the next several months, we need help from you in several ways. 1

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The first view has only the top statement of each task and only 1 line of that statement. The second view has the entire task branch in all its gory detail. Mark either view. 3

There is a new convention for dates in Basedata. There can be two forms: 4

6:2 = 2nd week June -- June 12th 4a

6/12 = June 12th -- last day in second week of June 4b

Some correspondences follow: 4c

   wks by mo/day: 6/5 6/12 6/19 6/26 7/3 7/10 7/17 7/24 7/31 8/7 4c1

   wks by mo/week: 6:1 6:2 6:3 6:4 7:1 7:2 7:3 7:4 7:5 8:1 4c2

Current Tasks for Mimi

Service'Developement! 6

TENEX! 7

Background'Process> ??? ??? <Mimi 7a

NIC! 8

NLS! 9

Display'NLS> 3/2 4/3 <Charles Mimi WHP 9a

User'Program'Monitor> ??? ??? <Mimi Charles WHP Ken? Don? 9b

CONAN'Branches> ??? ??? <Mimi 9c

Cross'Reference> ??? ??? <WHP? Charles? Mimi? 9d

EXEC'NLS> 4/2 ??? <Dave? Mimi? WHP? Charles? 9e

Fast'Sort> ??? ??? <WSD? Charles? Mimi? WHP? 9f

Collector'Sorter'Branches> ??? ??? <WSD? Charles? Mimi? WHP? 9g

Control'File> ??? ??? <Charles? Mimi? WSD 9h

Graphics> ??? ??? <Charles? Mimi? WHP? John? Dave? 9i

Signature'Display> ??? ??? <Mimi? Charles? 9j

Seq'Gen'Change> ??? ??? <Mimi 9k

Command'Backup> ??? ??? <Charles? WHP? Mimi? 9l

Dialogue'Support! 10

Identification'System> ??? ??? <Mimi? WSD 10a

Management'Systems! 11

Documentation! 12

NLS'Users''Guide> ??? ??? <Dirk Charles? Mimi? WHP? 12a

RINS! 13

Software'Engineer'Augmentation! 14

Hardware'Upgrade! 15

Current Tasks for Mimi

Collaboration! 16

Miscellaneous! 17

Service'System'Operations! 18

NLS'Maintain> --- --- <Mimi Charles WHP WSD? Bruce? 18a

['!] OR % gets headings % 18b

(Done'Tasks) 19

20

Current Tasks for Mimi

Service'Developement! 21

TENEX! 22

Background'Process> ??? ??? <Mimi software NIC 1 22a

Information: 22a1

The idea is to have a version of NLS running in background mode that would be able to handle things like hardcopy output and compilations. 22a1a

NIC! 23

NLS! 24

Display'NLS> 3/2 4/3 <Charles Mimi WHP software 0 24a

Information: 24a1

Get NLS running on the displays. 24a1a

At the completion date above, NLS will include all the NLS features of the 940 with the exception of: 24a1b

the calculator 24a1b1

the vector package 24a1b2

the keyword system 24a1b3

executable text 24a1b4

Major new features that will be implemented by that date are: 24a1c

partial copies 24a1c1

two checkpoints 24a1c2

Jump to Word 24a1c3

Buyer(s): 24a2

(,NIC'Stage'2) 24a2a

Subtasks: 24a3

Tabs> ??? ??? <Mimi
software 24a3a

Information: 24a3a1

Implement tabs. 24a3a1a

Buyer(s): 24a3a2

(,Baseline'Tools) 24a3a2a

Fast'Create'Display> ??? ??? <Mimi? Charles?
software 24a3b

Information: 24a3b1

Debug fast Create Display (when only a portion of the display, not the whole thing, is reformatted). 24a3b1a

CD'Fonts> ??? ??? <Mimi? Charles?
software 24a3c

Information: 24a3c1

Underline, overbar, boldface, italics fonts in display nls--requires some thought on implementation. 24a3c1a

Journal'Commands> ??? ??? <Harvey
software 24a3d

Information: 24a3d1

Implement journal commands in display nls command parser. 24a3d1a

Collecter-Sorter'Commands> ??? ??? <Harvey
software 24a3e

Information: 24a3e1

Implement Collecter-Sorter commands in display nls command parser. 24a3e1a

Catalog'Commands> ??? ??? <Harvey
software 24a3f

Information: 24a3f1

Implement Catalog commands in display nls command parser. 2ha3f1a

Identification'Commands> ??? ??? <Harvey
software 2ha3g

Information: 2ha3g1

Implement Identification commands in display nls command parser. 2ha3g1a

User'Program'Monitor> ??? ??? <Mimi Charles WHP Ken? Don?
software 0 2hb

Information: 2hb1

Develop tools for taking measurements, e.g., number of times each subroutine is executed, CPU time used by each subroutine, run-time required to execute a command, of user programs, e.g., NLS. 2hb1a

CONAN'Branches> ??? ??? <Mimi
software 0 2hc

Information: 2hc1

Add a viewapec so that if a statement passes a Content Analyzer pattern, then that entire branch passes. 2hc1a

Cross'Reference> ??? ??? <WHP? Charles? Mimi?
software 2? 2hd

Information: 2hd1

Generate cross references for L10 source files. 2hd1a

Buyer(s): 2hd2

MSR 2hd2a

EXEC'NLS> 4/2 ??? <Dave? Mimi? WHP? Charles?
software NIC 2he

Information: 2he1

Put (some) EXEC commmands into NLS. 2he1a

Requirements: 2he2

(see -- Journal, 6229) 2he2a

Current Tasks for Mimi

Fast'Sort> ??? ??? <WSD? Charles? Mimi? WHP? 2hf
software NIC

Information: 2hf1

The Collector-Sorter needs a faster sort. 2hf1a

Buyer(s): 2hf2

(,NIC'Stage'2) 2hf2a

Collector'Sorter'Branches> ??? ??? <WSD? Charles? Mimi? WHP? 2hg
software NIC

Information: 2hg1

Ennable the Collector-Sorter to sort branches in addition to/instead of statements. 2hg1a

Buyer(s): 2hg2

(,NIC'Stage'2) 2hg2a

Control'File> ??? ??? <Charles? Mimi? WSD 2hh
software

Information: 2hh1

Each user is to have a "control file" that contains various information about himself and his files. 2hh1a

Graphics> ??? ??? <Charles? Mimi? WHP? John? Dave? 2hi
software

Information: 2hi1

Make a graphics package. May be intimately related to the calculator. 2hi1a

Signature'Display> ??? ??? <Mimi? Charles? 2hj
software

Information: 2hj1

Be able to display signatures. 2hj1a

Seq'Gen'Change> ??? ??? <Mimi 2hk
software

Information: 2hk1

Figure out how the Sequence Generator ought really to work and do it. 24k1a

Command'Backup> ??? ??? <Charles? WHP? Mimi? software 241

Information: 2411

Allow user to undo one or more commands that have been executed. 2411a

Man-time: 2412

1 man-week /Charles/ 2412a

Dialogue'Support! 25

Identification'System> ??? ??? <Mimi? WSD software NIC 0 25a

Information: 25a1

The Identification System enables keeping information about all the people known to it -- like name, initials, account number, address. 25a1a

Buyer(s): 25a2

(,NIC'Stage'0) 25a2a

Subtasks: 25a3

Identification'File> ??? ??? <Mimi WSD software NIC 0 25a3a

Information: 25a3a1

Design and implement a NLS file containing identification information. The file will be used when entering NLS, during Journal Distribution (including groups), and for (,Novice'Mode). 25a3a1a

Buyer(s): 25a3a2

(,Novice'Mode) 25a3a2a

(,Group'Identification) 25a3a2b

Group'Identification> ??? ??? <Mimi WSD software NIC 0 25a3b

Information: 25a3b1

Being able to specify the name of a "group" instead of typing in all the initials of all the people in the group. 25a3b1a

Sub-Contracts:(s): 25a3b2

(,Identification'File) 25a3b2a

Cost: 25a3b3

4 days (WSD) 25a3b3a

File'Library'Meeting> 6/1 6/1 <WSD Bruce Charles WHP Mimi
software NIC 1 25a3c

Information: 25a3c1

Hold a meeting to decide roughly how to do the file system. 25a3c1a

File'Library'Stage'0> ??? ??? <WSD
software NIC 1 25a3d

Information: 25a3d1

Implement the first version of the File Library System. This will probably only involve a facility for loading Journal entries as a read only "Tree". A Tree is a branch the uppermost member of which is considered to have statement number zero. 25a3d1a

Master'Catalog'Organization> ??? ??? <WSD
NIC 1 25a3e

Information: 25a3e1

Propose a design for the organization of the Master Catalog. 25a3e1a

File'Library'System'Design> ??? ??? <WSD
NIC 1 25a3f

Information: 25a3f1

Work out a design for the final, grandiose File Library System. 25a3f1a

Management'Systems! 26

Documentation! 27

NLS'Users''Guide> ??? ??? <Dirk Charles? Mimi? WHP? 2 27a

Information: 27a1

A full-blown users' guide for NLS on TENEX. 27a1a

RINS! 28

Software'Engineer'Augmentation! 29

Hardware'Upgrade! 30

Collaboration! 31

Miscellaneous! 32

Service'System'Operations! 33

NLS'Maintain> --- --- <Mimi Charles WHP WSD? Bruce? software 0 * 1 2 33a

Subtasks: 33a1

Head'Flag'Bug> ??? ??? <WHP software 33a1a

Information: 33a1a1

Ouput File sometimes turns off the head flag in the origin statement. -- Bruce WHP 33a1a1a

Name'Hash'Bug> ??? ??? <WHP Bruce software 33a1b

Information: 33a1b1

Certain combinations of statement names and Name delimiter commands don't end up with the name being hashed right. 33a1b1a

Buyer(s): 33a1b2

(,Baseline'Tools) 33a1b2a

Index'Creation'Bug> ??? 5/1 <WSD? Ken? Charles? software 33a1c

Information: 33a1c1

This is the problem which has led to innumerable crashes and prevented us from easily creating titleword indexes 33a1c1a

Buyer(s): 33a1c2

(,Catalog) 33a1c2a

Bug'Mark'Bug> ??? ??? <Charles? Mimi? software 33a1d

Information: 33a1d1

The bug mark does not appear when something in column 72 is bugged. -- Bruce 33a1d1a

CONAN'Bugs> ??? ??? <Charles? software 33a1e

Information: 33a1e1

When the display is recreated with CONAN on, the first statement that passes is often lost. Also if a statement and its first substatement pass, the substatement is lost. Also if a statement that passes is edited (and still passes), it is lost in the next full (not fast) recreate display. Also the Output Processor crashes when the Content Analyzer is on. USUALLY if a statement and its successor should pass, only the first one makes it. Also the last statement in this file keeps coming thru even though it doesn't fit the pattern. -- Bruce 33a1e1a

Break'Statement'Bugs> ??? ??? <Mimi? software 33a1f

Information: 33a1f1

A large number of Break Statements eventually results in an Exceed Capacity message. After the message its OK for a while. The sequence BS, JI, BS always produces the message (on a 'd I was giving as a LEVADJ). -- Bruce 33a1f1a

Current Tasks for Mimi

Set'Bugs> ??? ??? <Mimi
software 33a1g

Information: 33a1g1

debug the set command 33a1g1a

Transpose'Branch'Bug> ??? ??? <Mimi?
software 33a1h

Information: 33a1h1

In the old system (5/28) Transpose Branch looped.
-- Bruce 33a1h1a

Output'Sequential'Bug> ??? ??? <Mimi?
software 33a1i

Information: 33a1i1

Output Sequential doesn't work. 33a1i1a

Information: 33a2

Bug fixing, cleaning up, speeding up programs. 33a2a

OP'CONAN'Bug> ??? ??? <Mimi
software 33a2b

Information: 33a2b1

The Output Processor crashes when the Content
Analyzer is on. -- Bruce 33a2b1a

Buyer(s): 33a2b2

(,Baseline'Tools) 33a2b2a

Information: 33a3

Bug fixing, cleaning up, speeding up programs. 33a3a

['!] OR % gets headings % 33b

(Done'Tasks) 3h

BER 4-JUN-71 16:21 7211

Current Tasks for Mimi

<JOURNAL>7211.NLS;2, 7-JUN-71 11:32 HGL ; (Expedite) Title: Author(s): Bruce L. Parsley/BLP; Distribution: Mimi S. Church/MSC; Keywords: ; Clerk: BER;
Origin: <MSR>JMIMI.NLS;1, 4-JUN-71 15:39 BER ;

.PEL; .PGN=PGN-1; .GCR;baseline record

BER 4-JUN-71 16:38 7212

Current Tasks for Marilyn

The following is a printout of two views all the task branches from the Baseline Data in which your name appears. In order to get a reasonably accurate picture of what should or will occur in ARC during the next several months, we need help from you in several ways. 1

1. If you are the pusher (if your name is the first after the < in the top statement of a task) for the task, you should make an estimate of the dates for the start and completion (unless "ongoing") of the task. It is realized that such estimates are usually inaccurate, but the guesses will be useful in the balancing process. Please be conservative. 1a

   You may want to discuss the estimated dates with the task's buyer and/or the other workers and/or if its a software task the Software Personnel Coordinator (me -- Bruce) as you make them. 1a1

2. Update or note any erroneous or incomplete information you see. 1b

3. Let me know about any tasks that aren't in here or have been completed. 1c

To do this, you should mark this hardcopy with the above information and return it to me - by Tuesday 6/7? -- I will take care of getting all the updating into the file itself. (by the way the file is now (MSR, Basedata,) and no longer Baserec) Feel free to come and talk with me about any of the information or process. 2

The first view has only the top statement of each task and only 1 line of that statement. The second view has the entire task branch in all its gory detail. Mark either view. 3

There is a new convention for dates in Basedata. There can be two forms: 4

6:2 = 2nd week June -- June 12th 4a

6/12 = June 12th -- last day in second week of June 4b

Some correspondences follow: 4c

wks by mo/day: 6/5 6/12 6/19 6/26 7/3 7/10 7/17 7/24 7/31 8/7 4c1

wks by mo/week: 6:1 6:2 6:3 6:4 7:1 7:2 7:3 7:4 7:5 8:1 4c2

Current Tasks for Marilyn

Service'Developement!	6
TENEX!	7
NIC!	8
NIC'Stage'1> 5/4 8/1 <Dick John Marilyn Dirk	8a
NIC'Stage'2> 6/3 9/1 <Dick John Marilyn Dirk	8b
NLS!	9
Dialogue'Support!	10
Management'Systems!	11
Documentation!	12
Initial'TNLS'Primer> 4/1 6/1 <Marilyn	12a
Journal'User'Guide> 4/1 6/1 <Marilyn	12b
ONR'Report> ??? 5/2 <Dirk Doug Jim Marilyn	12c
Final'TNLS'Primer> 5/2 6/3 <Marilyn Dick	12d
NLS'Doc'Master'File> ??? ??? <Jim Marilyn	12e
RINS!	13
Software'Engineer'Augmentation!	14
Hardware'Upgrade!	15
Collaboration!	16
Miscellaneous!	17
Service'System'Operations!	18
NIC'Operations> --- --- <Dick Jean Marilyn Mil	18a
['!] OR % gets headings %	18b
(Done'Tasks)	19
	20

Current Tasks for Marilyn

Service'Developement! 21

TENEX! 22

NIC! 23

NIC'Stage'1> 5/4 8/1 <Dick John Marilyn Dirk
NIC 1 23a

Information: 23a1

Stage 1 is to provide access to the NIC from any site on the Network having the appropriate access software. 23a1a

Requirements: 23a2

Restrict NIC users to a subset of EXEC commands. 23a2a

Access to any site with official Telnet 23a2b

Number of lines in = 4-8 depending on our capability 23a2c

Need a study to determine how to place file space restrictions on network users or sites 23a2d

Final Primer 23a2e

Online files accessed with standard TNLS commands (possibly a simple query language) 23a2f

Catalog 23a2f1

Guide to network personnel 23a2f2

ARPA Network Resources Notebook 23a2f3

NIC guide 23a2f4

Host status 23a2f5

Link for advise mode 23a2g

Network file transfer 23a2h

Buyer(s): 23a3

ARC goal 23a3a

Sub-Contracts: 23a4

(,DSS) 23a4a

Requirements: 23a4a1

(Journal,6959,) (Journal,6966,) 23a4a1a

(,Restrict'File'Space'Study) 23a4b

(,Restrict'Exec'Commands) 23a4c

(,NET'Link) 23a4d

(,NET'Advise'Study) 23a4e

(,Network'File'Transfer) 23a4f

(,UCSB'Storage'File) 23a4g

(,Final'TNLS'Primer) 23a4h

(,Journal'User'Guide) 23a4i

Subtasks: 23a5

NIC'TENEX'1> 5/4 7/2 <John
software NIC 1 23a5a

Information: 23a5a1

Miscellaneous work in TENEX needed for Stage 1. 23a5a1a

Requirements: 23a5a2

Help create NICTNLS 23a5a2a

New'NCP'Telnet> ??? 7/2 <John
software NIC 1 23a5b

Enter'User'ID'Info> ??? 7/2 <John
NIC 1 23a5c

Access'Spec> ??? ??? <John
NIC 1 23a5d

Sub-Contracts: 23a5d1

We must wait for BBN to write new NCP and for the NWG to specify a Telnet and BBN to implement it. 23a5d1a

NIC'Documentation'1> 5/2 7/2 <Marilyn
NIC 1 23a5e

Requirements: 23a5e1

Guide to our online files 23a5e1a

Final NICTNLS Primer 23a5e1b

Guide to Journal system 23a5e1c

Sub-Contracts: 23a5e2

(,Final'TNLS'Primer) 23a5e2a

(,Journal'User'Guide) 23a5e2b

NIC'Training'Plans> ??? 6/2 <Dirk Dick
NIC 1 23a5f

Requirements: 23a5f1

Plans for site training 23a5f1a

NIC'Online'Files'1> 5/4 7/2 <Dick Marilyn
NIC 1 23a5g

Requirements: 23a5g1

Catalog and simple query facility 23a5g1a

Guide to Network personnel 23a5g1b

Facilities guide 23a5g1c

NIC guide includes NIC TNLS Primer 23a5g1d

Host status 23a5g1e

NIC'Stage'2> 6/3 9/1 <Dick John Marilyn Dirk
NIC 2 23b

Information: 23b1

Stage 2 is to provide more capacity for Network use and additional facilities as described in Require 23b1a

Requirements: 23b2

Online message delivery 23b2a

Number of lines in greater than in Stage 1	23b2b
Deferred Execution Offline entry	23b2c
Access to remote files	23b2d
Refined resource restrictions	23b2e
Improve query facilities for our online files	23b2f
Buyer(s):	23b3
ARC goal	23b3a
Sub-Contracts:	23b4
(,Display'NLS)	23b4a
(,Accounting)	23b4b
(,Fast'Sort)	23b4c
(,Invisible'Record'Separators)	23b4d
(,Collector'Sorter'Branches)	23b4e
(,Mixed'Text'Graphics)	23b4f
(,Deferred'Execution)	23b4g
(,DSS)	23b4h
Requirements:	23b4h1
Online message delivery	23b4h1a
Message delivery to remote files-dependent on NWG specifying a protocol and sites implementing it	23b4h1b
(,Increase'Capacity)	23b4i
(,Baseline'Conventions)	23b4j
(,Baseline'Tools)	23b4k
(,Resource'Accounting)	23b4l
(,Network'File'Transfer)	23b4m
Subtasks:	23b5

Site'Hardcopy'Plan> ??? ??? <John
NIC 2 23b5a

Information: 23b5a1

Develop plan for shipping files to remote sites
for printing on their printers. 23b5a1a

Sub-Contracts: 23b5a2

(,Network'File'Transfer) 23b5a2a

Limit'Net'Access> 7/2 8/2 <John
software NIC 2 23b5b

Requirements: 23b5b1

Access from X lines with maximum y per site. 23b5b1a

NIC'Documentation'2> ??? 8/2 <Marilyn Dick
NIC 2 23b5c

Requirements: 23b5c1

On-going improvements and coverage of new features
offered to Network 23b5c1a

NET'Site'Training> ??? 8/1 <Dirk Dick
NIC 2 23b5d

Requirements: 23b5d1

On-going site training. 23b5d1a

NIC'Online'Files'2> 6/3 8/2 <Dick
NIC 2 23b5e

Requirements: 23b5e1

Improve query system using ARC set techniques? 23b5e1a

Improve our online documentation of NIC. 23b5e1b

NLS! 24

Dialogue'Support! 25

Management'Systems! 26

Documentation! 27

Initial'TNLS'Primer> 4/1 6/1 <Marilyn
NIC 0 27a

Information: 27a1

.An initial version of a TNLS Primer. 27a1a

Buyer(s): 27a2

(,NIC'Stage'0) 27a2a

Journal'User'Guide> 4/1 6/1 <Marilyn
NIC 0 27b

Information: 27b1

A users' guide for the Journal. 27b1a

Buyer(s): 27b2

(,NIC'Stage'0) 27b2a

ONR'Report> ??? 5/2 <Dirk Doug Jim Marilyn
0 27c

Information: 27c1

Final report to the Office of Naval Research. 27c1a

Final'TNLS'Primer> 5/2 6/3 <Marilyn Dick
NIC 1 27d

Information: 27d1

A final version of the TNLS primer. This has to include the meanings of all the error messages and hopefully the folklore about what to do about them. 27d1a

Buyer(s): 27d2

(,NIC'Stage'1) 27d2a

NLS'Doc'Master'File> ??? ??? <Jim Marilyn
NIC 2 27e

Information: 27e1

Develop a plan for a master file of NLS documentation that can be manipulated in various ways, e.g., with the Content Analyzer, to produce various documents. 27e1a

Current Tasks for Marilyn

RINS! 28

Software'Engineer'Augmentation! 29

Hardware'Upgrade! 30

Collaboration! 31

Miscellaneous! 32

Service'System'Operations! 33

NIC'Operations> --- --- <Dick Jean Marilyn Mil
O * 1 2 33a

Information: 33a1

Updating catalogues and collections, etc. 33a1a

Subtasks: 33a2

Help'For'Net'Users> 6/3 --- <Marilyn
NIC O * 1 2 33a2a

Information: 33a2a1

Answering the phone that NET users call to ask questions about NLS, TENEX, etc. 33a2a1a

Station'Agent'Help> --- --- <Jean
NIC O * 1 2 33a2b

Requirements: 33a2b1

Station Agent Manual 33a2b1a

Site visits 33a2b1b

Suggestions on storage circulation 33a2b1c

Obtain'documents> --- --- <Jean Mil
NIC O * 1 2 33a2c

Information: 33a2c1

Obtain ARPA reports and Karp biblio documents for collection 33a2c1a

Buyer(s): 33a2c2

Current Tasks for Marilyn

NIC	33a2c2a
['1] OR % gets headings %	33b
(Done'Tasks)	34

BER 4-JUN-71 16:38 7212

Current Tasks for Marilyn

<JOURNAL>7212.NLS;2, 7-JUN-71 12:17 HGL ; (Expedite) Title: Author(s): Bruce L. Parsley/BLP; Distribution: Marilyn F. Auerbach/MFA; Keywords: baseline record; Clerk: BER;
Origin: <MSR>JMARILYN.NLS;1, 4-JUN-71 15:51 BER ;

NEW OUTPUT PROCESSOR USER FEATURES

NEW OUTPUT PROCESSOR USER FEATURES

FOOTERS 1

The page number field has been generalized into a "footer" field which can be used in the same way as a header field.

If the user specifies no footer text, page numbers will be generated as in previous versions of the Output Processor.

When a user specifies text for a footer, this text replaces the page number, and if page numbers are wanted, the user must use the GPN directive to specify where they are to appear.

THE GPN directive may be used anywhere within the document so that page numbers can be placed in any of the headers as well as in the footer.

The following directives control the use of footers:

F Set text of footer (takes a string as value).

FP Footer position (takes same values as other position directives). /FP and PNP are synonyms naming the same Output Processor parameter./

FSW Footer Switch (print or don't print footers).

LPF Lines Preceeding Footer (Number of blank lines between body area and footer area). /LPF and LPPN are synonyms naming the same Output Processor parameter./

LEFT AND RIGHT MARGIN SETTINGS 2

Different left and right margin settings can now be specified independently for each of three document areas -- header area, body area, and footer area.

The old directives LM and RM operate as before and change the margin settings for all three areas simultaneously. Six new directives -- HLM, HRM, BLM, BRM, FLM, FRM -- change the settings only in the specified area.

NEW OUTPUT PROCESSOR USER FEATURES

SPLIT DIRECTIVE 3

A new directive, Split, causes the line in which it occurs to be divided into two parts.

The left part (from the beginning of the line up to but not including the Split directive) is set flush to the indented left margin.

The right part of the line (including the Split directive) is set flush to the right margin.

The normal positioning option for a line is ignored when a Split directive occurs in it.

This directive is particularly useful in formatting headers and footers.

IGNORE LINE SEGMENT DIRECTIVE 4

A Line Segment is a string of text terminated by:

(1) A tab character or GT directive

(2) A Split directive

(3) An end-of-line condition (carriage return character or GCR directive, line overflow beyond the right margin, or end-of-statement encountered)

The IgLS directive causes the text of the line segment in which it occurs to be ignored. (Directives in the line segment are executed, however.)

SNSHOW DIRECTIVE 5

The old directives SN and SNF allow the user to control whether statement numbers will be printed for each statement. A new directive SNShow, operating in conjunction with SN and/or SNF, permits the user to specify for which levels statement numbers will be printed.

SNShow is an intervals type directive, so its value is in general a list of numbers or intervals, seperated by commas.

An interval is specified by preceeding a number with one of the the logical connectives (=, >, <, >=, <=) or by enclosing a pair of numbers in parentheses (open interval -- does not include endpoints) or brackets (closed interval -- includes end points). Examples of intervals are:

=3	Level 3 only.
>3	Levels greater than 3 (up through 63).
<=3	Levels 1, 2, 3.
(3,5)	Levels 4 and 5.

To turn printing on for all levels, any of the words "All", "On", or "Yes" may be used.

To turn printing off for all levels, any of the words "None", "Off", or "No" may be used.

Examples of valid SNShow directive usage are:

.SNShow=1,2,3;	Show numbers on levels 1, 2, 3 only.
.SNShow=[2,5],7;	Show on levels 2, 3, 4, 5, 7 only.
.SNShow=<=5;	Show on levels 1, 2, 3, 4, 5 only.
.SNShow=All;	Show on all levels.

PLEX NUMBERING 6

The old directive NPX (or PlexNum) allows the user to request that the branches in a sub-plex be numbered in any of several ways. There is a new set of directives which supplements NPX to permit a more general type of numbering.

The PxNShow directive allows the user to specify on which levels plex numbering should take place. PxNShow is an intervals type directive, so its value is set the same as with SNShow except that the highest level number which may be specified is 12 (instead of 63).

The PxN directive is used to specify the type of numbering to be used at each level. It has an argument, which is the level being set, and a value, which is the kind of numbering for that level. For example:

```
.PxN[1]=UR;   Use upper-case Roman numerals on level 1.

.PxN[2]=UL;   Use upper-case letters on level 2.

.PxN[3]=Dec;  Use decimal numbers on level 3.
```

NUMBERING OPTIONS 7

The range of numbering options available for plex and page numbering has been expanded.

Any of the previously available number types may now be optionally enclosed within parentheses, brackets, angle brackets, or hyphens and/or followed by a period or colon.

The complete numbering option is specified by adding to the number-type code codes for the enclosing and/or following characters -- e.g., to get decimal numbers enclosed in angle brackets either "31" or "Dec+Angles" may be used.

The following table summarizes the options available:

Dec	=	1	Decimal Numbers
LR	=	2	Lower Case Roman Numbers
UR	=	3	Upper Case Roman Numbers
LL	=	4	Lower Case Letters
UL	=	5	Upper Case Letters
Oct	=	6	Octal Numbers
SNum	=	7	Statement Number Format (plex nums only)
DotNum	=	8	Dot Number Format (plex nums only)
Parens	=	10	Enclose Number in (Parentheses)
Brackets	=	20	Enclose Number in /Brackets/
Angles	=	30	Enclose Number in <Angle Brackets>
Hyphens	=	40	Enclose Number in -Hyphens-
Period	=	100	Follow Number (and Enclosure) with a Period
Colon	=	200	Follow Number (and Enclosure) with a Colon

PLEX FORMATTING 8

A new set of directives permits the user to exercise formatting control over larger structural entities than has been possible before. These directives are particularly useful for formatting listings and outlines of various kinds.

PxFShow (Plex Format Show) is an intervals type directive which controls plex formatting at levels 1 through 63. When plex formatting is "on" at level "N", extra blank lines (in addition to LBS) will be output between level N statements and statements at levels N and N+1.

The number of extra blank lines is determined by directives PxFLS, PxFLD, and PxFLU:

PxFLS (Plex Format Lines Same) is the number of extra lines to be inserted between statements on level N. *(Default value is 1.)*

PxFLD (Plex Format Lines Down) is the number of extra lines to be inserted after a level N statement if the next statement is at level N+1. *(Default value is 1.)*

PxFLU (Plex Format Lines Up) is the number of extra lines to be inserted before a level N statement if the previous statement was at level N+1. *(Default value is 2.)*

PROBLEMS? 9

If you have any questions regarding these new Output Processor features or if you find any bugs or inconsistencies, please see Walt. Updated Output Processor Reference Guides will be available on request.

NEW OUTPUT PROCESSOR USER FEATURES

<JOURNAL>7215.NLS;2, 7-JUN-71 12:20 HGL ;Title: Author(s): Walter L. Bass/WLB; Distribution: Marilyn F. Auerbach, William S. Duvall, Douglas C. Engelbart, Charles H. Irby, Mil Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Bruce L. Parsley, William H. Paxton, Dirk H. van Nouhuys, Richard W. Watson, James A. Fadiman/MFA WSD DCE CHI MEJ HGL JBN JCN BLP WHP DVN RWW JAF; Keywords: ; Clerk: WLB;
Origin: <PORGEN>NEWFEATURES.NLS;1, 4-JUN-71 16:33 WLB ;

BLP 6-JUN-71 12:41 7218

Baseline -- Walter

The following is a printout of two views all the task branches from the Baseline Data in which your name appears. In order to get a reasonably accurate picture of what should or will occur in ARC during the next several months, we need help from you in several ways. 1

1. If you are the pusher (if your name is the first after the < in the top statement of a task) for the task, you should make an estimate of the dates for the start and completion (unless "ongoing") of the task. It is realized that such estimates are usually inaccurate, but the guesses will be useful in the balancing process. Please be conservative. 1a

   You may want to discuss the estimated dates with the task's buyer and/or the other workers and/or if its a software task the Software Personnel Coordinator (me -- Bruce) as you make them. 1a1

2. Update or note any erroneous or incomplete information you see. 1b

3. Let me know about any tasks that aren't in here or have been completed. 1c

To do this, you should mark this hardcopy with the above information and return it to me - by Tuesday 6/7? -- I will take care of getting all the updating into the file itself. (by the way the file is now (MSR, Basedata,) and no longer Baserec) Feel free to come and talk with me about any of the information or process. 2

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There is a new convention for dates in Basedata. There can be two forms: 4

6:2 = 2nd week June -- June 12th 4a

6/12 = June 12th -- last day in second week of June 4b

Some correspondences follow: 4c

   wks by mo/day: 6/5 6/12 6/19 6/26 7/3 7/10 7/17 7/24 7/31 8/7 4c1

   wks by mo/week: 6:1 6:2 6:3 6:4 7:1 7:2 7:3 7:4 7:5 8:1 4c2

Baseline -- Walter

Baseline -- Walter

```
   ['!] OR     % gets headings %                                    18b
(Done'Tasks)                                                       19

                                                                   20
```

Baseline -- Walter

Service'Developement! 21

TENEX! 22

NIC! 23

Catalog> --- --- <Dick Walter Jean Jim WHP
NIC 0 * 1 2 23a

Information: 23a1

There are a number of tasks required to continue to upgrade our capabilities in the cataloging area 23a1a

Buyer(s): 23a2

NIC 23a2a

Sub-Contracts: 23a3

(,Index'Creation'Bug) 23a3a

Subtasks: 23a4

Complete'New'Catalog> --- 5/4 <Dick Jim
NIC 0 23a4a

Doc'Catalog'Production> 5/2 5/3 <Dick Jim
NIC 0 23a4b

Information: 23a4b1

Document catalog production. 23a4b1a

Obsolete'Documents> ??? ??? <Jean Dick
NIC 0 23a4c

Information: 23a4c1

How are obselete documents appearing in the catalog handeled. 23a4c1a

Improve'Catalog'Produce> ??? 7/1 <Walter WHP
software NIC * 1 23a4d

Information: 23a4d1

Improve catalog production process. 23a4d1a

Baseline -- Walter

Catalog'Entry> ??? ??? <Walter
software NIC 1 23a4e

Information: 23a4e1

Develop procedures and software aids for entering new catalog items. 23a4e1a

Initial'Query'Language> ??? 6/3 <Dick Walter
software NIC 2 23a4f

NLS! 24

Diddle'OP> 4/4 5/2 <Walter Bruce
software 0 24a

Information: 24a1

Add directives and fix a couple of bugs. 24a1a

Bugs 24a1b

Roman Numbers 24a1b1

GPN with negative page numbers 24a1b2

IF expressions 24a1b3

New Directives 24a1c

HJournal -- special directive for Journal 24a1c1

Multiple Header Directives: H1, H2, H3, H4, LBH1H2, LBH2H3, LBH3H4, H1Sw, H2Sw, H3Sw, H4Sw, H1P, H2P, H3P, H4P. 24a1c2

IgL -- Ignore Line 24a1c3

IgLS -- Ignore Line Segment 24a1c4

LShow -- Line Show 24a1c5

SVLC -- Statement Visible Line Count (for query only) 24a1c6

SNShow -- Statement Number Show; also work on SNF and SN to make numbering neater. 24a1c7

Mixed'Text'Graphics> ??? 8/1 <Charles? Dick Walter?
software NIC 24b

Requirements: 2hb1

Ways to specify from typewriters drawings in NICTNLS which, when output through Output Processor, would create line printer drawings; we need a proposal. 2hb1a

Buyer(s): 2hb2

(,NIC'Stage'2) 2hb2a

Cheap'Fonts> ??? ??? <Walter Bruce software 2hc

Information: 2hc1

Implement directives for a limited set of fonts, e.g., underbar, overbar, and bold-face -- multiple impression -- for the line printer. 2hc1a

Grid'Coordinates> ??? ??? <Walter Bruce software 2hd

Information: 2hd1

Fix up the Output Processor to work internally with grid coordinates instead of columns and lines and add directives that specify horizontal and vertical positions in grid coordinates. 2hd1a

OP'Fonts> ??? ??? <Walter Bruce software 2he

Information: 2he1

Allow input characters in various fonts and produce various fonts on output. The input fonts may first be handeled with directives, eventually perhaps by means of the feature (,Node'Property'List). 2he1a

FR80> ??? ??? <Walter Bruce software 2hf

Information: 2hf1

Reinstate the FR80 COM as an output device. 2hf1a

Portrayal'Generator> ??? ??? <Walter Bruce Charles software 2hg

Information: 2hg1

Baseline -- Walter

Make one program that performs all the current functions of Create Display, the Output Processor, TNLS Print command, and Quickprint. 24g1a

Dialogue'Support! 25

Management'Systems! 26

Documentation! 27

Rome'Report> --- 6/5 <Dirk Doug Jim Walter Don WSD Cindy 27a

Information: 27a1

The report to Rome Air Development Center required by the contract that pays us. This report is for work in 1970. It was originally due in February but has been delayed indefinitely. Doug gave a guideline for writing: that we should try primarilly to produce a document that will be useful to us as an archive of 1970. 27a1a

Buyer(s): 27a2

The report to Rome is named as a buyer in Doug's scheme of buyers (Journal,6934,2d2). 27a2a

Requirements: 27a3

The requirements are spelled out in the contract with Rome; Mil has it on file. 27a3a

Design: 27a4

The design is the outline of the document (vannouhuys,rrr,:xb) 27a4a

Dates: 27a5

Due in Rome 7/1/71 27a5a

Cost: 27a6

(in hours estimated by Dirk 5/10) 27a6a

Doug:20 27a6b

Dirk: 60 27a6c

Jim:12 27a6d

Baseline -- Walter

Walter:8 27a6e

WSD:4 27a6f

Don:12 27a6g

Cindy :20 27a6h

Barbara:8 27a6i

Subtasks: 27a7

Norton'Work> --- 6/2 <Jim Dirk 27a7a

Information: 27a7a1

Jim Norton needs to rework parts of the report dealing with NIC (vannouhuys,rrr,5a) ,with Desing Team Planning (vannouhuys,rrr,7e) and with the Journal (vannouhuys,rrr.7f). 27a7ala

Higher'Level'Processes> --- 6/2 <Walt 27a7b

Information: 27a7b1

WSB needs to complete the section on higher level processes (vannouhuys,rrr,7d). 27a7bla

Remote'Life> --- 6/2 <WSD Dirk 27a7c

Information: 27a7c1

Dirk and WSD need to do further polishing on the account of his remote life (vannouhuys,rrr,7g). 27a7cla

Transferring'Compiler> --- 6/2 <Don Dirk 27a7d

Information: 27a7d1

Don Andrews needs to take his section on transfer the compiler from the 940 too the 10 from rough draft to final form (vannouhuys,rrr,6b). 27a7dla

Future'Plans> --- 6/3 <Doug Dirk 27a7e

Information: 27a7e1

Doug needs to write a section on Future plans for the summary (vannouhuys,rrr,2c) and a similar section standing alone (vannouhuys,rrr,8). 27a7ela

References> --- 6/3? <Cindy Dirk 27a7f

Information: 27a7f1

We need to assemble them when Jim and Doug are though writing their sections 27a7f1a

Glossary> --- 6/3 <Dirk 27a7g

Information: 27a7g1

We need more and better words and to prune out old words 27a7g1a

Editing> --- 6/5 <Dirk 27a7h

Information: 27a7h1

Dirk needs to pat down the prose more, refine printing directives, and shepard through SRI review and printing. 27a7h1a

Review> --- 6/4 <Doug 27a7i

Information: 27a7i1

Doug has to read and affirm that all this is consonant with his thinking. 27a7i1a

New'OP'User'Guide> 5/2 5/4 <Walter Bruce 27b

Information: 27b1

Update user guide to include new directive names, new directives, and new syntax and features. 27b1a

RINS! 28

Software'Engineer'Augmentation! 29

Hardware'Upgrade! 30

Graphic'Hardcopy'Study> ??? ??? <Roger Walter? Bruce? NIC 0 30a

Information: 30a1

Look at developing an in-house facility for producing text/graphic hardcopy output. 30a1a

Baseline -- Walter

Collaboration! 31

Miscellaneous! 32

Service'System'Operations! 33

Output'Processor'Maintain> --- --- <Walter Bruce
software 0 * 1 2 33a

Subtasks: 33a1

Output'Device'QED> ??? ??? <Walter
software 33a1a

Information: 33a1a1

Output Device QED doesn't work. -- Bruce 33a1a1a

PNO'O> ??? ??? <Walter
software 33a1b

Information: 33a1b1

PNO=O doesn't work. -- Bruce 33a1b1a

OP'CONAN'Bug> ??? ??? <Mimi
software 33a1c

Information: 33a1c1

The Output Processor crashes when the Content
Analyzer is on. -- Bruce 33a1c1a

Buyer(s): 33a1c2

(,Baseline'Tools) 33a1c2a

Information: 33a2

Bug fixing, cleaning up, speeding up programs. 33a2a

['!] OR % gets headings % 33b

(Done'Tasks) 34

BLP 6-JUN-71 12:41 7218

Baseline -- Walter

<JOURNAL>7218.NLS;2, 7-JUN-71 12:21 HGL ; (Expedite) Title: Author(s): Bruce L. Parsley/BLP; Distribution: Walter L. Bass/WLB; Keywords: baseline Record; Clerk: BLP;
Origin: <MSR>JWALT.NLS;1, 4-JUN-71 16:01 BER ;

.PEL; .PGN=PGN-1; .GCR;

BLP 6-JUN-71 12:44 7219

Baseline -- WSD

The following is a printout of two views all the task branches from the Baseline Data in which your name appears. In order to get a reasonably accurate picture of what should or will occur in ARC during the next several months, we need help from you in several ways. 1

1. If you are the pusher (if your name is the first after the < in the top statement of a task) for the task, you should make an estimate of the dates for the start and completion (unless "ongoing") of the task. It is realized that such estimates are usually inaccurate, but the guesses will be useful in the balancing process. Please be conservative. 1a

You may want to discuss the estimated dates with the task's buyer and/or the other workers and/or if its a software task the Software Personnel Coordinator (me -- Bruce) as you make them. 1a1

2. Update or note any erroneous or incomplete information you see. 1b

3. Let me know about any tasks that aren't in here or have been completed. 1c

To do this, you should mark this hardcopy with the above information and return it to me - by Tuesday 6/7? -- I will take care of getting all the updating into the file itself. (by the way the file is now (MSR, Basedata,) and no longer Baserec) Feel free to come and talk with me about any of the information or process. 2

The first view has only the top statement of each task and only 1 line of that statement. The second view has the entire task branch in all its gory detail. Mark either view. 3

There is a new convention for dates in Basedata. There can be two forms: 4

6:2 = 2nd week June -- June 12th 4a

6/12 = June 12th -- last day in second week of June 4b

Some correspondences follow: 4c

wks by mo/day: 6/5 6/12 6/19 6/26 7/3 7/10 7/17 7/24 7/31 8/7 4c1

wks by mo/week: 6:1 6:2 6:3 6:4 7:1 7:2 7:3 7:4 7:5 8:1 4c2

Service'Developement! 6

TENEX! 7

UCSB'Storage'File> 5/3 6/3 <John WSD 7a

Backup'System> ??? ??? <Ken? WSD Wallace? 7b

NIC! 8

NLS! 9

Fast'Sort> ??? ??? <WSD? Charles? Mimi? WHP? 9a

Collector'Sorter'Branches> ??? ??? <WSD? Charles? Mimi? WHP? 9b

Control'File> ??? ??? <Charles? Mimi? WSD 9c

Dialogue'Support! 10

Fortify'Journal> ??? ??? <WSD 10a

Journal'Subcollections> ??? ??? <WSD 10b

Auto'RFC'Numbers> ??? ??? <WSD 10c

Speedy'Journal> ??? ??? <WSD? 10d

Identification'System> ??? ??? <Mimi? WSD 10e

Journal'Harcopy'Entry> ??? ??? <WSD 10f

Journal'CONAN> ??? ??? <WSD 10g

File'Library'System> 4/1 ??? <WSD? 10h

New'Catalog'Numbers> ??? ??? <WSD? 10i

Journal'Secondary'Distribution> ??? ??? <WSD? 10j

Sets> ??? ??? <WSD Bruce 10k

Backlinks> ??? ??? <WSD? 10l

Mail'System> ??? ??? <WSD? 10m

Management'Systems! 11

Estimating> ??? ??? <Jim? Bruce? WSD? WHP? ??? 11a

Baseline -- WSD

```
Documentation!                                                    12
   Rome'Report> --- 6/5 <Dirk Doug Jim Walter Don WSD Cindy       12a
RINS!                                                             13
Software'Engineer'Augmentation!                                   14
Hardware'Upgrade!                                                 15
Collaboration!                                                    16
   Imlac'Interface'Spec> ??? ??? <Charles? WSD? Peter             16a
Miscellaneous!                                                    17
   Imlac'Support> ??? ??? <WSD? Peter?                            17a
Service'System'Operations!                                        18
   NLS'Maintain> --- --- <Mimi Charles WHP WSD? Bruce?             18a
   Journal'Maintain> --- --- <WSD Harvey                          18b
   Collector-Sorter'Maintain> --- --- <WSD                        18c
  ('!/ OR    % gets headings %                                    18d
(Done'Tasks)                                                      19

                                                                  20
```

Baseline -- WSD

Service'Developement! 21

TENEX! 22

UCSB'Storage'File> 5/3 6/3 <John WSD software NIC 1 22a

Information: 22a1

Perhaps use UCSB a a file storage place. 22a1a

Buyer(s): 22a2

(,NIC'Stage'1) 22a2a

Backup'System> ??? ??? <Ken? WSD Wallace? software 22b

Information: 22b1

A software system that automatically backs up files. BBN is to send whatever specs they have for this system.. 22b1a

NIC! 23

NLS! 2h

Fast'Sort> ??? ??? <WSD? Charles? Mimi? WHP? software NIC 2ha

Information: 2ha1

The Collector-Sorter needs a faster sort. 2ha1a

Buyer(s): 2ha2

(,NIC'Stage'2) 2ha2a

Collector'Sorter'Branches> ??? ??? <WSD? Charles? Mimi? WHP? software NIC 2hb

Information: 2hb1

Ennable the Collector-Sorter to sort branches in addition to/instead of statements. 2hb1a

Buyer(s): 2hb2

(,NIC'Stage'2) 2hb2a

Control'File> ??? ??? <Charles? Mimi? WSD software 24c

Information: 24c1

Each user is to have a "control file" that contains various information about himself and his files. 24c1a

Dialogue'Support! 25

Fortify'Journal> ??? ??? <WSD software NIC 0 25a

Information: 25a1

This is a collection of things to do to either make the Journal less susceptible to crashing or helping to straighten it out after it does crash. 25a1a

Buyer(s): 25a2

(,NIC'Stage'0) 25a2a

Journal'Subcollections> ??? ??? <WSD software NIC 0 25b

Information: 25b1

There can be subcollections of the collection of Journal entries. 25b1a

Buyer(s): 25b2

(,NIC'Stage'0) 25b2a

Costs: 25b3

1 day (WSD) 25b3a

Auto'RFC'Numbers> ??? ??? <WSD software NIC 0 25c

Information: 25c1

(Possibly) implement automatic RFC numbers. 25c1a

Buyer(s): 25c2

(,NIC'Stage'0) 25c2a

Costs: 25c3

2 days (WSD) 25c3a

Speedy'Journal> ??? ??? <WSD?
software NIC 0 25d

Information: 25d1

Because the present way of entering things in the Journal is slow, make the Journal faster or develop a facility for doing the number assignment and entry as a background process. 25d1a

Buyer(s): 25d2

(,NIC'Stage'0) 25d2a

Design: 25d3

Possible alternatives: 25d3a

Background processes -- 30 days (WSD) 25d3a1

Re-organize the Journal's files and file handeling by making its files sequential files as opposed to the NLS file that they currently are -- 10 days (WSD) 25d3a2

Improve efficiency of string construction stuff. 25d3a3

Inprove efficiency of file opening in TENEX. 25d3a4

Alternate file mechanisms in TENEX for handling Journal files. 25d3a5

Subtasks: 25d4

Journal'Measure> ??? ??? <WSD
software Nic 0 25d4a

Identification'System> ??? ??? <Mimi? WSD
software NIC 0 25e

Information: 25e1

The Identification System enables keeping information about all the people known to it -- like name, initials, account number, address. 25e1a

Buyer(s): 25e2

(,NIC'Stage'0) 25e2a

Subtasks: 25e3

Identification'File> ??? ??? <Mimi WSD software NIC 0 25e3a

Information: 25e3a1

Design and implement a NLS file containing identification information. The file will be used when entering NLS, during Journal Distribution (including groups), and for (,Novice'Mode). 25e3a1a

Buyer(s): 25e3a2

(,Novice'Mode) 25e3a2a

(,Group'Identification) 25e3a2b

Group'Identification> ??? ??? <Mimi WSD software NIC 0 25e3b

Information: 25e3b1

Being able to specify the name of a "group" instead of typing in all the initials of all the people in the group. 25e3b1a

Sub-Contracts:(s): 25e3b2

(,Identification'File) 25e3b2a

Cost: 25e3b3

4 days (WSD) 25e3b3a

Journal'Harcopy'Entry> ??? ??? <WSD software 0 25f

Information: 25f1

Allow catalog entries for documents that are not on-line (hardcopy only) to be entered into the Journal catalog. 25f1a

Buyer(s): 25f2

(,NIC'Stage'0) 25f2a

Journal'CONAN> ??? ??? <WSD
software 0 25g

Information: 25g1

The Journal should be able to do the right things when the Content Analyzer is on. 25g1a

File'Library'System> 4/1 ??? <WSD?
software NIC 1 25h

Information: 25h1

An open-ended file storage system with a catalog/directory and with at least semi-automatic moving of files from level to level according to use. 25h1a

Buyer(s): 25h2

(,NIC'Stage'1) 25h2a

Design: 25h3

See (Duvall, fstageo,), (Journal, 6357,), (Journal, 6256,), and (Journal, 5261,), for functional and user-interface specs. 25h3a

Additionally, see (Journal, 6947,) 25h3b

Costs: 25h4

8 weeks (WSD) 25h4a

Sub-Contracts: 25h5

May depend on (,More'Open'Files) 25h5a

There is a tie-in with at least the design phase of (,Sets) and (,Backlinks) 25h5b

Subtasks: 25h6

File'Library'Meeting> 6/1 6/1 <WSD Bruce Charles WHP Mimi
software NIC 1 25h6a

Information: 25h6a1

Hold a meeting to decide roughly how to do the file system. 25h6a1a

File'Library'Stage'0> ??? ??? <WSD
software NIC 1 25h6b

Information: 25h6b1

Implement the first version of the File Library System. This will probably only involve a facility for loading Journal entries as a read only "Tree". A Tree is a branch the uppermost member of which is considered to have statement number zero. 25h6b1a

Master'Catalog'Organization> ??? ??? <WSD
NIC 1 25h6c

Information: 25h6c1

Propose a design for the organization of the Master Catalog. 25h6c1a

File'Library'System'Design> ??? ??? <WSD
NIC 1 25h6d

Information: 25h6d1

Work out a design for the final, grandiose File Library System. 25h6d1a

New'Catalog'Numbers> ??? ??? <WSD?
software NIC 2 25i

Information: 25i1

(Possibly) change catalog numbering system to accept DATE TIME IDENT [SITE]. 25i1a

Buyer(s): 25i2

(,NIC'Stage'2) 25i2a

Costs: 25i3

4 weeks (WSD) 25i3a

Journal'Secondary'Distribution> ??? ??? <WSD?
software NIC 2 25j

Information: 25j1

(Possibly) automate secondary distribution (request for

copies of previously published documents) of Journal documents. 25j1a

Buyer(s): 25j2

(,NIC'Stage'2) 25j2a

Costs: 25j3

2 weeks (WSD) 25j3a

Sets> ??? ??? <WSD Bruce software NIC 25k

Information: 25k1

This is the set system so long thought about. 25k1a

Buyer(s): 25k2

(,Baseline'Tools) 25k2a

NIC 25k2b

(,File'Library'System) 25k2c

Design: 25k3

(Journal, 6207,) 25k3a

(Journal, 6983,) 25k3b

Backlinks> ??? ??? <WSD? software NIC 25l

Information: 25l1

A backlink is a mark of some sort attached to a point in a file that is pointed to by a link. The backlink includes information on the whereabouts of that link. 25l1a

Buyer(s): 25l2

(,Baseline'Tools) 25l2a

NIC 25l2b

(,File'Library'System) 25l2c

Costs: 25l3

6 weeks (WSD) 2513a

Mail'System> ??? ??? <WSD?
software NIC 25m

Information: 25m1

(Possibly) provide a mail system for the NET. 25m1a

Buyer(s): 25m2

NIC 25m2a

Costs: 25m3

4 weeks (WSD) 25m3a

Management'Systems! 26

Estimating> ??? ??? <Jim? Bruce? WSD? WHP? ???
software NIC 2 26a

Information: 26a1

Develop a more formal and hopefully more accurate methodology for estimating the costs (including time) of tasks that are to be worked on. 26a1a

Design: 26a2

There seem to be several different man-time estimates: 26a2a

time required to generate the Requirements 26a2a1

time required to generate the Design 26a2a2

time required to implement 26a2a3

estimates befor the design has been completed and estimates after (the latter is probably much more accurate) 26a2a4

Documentation! 27

Rome'Report> --- 6/5 <Dirk Doug Jim Walter Don WSD Cindy 27a

Information: 27a1

The report to Rome Air Development Center required by the contract that pays us. This report is for work in

1970. It was originally due in February but has been delayed indefinitely. Doug gave a guideline for writing: that we should try primarilly to produce a document that will be useful to us as an archive of 1970. 27a1a

Buyer(s): 27a2

The report to Rome is named as a buyer in Doug's scheme of buyers (Journal,6934,2d2). 27a2a

Requirements: 27a3

The requirements are spelled out in the contract with Rome; Mil has it on file. 27a3a

Design: 27a4

The design is the outline of the document (vannouhuys,rrr,:xb) 27a4a

Dates: 27a5

Due in Rome 7/1/71 27a5a

Cost: 27a6

(in hours estimated by Dirk 5/10) 27a6a

Doug:20 27a6b

Dirk: 60 27a6c

Jim:12 27a6d

Walter:8 27a6e

WSD:4 27a6f

Don:12 27a6g

Cindy :20 27a6h

Barbara:8 27a6i

Subtasks: 27a7

Norton'Work> --- 6/2 <Jim Dirk 27a7a

Information: 27a7a1

Jim Norton needs to rework parts of the report dealing with NIC (vannouhuys,rrr,5a) ,with Desing Team Planning (vannouhuys,rrr,7e) and with the Journal (vannouhuys,rrr.7f). 27a7a1a

Higher'Level'Processes> --- 6/2 <Walt 27a7b

Information: 27a7b1

WSB needs to complete the section on higher level processes (vannouhuys,rrr,7d). 27a7b1a

Remote'Life> --- 6/2 <WSD Dirk 27a7c

Information: 27a7c1

Dirk and WSD need to do further polishing on the account of his remote life (vannouhuys,rrr,7g). 27a7c1a

Transferring'Compiler> --- 6/2 <Don Dirk 27a7d

Information: 27a7d1

Don Andrews needs to take his section on transfer the compiler from the 940 too the 10 from rough draft to final form (vannouhuys,rrr,6b). 27a7d1a

Future'Plans> --- 6/3 <Doug Dirk 27a7e

Information: 27a7e1

Doug needs to write a section on Future plans for the summary (vannouhuys,rrr,2c) and a similar section standing alone (vannouhuys,rrr,8). 27a7e1a

References> --- 6/3? <Cindy Dirk 27a7f

Information: 27a7f1

We need to assemble them when Jim and Doug are though writing their sections 27a7f1a

Glossary> --- 6/3 <Dirk 27a7g

Information: 27a7g1

We need more and better words and to prune out old words 27a7g1a

Editing> --- 6/5 <Dirk 27a7h

Information: 27a7h1

Dirk needs to pat down the prose more, refine printing directives, and shepard through SRI reviewW and printing. 27a7h1a

Review> --- 6/4 <Doug 27a7i

Information: 27a7i1

Doug has to read and affirm that all this is consonant with his thinking. 27a7i1a

RINS! 28

Software'Engineer'Augmentation! 29

Hardware'Upgrade! 30

Collaboration! 31

Imlac'Interface'Spec> ??? ??? <Charles? WSD? Peter NIC 1 31a

Information: 31a1

Specs for interfacing a remote Imlac to NLS. 31a1a

Miscellaneous! 32

Imlac'Support> ??? ??? <WSD? Peter? software # 32a

Information: 32a1

Make an MOL for the Imlac. 32a1a

Service'System'Operations! 33

NLS'Maintain> --- --- <Mimi Charles WHP WSD? Bruce? software 0 * 1 2 33a

Subtasks: 33a1

Head'Flag'Bug> ??? ??? <WHP software 33a1a

Information: 33a1a1

Ouput File sometimes turns off the head flag in the origin statement. -- Bruce WHP 33a1a1a

Name'Hash'Bug> ??? ??? <WHP Bruce software 33a1b

Information: 33a1b1

Certain combinations of statement names and Name delimiter commands don't end up with the name being hashed right. 33a1b1a

Buyer(s): 33a1b2

(,Baseline'Tools) 33a1b2a

Index'Creation'Bug> ??? 5/1 <WSD? Ken? Charles? software 33a1c

Information: 33a1c1

This is the problem which has led to innumerable crashes and prevented us from easily creating titleword indexes 33a1c1a

Buyer(s): 33a1c2

(,Catalog) 33a1c2a

Bug'Mark'Bug> ??? ??? <Charles? Mimi? software 33a1d

Information: 33a1d1

The bug mark does not appear when something in column 72 is bugged. -- Bruce 33a1d1a

CONAN'Bugs> ??? ??? <Charles? software 33a1e

Information: 33a1e1

When the display is recreated with CONAN on, the first statement that passes is often lost. Also if a statement and its first substatement pass, the substatement is lost. Also if a statement that passes is edited (and still passes), it is lost in the next full (not fast) recreate display. Also the Output Processor crashes when the Content Analyzer is on. USUALLY if a statement and its

successor should pass, only the first one makes it. Also the last statement in this file keeps coming thru even though it doesn't fit the pattern. -- Bruce 33a1e1a

Break'Statement'Bugs> ??? ??? <Mimi? software 33a1f

Information: 33a1f1

A large number of Break Statements eventually results in an Exceed Capacity message. After the message its OK for a while. The sequence BS, JI, BS always produces the message (on a 'd I was giving as a LEVADJ). -- Bruce 33a1f1a

Set'Bugs> ??? ??? <Mimi software 33a1g

Information: 33a1g1

debug the set command 33a1g1a

Transpose'Branch'Bug> ??? ??? <Mimi? software 33a1h

Information: 33a1h1

In the old system (5/28) Transpose Branch looped. -- Bruce 33a1h1a

Output'Sequential'Bug> ??? ??? <Mimi? software 33a1i

Information: 33a1i1

Output Sequential doesn't work. 33a1i1a

Information: 33a2

Bug fixing, cleaning up, speeding up programs. 33a2a

Index'Creation'Bug> ??? 5/1 <WSD? Ken? Charles? software 33a2b

Information: 33a2b1

This is the problem which has led to innumerable crashes and prevented us from easily creating titleword indexes 33a2b1a

Special'TTY'I/O> ??? ??? <John Ken
software 33a2c

Information: 33a2c1

Fix so 15 and 30 character/second terminals don't drop characters. Also straighten out upper/lower case problems. 33a2c1a

GET'JSYS> ??? ??? <Ken
software 33a2d

Information: 33a2d1

The JSYS that does GETS doesn't work if there are overlapping pages in the running process and the file the GET is performed on. 33a2d1a

NOUT'JSYS> ??? ??? <Ken
software 33a2e

Information: 33a2e1

The NOUT JSYS (number output) sometimes clobbers register 3. 33a2e1a

OPENF'JSYS> ??? ??? <Ken
software 33a2f

Information: 33a2f1

OPENF set byte size doesn't make it to the FDB. 33a2f1a

Information: 33a3

Bug fixing, cleaning up, speeding up programs. 33a3a

Journal'Maintain> --- --- <WSD Harvey
software 0 * 1 2 33b

Subtasks: 33b1

Information: 33b2

Bug fixing, cleaning up, speeding up programs. 33b2a

Collector-Sorter'Maintain> --- --- <WSD
software 0 * 1 2 33c

Subtasks: 33c1

Index'Creation'Bug> ??? 5/1 <WSD? Ken? Charles? software 33c1a

Information: 33c1a1

This is the problem which has led to innumerable crashes and prevented us from easily creating titleword indexes 33c1a1a

Information: 33c2

Bug fixing, cleaning up, speeding up programs. 33c2a

['!] OR % gets headings % 33d

(Done'Tasks) 3h

BLP 6-JUN-71 12:44 7219

Baseline -- WSD

<JOURNAL>7219.NLS;2, 7-JUN-71 12:22 HGL : (Expedite) Title: Author(s): Bruce L. Parsley/BLP; Distribution: William S. Duvall/WSD; Keywords: Baseline Record; Clerk: BLP;
Origin: <MSR>JWSD.NLS;1, 4-JUN-71 16:44 BER ;

.PEL; .PGN=PGN-1; .GCR;

BLP 6-JUN-71 12:58 7222

Baseline -- Martin

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2. Update or note any erroneous or incomplete information you see. 1b

3. Let me know about any tasks that aren't in here or have been completed. 1c

To do this, you should mark this hardcopy with the above information and return it to me - by Tuesday 6/7? -- I will take care of getting all the updating into the file itself. (by the way the file is now (MSR, Basedata,) and no longer Baserec) Feel free to come and talk with me about any of the information or process. 2

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There is a new convention for dates in Basedata. There can be two forms: 4

6:2 = 2nd week June -- June 12th 4a

6/12 = June 12th -- last day in second week of June 4b

Some correspondences follow: 4c

wks by mo/day: 6/5 6/12 6/19 6/26 7/3 7/10 7/17 7/24 7/31 8/7 4c1

wks by mo/week: 6:1 6:2 6:3 6:4 7:1 7:2 7:3 7:4 7:5 8:1 4c2

Baseline -- Martin

Management'Systems! 11

Documentation! 12

RINS! 13

Software'Engineer'Augmentation! 14

Hardware'Upgrade! 15

New'Cameras> ??? ??? <Martin 15a

Collaboration! 16

Miscellaneous! 17

Service'System'Operations! 18

Hardware'Maintenance> --- --- <Ed Martin Fred Jake Bo Roger 18a

['!] OR % gets headings % 18b

(Done'Tasks) 19

20

Baseline -- Martin

Service'Developement! 21

Hardware'Documentation> --- ??? <Martin Roger Bo?
0 * 1 2 21a

Information: 21a1

Bring documentation on all our hardware up to date and make it complete. Martin and Bo will do documentation that serves hardware trouble-shooters. Roger will do documentation that serves programmers. 21a1a

Hardware'Training> ??? ??? <Ed Martin Roger Bo Fred Jake
1? 21b

Information: 21b1

Train Fred on Tasker and work station input devices, Martin on digital equipment, Jake on the TV equipment, Roger on Cybernex stuff and the paging box, and Bo. 21b1a

Hardware'Doc'Standards> 5/1 5/1 <Ed Martin Roger Bo Fred Jake
2? 21c

Information: 21c1

Decide on standards of hardware documentation. The standards would be applied both to documentation done by ARC people and future contractors. 21c1a

TENEX! 22

Tasker'Test'Pattern> ??? ??? <Martin Charles
software 1 22a

Information: 22a1

Be able to display a test pattern. 22a1a

NIC! 23

NLS! 24

Dialogue'Support! 25

Management'Systems! 26

Documentation! 27

RINS! 28

Software'Engineer'Augmentation! 29

Hardware'Upgrade! 30

New'Cameras> ??? ??? <Martin
O 30a

Information: 30a1

Evaluate various TV cameras. 30a1a

Collaboration! 31

Miscellaneous! 32

Service'System'Operations! 33

Hardware'Maintenance> --- --- <Ed Martin Fred Jake Bo Roger
O * 1 2 33a

Information: 33a1

Trouble-shooting, tweaking, and preventive hardware maintenance. 33a1a

Subtasks: 33a2

Bryant'Disk'Mods> ??? ??? <Roger 33a2a

Information: 33a2a1

Modifications to the Bryant disk controller to clean it up. 33a2a1a

Priority: 33a2a2

Low. It hasn't caused any problems yet. 33a2a2a

Costs: 33a2a3

1 man-week (Roger) 33a2a3a

Printer-Imlac'Interference> ??? ??? <Ed
33a2b

Information: 33a2b1

Fix it so when the printer is down Duvall's Imlac isn't screwed. 33a2b1a

```
   ['!] OR     % gets headings %                                    33b
(Done'Tasks)                                                       34
```

BLP 6-JUN-71 12:58 7222

Baseline -- Martin

<JOURNAL>7222.NLS;2, 7-JUN-71 12:05 HGL ; (Expedite) Title: Author(s):
Bruce L. Parsley/BLP; Distribution: Martin E. Hardy/MEH; Keywords:
Baseline Record; Clerk: BLP;
Origin: <MSR>JMARTIN.NLS;1, 4-JUN-71 17:14 BER ;

.PEL; .PGN=PGN-1; .GCR;

BLP 6-JUN-71 13:00 7223

Baseline -- Dave

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   wks by mo/week: 6:1 6:2 6:3 6:4 7:1 7:2 7:3 7:4 7:5 8:1 4c2

Baseline -- Dave

Baseline -- Dave

Service'Developement! 20

TENEX! 21

Bryant'System> ??? ??? <Dave Ken
software 0 21a

Information: 21a1

Make a system that uses the Bryant drum and not the Univac. 21a1a

Man-time: 21a2

less than 1 man-week /Dave/ 21a2a

Bryant'Diagnostics> ??? ??? <Dave Roger
software 0 21b

Information: 21b1

Diagnostics for the Bryant drum. Modify Univac diagnostics to provide a time-shared diagnostic for the Bryant. 21b1a

Man-time: 21b2

1 man-week /Dave/ 21b2a

Drum'Compare> 4/1 ??? <Don Ken Ed WHP Roger Dave John?
software 1? 21c

Information: 21c1

Decide relative merits of Univac, Bryant, and both drums and decide which to keep. 21c1a

Milestones: 21c2

before 6/2: drum statistics collector so can run tests 21c2a

no decision will be reached before 9/1 to allow statistic gathering and to assure that the heads are not going to crash 21c2b

NIC! 22

NLS! 23

Baseline -- Dave

EXEC'NLS> 4/2 ??? <Dave? Mimi? WHP? Charles?
software NIC 23a

Information: 23a1

Put (some) EXEC commmands into NLS. 23a1a

Requirements: 23a2

(see -- Journal, 6229) 23a2a

Graphics> ??? ??? <Charles? Mimi? WHP? John? Dave?
software 23b

Information: 23b1

Make a graphics package. May be intimately related to the calculator. 23b1a

Dialogue'Support! 24

Management'Systems! 25

Documentation! 26

RINS! 27

Software'Engineer'Augmentation! 28

Hardware'Upgrade! 29

Collaboration! 30

Miscellaneous! 31

Service'System'Operations! 32

TENEX'Maintain> --- --- <Ken John Dave Charles
software 0 * 1 2 32a

Subtasks: 32a1

PMAP'Bug> ??? ??? <Ken
software 0 32a1a

Information: 32a1a1

Bill Duvall thinks he discovered a bug in PMAP when there are lots of files open. 32a1a1a

Baseline -- Dave

Index'Creation'Bug> ??? 5/1 <WSD? Ken? Charles?
software 32a1b

Information: 32a1b1

This is the problem which has led to innumerable crashes and prevented us from easily creating titleword indexes 32a1b1a

Special'TTY'I/O> ??? ??? <John Ken
software 32a1c

Information: 32a1c1

Fix so 15 and 30 character/second terminals don't drop characters. Also straighten out upper/lower case problems. 32a1c1a

GET'JSYS> ??? ??? <Ken
software 32a1d

Information: 32a1d1

The JSYS that does GETS doesn't work if there are overlapping pages in the running process and the file the GET is performed on. 32a1d1a

NOUT'JSYS> ??? ??? <Ken
software 32a1e

Information: 32a1e1

The NOUT JSYS (number output) sometimes clobbers register 3. 32a1e1a

OPENF'JSYS> ??? ??? <Ken
software 32a1f

Information: 32a1f1

OPENF set byte size doesn't make it to the FDB. 32a1f1a

Information: 32a2

Bug fixing, cleaning up, speeding up programs. 32a2a

BLP 6-JUN-71 13:00 7223

Baseline -- Dave

<JOURNAL>7223.NLS;2, 7-JUN-71 12:26 HGL ; (Expedite) Title: Author(s): Bruce L. Parsley/BLP; Distribution: J. D. Hopper/JDH; Keywords: Baseline Record; Clerk: BLP;
Origin: <MSR>JDAVE.NLS;1, 5-JUN-71 16:01 BLP ;

.PEL; .PGN=PGN-1; .GCR;

BLP 6-JUN-71 13:0h 722h

Baseline -- Harvey

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   Wks by mo/week: 6:1 6:2 6:3 6:h 7:1 7:2 7:3 7:h 7:5 8:1 hc2

Baseline -- Harvey

Service'Developement! 20

TENEX! 21

NIC! 22

NLS! 23

Journal'Commands> ??? ??? <Harvey software 23a

Information: 23a1

Implement journal commands in display nls command parser. 23a1a

Collecter-Sorter'Commands> ??? ??? <Harvey software 23a1b

Information: 23a1b1

Implement Collecter-Sorter commands in display nls command parser. 23a1b1a

Catalog'Commands> ??? ??? <Harvey software 23a1c

Information: 23a1c1

Implement Catalog commands in display nls command parser. 23a1c1a

Identification'Commands> ??? ??? <Harvey software 23a1d

Information: 23a1d1

Implement Identification commands in display nls command parser. 23a1d1a

Paper'Tape'Input> 4/2 ??? <Harvey software NIC * 23b

Information: 23b1

Allow files to be edited by providing all the input on papertape. This may be the first stage of Deferred Execution. 23b1a

Sub-Contracts: 23b2

(,Oiled'Paper'Tape) 23b2a

Deferred'Execution> 4/2 ??? <Harvey Doug
software NIC 23c

Information: 23c1

Allow user to specify many commands before any of them are executed. Would be primarily used from off-line. 23c1a

Requirements: 23c2

(Journal,6936,) 23c2a

Buyer(s): 23c3

(,NIC'Stage'2) 23c3a

Dialogue'Support! 24

Site'Journal'Access'Copies> ??? ??? <Harvey?
software NIC 1 24a

Information: 24a1

Automate distribution of Journal entries to NET sites for them to place in their Journal Access Copy. 24a1a

Buyer(s): 24a2

(,NIC'Stage'0) 24a2a

Journal'On-line'Distribute> --- ??? <Charles Harvey
software NIC 1 24b

Information: 24b1

Automatic distribution of Journal entries on-line to ARC and NIC users. 24b1a

Buyer(s): 24b2

(,NIC'Stage'1) 24b2a

Costs: 24b3

6 man-weeks (WSD) 24b3a

Sub-Contracts: 24b4

maybe (,Control'File) 24b4a

maybe (,Network'File'Transfer) 24b4b

Management'Systems! 25

Documentation! 26

Tree-Meta'Report> ??? 6/1 <Harvey Don Dirk 26a

Information: 26a1

Interim report plus: 26a1a

more work on the Program Environment section 26a1b

a detailed example 26a1c

more examples in the semantic section 26a1d

a section on bootstrapping compilers 26a1e

possibly a section on history 26a1f

RINS! 27

Software'Engineer'Augmentation! 28

Hardware'Upgrade! 29

Oiled'Paper'Tape> ??? ??? <Roger? Harvey?
NIC 0 29a

Information: 29a1

The TEN's paper tape reader only likes unoiled paper tape. Our 33's only like oiled paper tape. 29a1a

Collaboration! 30

Miscellaneous! 31

Service'System'Operations! 32

Journal'Maintain> --- --- <WSD Harvey
software 0 * 1 2 32a

Subtasks: 32a1

Information: 32a2

Baseline -- Harvey

```
        Bug fixing, cleaning up, speeding up programs.          32a2a
   ['!] OR     % gets headings %                                32b
(Done'Tasks)                                                    33
```

Baseline -- Harvey

<JOURNAL>7224.NLS;2, 7-JUN-71 12:28 HGL ; (Expedite) Title: Author(s): Bruce L. Parsley/BLP; Distribution: Harvey G. Lehtman/HGL; Keywords: Baseline Record; Clerk: BLP;
Origin: <MSR>JHARVEY.NLS;2, 5-JUN-71 16:40 BLP ;

.PEL; .PGN=PGN-1; .GCR;