

Procedures for the Cable Production Inventory Table
--by Ernest Szeto (revised March 9, 1989)

The following is detailed information on the Cable Production Inventory system. Not everyone will need it, but it is available for reference when the Sybase data entry software goes into use for this database table.

The sections of this document are as follows:

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The information will also be available on-line in the mdbuser account from the command "helpdoc".

I hope this documentation will answer any questions regarding use of the Sybase software for this database table.

Procedures

1. General Information.

1.1. Procedures and Talmudic Advice Concerning Data Entry and Storage/Cutting of Cable: an example.

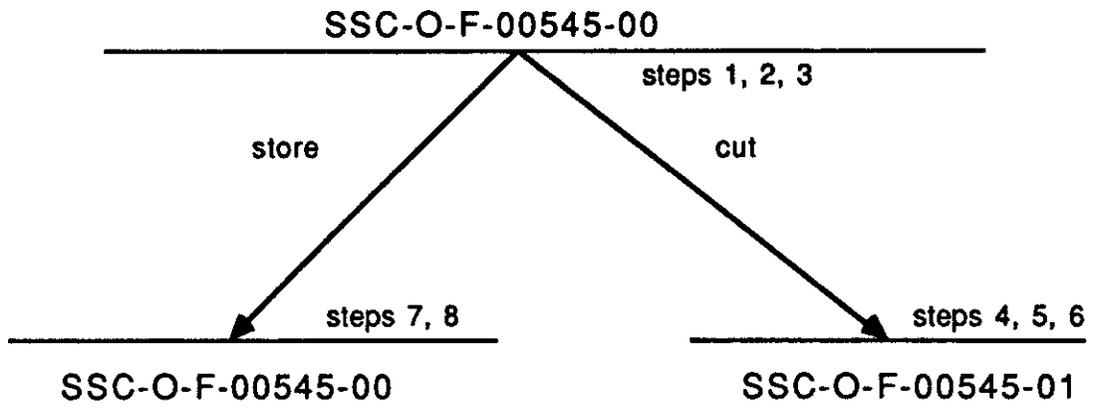
This example is intended to suggest how the cable cutting and storage process might work together with the data entry. The Cable Production Inventory table currently has two data entry screens: one for RECEIVING and storage of bare cable, and another for CUTting, or removal of bare cable from storage and usage. This procedure for coordinating data entry and inventory might not necessarily be the best procedure, but its presentation is meant convey the intention (or conceptual understanding) of the author of these data entry screens. Any variation of this procedure that achieves the same results is welcome.

- (1) The cable SSC-O-F-00545 is received from production. The cable segment "00" should be tacked on to this Cable Production ID to form SSC-O-F-00545-00. The "00" signifies this is the original spool. The current running segment ID is "0" (right digit) and the parent segment (immediate predecessor on the left digit) is also "0". The segment ID's generally consist of two digits in the form of <immediate-predecessor-id><current-running-id>. These ID's are digits that go from 0-9 and A-Z and are allocated incrementally whenever a cut is made from the Cable Production ID SSC-O-F-00545 (or SSC-O-F-00545-xx). The "immediate predecessor ID" and "current running ID" are also referred to as "source no." and "cut no." in section 5.10 of the database proposal (SSC-N-582) of January 11, 1989.
- (2) An entry of SSC-O-F-00545-00 is made on the RECEIVING screen via the program "CbInvRecv" in the main menu into the database.
- (3) The cable is marked accordingly and stored.
- (4) At a later date, the SSC-O-F-00545-00 cable is pulled from storage. The length of cut is determined based on the strand map for the cable.
- (5) The operator goes to the CUT screen via the program "CbInvCut" in the main menu. The operator enters the Cable ID of the source segment to cut, namely, SSC-

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O-F-00545-00. (He or she could also find the ID in the valid entries window since it was previously entered into the database via the RECEIVING screen. However, it is safer to look at the tag on the cable and just enter it. Also, there may be too many entries to browse through later on.) The operator also enters the length to be cut from the original cable. After the entry has been inserted via the menu option CUT NEW, the CUT screen assigns a new Cable ID to the segment to be cut, namely SSC-O-F-00545-01.

- (6) The operator physically makes the cut and marks the segment SSC-O-F-00545-01 as instructed by the program.
- (7) If the remaining piece of the cable is not shipped elsewhere, the operator should make a new entry on the RECEIVING screen for the original spool SSC-O-F-00545-00 with a new entry for "remaining length". (Do not modify the original SSC-O-F-00545-00 entry. Both entries should be available for tracking purposes.)
- (8) The operator physically stores SSC-O-F-00545-00.



(Procedures cont.)

Segment ID

1.2. Understanding Segment ID's: an example.

This document presents an example for understanding how segment ID's are formed as discussed in section 5.10 (CB_PROD_INVENTORY) of the database proposal (SSC-N-582) of January 11, 1989. The lengths shown here may have little bearing on reality, but the principle is important. The example applies for a hypothetical Cable Production ID SSC-O-F-00545. (Do not confuse "Cable ID" and "Cable Production ID". The former has the segment ID tacked on to it, such as SSC-O-F-00545-00, whereas the latter does not.)

The segment ID's are formed by two digits ranging from 0-9 and A-Z (36 cuts maximum from the original cable from production). The segment ID digits are in the form of <source no.><cut no.> or <immediate predecessor ID><current running ID>. With the immediate predecessor ID's, we can trace the ancestry of a cut by tracing through several segment ID's for the same Cable Production ID. The segment ID's are allocated incrementally starting at 0 whenever a cut is made for a given Cable Production ID such as SSC-O-F-00545.

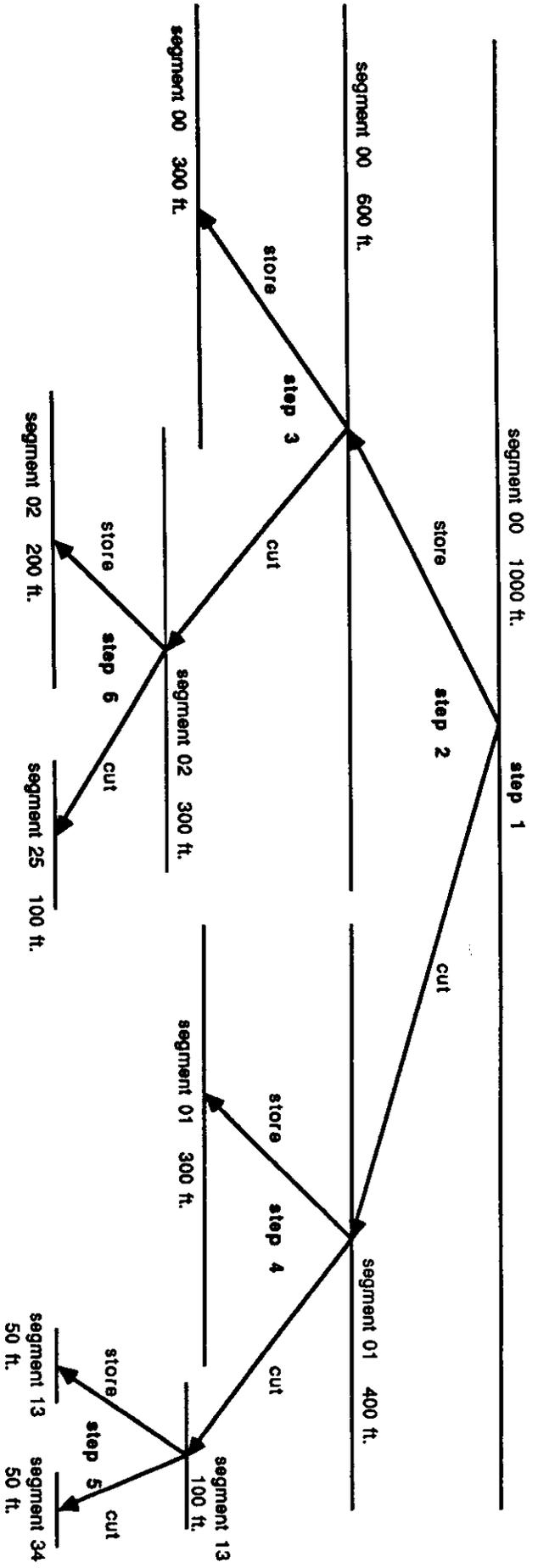
A possible sequence of events might be the following:

- (1) The original spool is received. It gets the segment number 00 by convention. The length of the cable is 1000 ft.
- (2) 400 ft. is cut from the segment 00. This cut segment gets the segment ID 01. (The parent ID is 0, it's current running ID is 1). 600 ft. of 00 is returned to storage.
- (3) 300 ft. is cut from 00. The segment ID for this cut is 02. (Parent again is 0. The current running ID is 2, or second temporal cut of the Cable Production ID SSC-O-F-00545.) 300 ft. of 00 is returned to storage.
- (4) 100 ft. is cut from the 400 ft. of segment 01. It gets the segment ID 13. (Parent is 1, current running ID or cut no. is 3). 300 ft. of 01 is returned to storage.
- (5) 50 ft. is cut from the 100 ft. of segment 13. It gets the ID 34. 50 ft. of segment 13 goes back to storage.

Segment ID

- (6) 100 ft. is cut from 300 ft. of segment 02. It gets the ID 25. 200 ft. of 02 is returned to storage.

Whenever a segment goes to storage, the RECEIVING screen is used. Whenever a segment cut, the CUT screen is used. This example should be clearer with the diagram on the next page.



For Cable Production ID SSC-O-F-00545

(Segment ID's example cont.)

Sybase Convention

1.3. Notes on Sybase Screen Keys and Conventions.

The following keys are a subset of useful keys to know when using the standard Sybase interface:

- (1) control-r (^r): The Sybase screen (and screen programs written in that style) is divided into two regions: 1) the MENU region. 2) the DATA ENTRY fields region. Typing control-r (i.e., holding down the control key and typing "r" at the same time) will allow the cursor to switch between these two regions whenever access to both is allowed.
- (2) arrow keys: These keys are used for moving the cursor among MENU choices or among lines in the VALID ENTRIES WINDOW (see below for the latter).
- (3) <carriage-return>: This means "select" the current item, i.e., the item where the cursor is positioned. This usually applies to the MENU region and the VALID ENTRIES WINDOW.
- (4) <tab>: This is for moving the cursor among fields (usually "forwards", "downwards", or "to the right") in the DATA ENTRY region. (This is the same as control-n (^n), i.e., "next" field.)
- (5) control-p (^p): This is for moving the cursor "backwards" or to the "previous" field in the DATA ENTRY region. It is the opposite of <tab> (or control-n).
- (6) control-v (^v): This opens the VALID ENTRIES WINDOW in the DATA ENTRY region for a data entry field (usually marked by "(^v)"). You can treat the items in that window as menu items, using the arrow keys to move around and <carriage-return> to select an item. To close the window, type control-v again. Some fields will allow you to enter other entries besides what's available in the VALID ENTRIES WINDOW. Other fields will not allow such entries.
- (7) control-d (^d): ReDraw the screen in case it gets defaced by line noise.

The following are notes on conventions for menu items:

Sybase Convention

- (1) <top menu item>!: A menu item at the top with a "!" at the end means that there are no pull down menu items underneath. Selecting this menu option executes the option immediately.
- (2) X - eXit: This generally means exit the current screen. (For some people it also means "execute" the screen. The Sybase "Data Workbench", *dwb*, usually allows the user to "apply", i.e., execute the options on the screen, or "cancel" upon exiting the screen.)
- (3) ? - help: This provides context sensitive help for the current field in the DATA ENTRY region.

Login mdbuser

2. Detailed Instructions on how to use the Software.

2.1. Logging into the Guest Account to run Sybase.

Currently, Sybase v3.1 for the SSC/CDG runs on a SUN called "pistachio". You can connect with "pistachio" using telnet or rlogin on your host computer (assuming it is defined on your host machine).

For example, you can type...

```
rlogin pistachio.ee.lbl.gov -l mdbuser
```

(i.e., type "flag"[-] "elle"[lowercase L] for "login" mdbuser) or

```
telnet pistachio.ee.lbl.gov
```

to connect with pistachio. The username for the guest account is "mdbuser" (don't type the quotes). (This document will not disclose the password. Contact Ernest Szeto or Bob Leedy for the password.)

After you login, you should be set for a vt100 (unless you are on a SUN). (Most of the programs are compiled/linked for the vt100.) If you have problems with the erase key, you can redefine it to the desired key by typing...

```
tset -e<erase_key>
```

where <erase_key> is the desired erase key typed immediately after the "-e".

To use the standard Sybase applications from the main menu, type...

```
menu
```

The menu item currently selected is shown by the location of the cursor.

Note that both Sybase and unix are case sensitive. Commands should be typed in the case shown.

When you run a Sybase program from the main menu, it usually starts with its own login (username again is "mdbuser") and prompt for password. Currently, no password is required for

Login mdbuser

any of the Sybase programs from mdbuser. Just hit
<carriage-return> at the prompt for password.

To logout, type...

logout

Note that <carriage-return> follows all of the above com-
mands typed into the terminal keyboard.

Receiving Screen

2.2. Inserting New Data for Cable Storage.

Whenever a piece of cable is received for storage, it should be entered into the Cable Production Inventory database. You can select the program "CbInvRecv" from the main menu to enter this storage information. After a cable has been cut, another entry should be made for the remaining piece returning to storage.

The following are some notes on the fields and menu items for data entry after you have entered into the Cable Production Inventory RECEIVING screen.

- (1) Cable Production ID: This should have the format of buyer-use-vendor-serialNumber. For example, "SSC-0-F-00545" is a valid ID. Note that the serial number should have exactly five digits. Zero fill these digits on the left, if necessary. If you hate typing, perhaps an easier method would be to select the menu item "CABLE ID". A window will pop up for forming parts of the Cable Production ID. It will prompt for the buyer code, use code, vendor code, serial number, and cable segment as separate fields, then form the cable ID with the hyphens and zero fill for you. Each of these codes will have a valid entries window (^v) available to help with the data entry. This field will be forced to upper case by the program. Be sure to <tab> past the last field after all the entries are made in this window.
- (2) Cable Segment: A typical value for this entry is "00". The entry "00" stands for the original cable from production with no cuts. Occasionally, you may get a non-00 entry, such as "12", "2A", etc. The left digit is the identifier of the immediate predecessor and the right digit of the current running segment ID (sequential cut numbers 0-9, A-Z from the original production cable given in temporal order). The cable segment could be entered via the "CABLE ID" menu option, along with the cable production ID as mentioned above. The values in this field are forced to uppercase.
- (3) Cable Length: Enter the length in feet of the cable sent to storage.

Receiving Screen

- (4) Location: Enter the mnemonic for the location of cable storage. This will be forced to uppercase.
- (5) Storage Date: Enter the storage date in the form "mm/dd/yy" or "Mon Day Year". For example, "3/2/89" and "mar 2 1989" are valid entries. (Do not type the quotes shown here.) If you leave this field blank, today's date and time will be inserted when you select the "INSERT NEW" menu option.
- (6) Receiving Supervisor: Enter last and first name ("**<last>, <first>**") of the receiving supervisor. This entry will be forced to uppercase by the program.

Cut Screen

2.3. Inserting Cable Cut Entries into the Cable Production Inventory Table.

Whenever a piece of unwrapped cable is removed from storage and cut, an entry should be made in the Cable Production Inventory table. The CUT data entry screen should also be used even when there is no cutting of the cable, i.e., when the cable is used in its entirety. In short, use the CUT screen whenever a cable is removed from storage for use. Use the RECEIVING screen if it goes back to storage. To run the CUT screen, select "CbInvCut" (Cable Production Inventory Cut) from the main menu.

The following are annotations on fields for data entry. The screen should already be in the "cleared for insert" state. (If not, select CLEAR from the top menu and CLEAR FOR INSERT from the pull down menu.)

- (1) Source Cable ID to Cut (^v): Enter the source cable to cut in the format buyer-use-vendor-serialNo-segmentId. For example, "SSC-O-F-00545-00" is a valid entry. You can select from a list of cable entries in storage by typing control-v (hold the control key down and type "v" together). A window of valid entries will open up for you to make your selection. To position the cursor on the valid line, use the up/down arrow keys. To make the selection, hit <carriage-return>. The selected line will be highlighted. To close the valid entries window, type control-v again. The selected entry will be entered into the field for you. There may be times when you have the source cable to cut right before you, along with the cable ID. (If the cable ID does not have a segment ID, for example, it has a "SSC-O-F-00545" but no "-00", add the "-00" in the source cable ID, signifying it is the original production cable with no cuts). If the cable (or segment thereof) is a valid cable along with with a cable ID, but no entry can be found for storage in the database from the valid entries window (because someone has not entered it), then it must be entered manually. Enter the cable ID of the cable (presumably marked) about to be cut. Remember, the serial number should have exactly five digits. Add zeros on the left if necessary. You can select the "FORM CABLE ID" option from the top menu to make entering parts of the cable ID easier. This menu option opens up a window for entering separate

Cut Screen

pieces of the cable ID. The buyer code (SSC, FNL, BNL,...), use code (O, I,...), vendor code (I for IGC, F for FUR, ...), serial number (you don't have to worry about the five digits here, just enter the number), and segment ID (0-9, A-Z, for the two digits) will be prompted individually. After you tab out of the last field, the cable id with hyphens and five digits for the serial number will be entered for you. Note that you can type control-v (^v) for the buyer code, use code, and vendor code in this separate window to get valid entries currently in the database. (You can also add your own if its not currently available. However, using control-v is highly recommended.) The data will be forced to uppercase. You can use this window again if you want to change the cable ID.

- (2) Cut Type: This option will determine how the program will determine the new segment ID of the piece to be cut. You can position the cursor to the desired option by using the down/up arrow keys. You can select the option by hitting <carriage-return>. The "New Segment ID" option will find the next segment ID for a given cable from production. (These are numbers incremented sequentially from 0-9, A-Z). The first digit of this segment ID will be the ID of its parent (immediate predecessor), i.e., the source cable segment from which the cut is to be made. The second digit will be the new segment ID itself. The other possible options are BEG and END for cuts at the beginning and end of the cable, usually used for testing. If you do not cut, but decide to use all of the original cable, the program will retain the original cable ID. (The inventory mnemonic and code, however, will be different in the database.)
- (3) Inventory Mnemonic (^v): Select the correct Mnemonic (purpose of the cut) from the valid entries window by typing control-v. Control-v (^v) opens/closes the valid entries window. The up/down arrows position the cursor to the desired entry. <Carriage-return> selects/highlights the entry for transfer from the window. Typical values are TEST_SAMPLE, SENT_TO_WRAP, REJECTED, etc. You can also select "tab, enter my own" from the valid entries window. After this string is transferred to the field, tab out the field and a new window will open up and allow

Cut Screen

you to enter your own mnemonic.

- (4) Inventory Code: This is a one letter code that will be filled out automatically for you when you select the inventory mnemonic.
- (5) Cut Length: If an entry was found in the valid entries window from the cable ID field, this will be initialized as the remaining length, or the maximum length of the cable from storage. You should enter here the length of the cable in feet you wish to cut off. It should be less than the initialized value. (If the cut length is not less than the original cable length, you will get an error message.)
- (6) Date Removed: Enter the date removed. Example of valid entries are "3/2/89" or "mar 2 1989". (Do not type the quotes.) If you leave this blank and tab on to the next field, it will be filled in automatically for you with today's date and time.
- (7) Use Supervisor: Enter last and first name of use supervisor. This field will be forced to uppercase.
- (8) Removal Comment: Enter any pertinent comments. This is the only field that will not be forced to uppercase. It will retain the case of its original entry.
- (9) Comment Person: Enter last and first name of the person making the above comments. The entry will be forced to uppercase.
- (10) Destination: Enter the lab mnemonic of where the cable is sent. This is forced to uppercase.
- (11) Individual Shipped To: Enter the last and first name of the person responsible for receiving this cut shipment of cable.

After you have made entries in the fields, type control-R to revert back the menu portion of the screen. Select

CUT NEW

and the program will assign the cable ID of the segment to be cut. Be sure to mark the cut segment with this new cable ID. Data on the screen will also be inserted into the

Cut Screen

database table when CUT NEW is selected. Make sure that the cut information on the screen is accurate before committing it. Be sure to make a new entry for the remaining segment going back to storage on the RECEIVING screen. (It is quite conceivable that this segment for storage may be shipped elsewhere. The person receiving this shipment should then make the entry on the RECEIVING screen.)

Search/Modify

2.4. Searching and Modifying Data in the Cable Production Inventory Screens.

Clear the screen with the following menu option if in the Cable Production Inventory RECEIVING screen:

CLEAR SCREEN

or select CLEAR from the top menu and CLEAR FOR SEARCH MASK from the pull down menu if in the Cable Production CUT screen. (Note that the other option CLEAR FOR INSERT clears the screen for inserting a new record when a piece of cable is cut. The screen entry format is slightly different.)

Enter the values you want to search for in the appropriate fields. Note that "%" may be used as a wildcard to match 0 or more characters in a character field. For example, you might enter "SSC-I-%" in the cable production ID field to find everything that begins with a "SSC-I-". You can enter a "%" in the cable production ID field to match all records.

If you enter a matching numeric value, records containing that value for that field will be found if they are within 20% of the entered value.

If you enter a matching date value, records containing dates within two months of the entered value will be found.

Multiple entries into fields for the search mask are ANDed together. For example, if the entry "SSC-I-%" were entered in cable production ID and the value "REMS%" were entered for receiving supervisor, records that begin with "SSC-I-" for cable production ID AND beginning with "REM" for receiving supervisor will be found.

To actually find the matching record after entering the search mask, select the top menu option

SEARCH

then select

FIND MATCH

from the pull down menu. This will find the first matching record. To find the next matching record, select SEARCH again and NEXT RECORD. You can go backwards with the

Search/Modify

collection of matching records by selecting SEARCH and PREVIOUS RECORD.

In the course of searching, you may find a record that needs to be modified. You can make the modification in the data entry fields, then select

MODIFY OLD

from the top menu and

MODIFY RECORD

from the pull down menu. You can also delete a record by selecting MODIFY OLD and DELETE RECORD. The selection will delete the current record on the screen. Of course, modification and deletion of data should be done with a great deal of caution. (For the RECEIVING screen it is preferable to make a new entry for new information.) In many cases, the Sybase system administrator may lock the records from modification and deletion. These locked records are available only for viewing.