

SECTION 11. COMPUTING AND DATA ENTRY

11.1 Computing Systems Overview

Computing for AASK can be divided into two broad areas: computing at the Clinical Centers or Central Labs, and computing at Data Coordinating Center (DCC). The purpose of this overview is to describe in general terms how these systems are organized.

Each Clinical Center has a personal computer. These PC's will be used, for study purposes, to run software for communicating electronically to the DCC. They may additionally be used for a variety of tasks useful for the centers' work related to the study, such as word processing.

To connect from your PC to the DCC (located in Cleveland, Ohio, at the Cleveland Clinic Foundation), you will be making use of the Internet, a world-wide network of computers, composed of and supported by primarily academic, governmental, and non-profit institutions. Using the Internet, you will be able to interact with the DCC's computers in Cleveland.

The PC that sits in your office is not directly connected to the Internet. You must first connect from your PC to a nearby computer that is on the Internet, and then from that computer to the DCC. This nearby computer is called an Internet "node." Just what kind of computer each center will connect to in order to access the Internet will vary from center to center. Some centers will be connected to computers at their institution that are an Internet node. This connection might be through a campus network, or it might involve dialing up the institution's computer over a phone line using a modem. Other centers will be utilizing a public provider of Internet access for a small monthly fee. Connecting to such a service will involve making a local phone call to connect using a modem. In either case, this manual will refer to the nearby computer to which the AASK center's personal computer connects to gain Internet access as the Local Internet Provider (LIP).

The DCC's computer is also connected to the Internet. Hence, connecting from your personal computer to your LIP allows you to reach the DCC across the Internet. In fact, you'll be using the DCC's computer directly when you enter data, and receive reports and mail messages from the DCC.

When you read the "instructions" section of this chapter, some keys will be marked in brackets, like this: [commit]. This means the exact key you press will depend on the keyboard emulation (VT100 or VT220) you are using with your communications software.

11.2 Your AASK Study Personal Computer

Each center is required to have a minimum of one PC dedicated to the purposes of the AASK Study. The DCC's recommended specifications for your PC are outlined in Appendix A.

11.3 Instructions: Connecting to the DCC Computer

1. Connect to the nearby computer that serves as your Local Internet Provider, or LIP. The steps taken to connect will vary from center to center depending on whether you are

networked to the LIP or dial into the LIP.

Steps a-c reflect what typically takes place for centers that dial into the LIP using the recommended communications software Crosstalk.

a. Start Crosstalk on your PC by typing XTALK4 at the C:\> prompt and pressing Enter.

b. After a few moments, you will see the Crosstalk phone book directory. This is a list of other computers which Crosstalk has been set up to connect to. Locate the entry corresponding to your Local Internet Provider. Select this entry by moving the highlight bar using the arrow keys. When the entry for your LIP is highlighted, press the Enter key.

c. Crosstalk will dial the modem to establish the connection. Typically you will hear the dialing, the phone ringing, a high pitched sound (the "carrier"), a static sound, and then silence. In a few moments the screen should go blank and a login prompt to your LIP should appear.

2. Log into your LIP computer according to the instructions provided by your LIP.

3. Once you are connected to your LIP, you need to use Telnet in order to connect across the Internet to the DCC. How you access Telnet will depend upon how your LIP is set up. You will need documentation from your LIP as to how to do this. At some point you will be asked for an address of the computer you wish to telnet into. This is the Internet address of the DCC's Sun computer:

bach.bio.ri.ccf.org

4. If the connection is successfully established, you will probably see a message that says "Connected to bach.bio.ri.ccf.org". You'll also see "SunOS UNIX (bach)", telling you the operating system and name of the computer to which you are connected.

5. You will then see the prompt "login:". Type in your Sun username, provided to you by the DCC, and press Enter. Your username will be of the form "aaskxxxx" where "xxxx" is up to four letters of your institution's name. *Your username must be entered in lowercase letters.*

6. You will then see the prompt "Password:". Type in your Sun account password, and press Return. Note that your password will not be displayed on the screen as you type it, for reasons of security. Your password was originally provided to you by the DCC, but you should have changed it to something of your own choosing. Note that lower case letters and capital letters matter when entering your password; you must enter it in upper, lower, or mixed case, according to how you entered it when you set your password, in order for it to be recognized. Refer to "Changing Your Password" Section 11.7.

7. If you have entered your username and password correctly, you will see the prompt

bach%. This is the Unix operating system prompt. If not, you will see the message "Login incorrect" and will be given an opportunity to try again.

8. When you are finished with your work on the DCC's computer, disconnect from it by typing logout at the bach% prompt and pressing Enter. You will be returned to your local Internet provider. Disconnect from that computer as usual to return to your PC.

11.4 Instructions: How to Enter Study Data into the Database

The data in the AASK Study is being maintained using database management software called Oracle. This software will be used for both entry and maintenance of study data. To enter data after connecting to the DCC's Sun computer, you will be running Oracle on that computer, and entering directly into the study database on the Sun in Cleveland.

Each person who will be entering data will have their own personal Oracle username and password.

Your username will consist of your first initial followed by up to seven letters of your last name. Note that these are distinct from your **center's** Sun username and password.

- 1 a. If your PC is emulating a VT220, at the bach% prompt, type **aask-menu** and press Enter. This command (and all commands entered at the bach% prompt) must be entered in lowercase.

b. If your PC is emulating a VT100, duplicate here but use aask-menu-VT100.

2. An Oracle login screen will appear. Type in your personal Oracle username and press Enter; then type in your Oracle password and press Enter. Note that your password will not appear on the screen as you type it. If you've made a mistake, you will be so informed and will be given another opportunity.

3. When successful, a menu title "AASK Study Main Menu" will be displayed on the screen. The menu choices include each AASK Study form which you may have to enter at your center. The main menu may continue menu choices that actually send you to another menu (or submenu). These typically include the term menu in the description of the options (i.e., Screening Baseline menu). Refer to Appendix B for sample menu layouts.

There are two ways to pick a choice from a menu:

a. Use the down and up arrow and press Enter when your choice is highlighted, or

b. Type the number of your choice and press Enter.

Entering Data into the Oracle Form Application

Select the form you wish to enter from the menu. The first field on every form (that requires double data entry) is the VERIFY field. When entering a form for the first time, just press Enter to advance to the first field on your form.

- 1.Data is entered into fields on the Oracle form. Each field holds one item of data; it might be numeric data, a character string, or a date. Fields are grouped into blocks. A block is marked by a single line drawn around its fields on the screen, and usually has a title.
- 2.Field areas are the spaces where the data items are entered. These field areas should appear as highlighted areas on the screen. The screens have been set up to resemble the paper forms. To enter data, simply type the appropriate information; it will appear in the field area as it is typed.
- 3.When you have entered data for a field, press Enter, (also known as the [next field] key), to move the cursor to the next field. If your entered data length is shorter than the field length, you may just ignore the extra spaces.
- 4.The next to last line of your screen will be highlighted. This is known as the hint line. Text will be displayed on this line which will be a more verbose description of the expected data to be entered for this field. The hint line will change as you move from field to field, displaying information for the field at which the cursor is currently positioned.
- 5.Categorical fields, that is, fields which will take one of two or more discrete values, frequently have a List of Values associated with them. A field having a list of values is identified by the characters "<List>" that will appear at the bottom right of the screen when positioned at the field (This is known as the "list lamp"). To display the list of values when positioned at the field, type the [List] key. A box appears listing all valid values for that field. The left column contains the possible field values, with each value's corresponding meaning listed in the right column. This is a pick list; that is, you may move the highlight up and down the list using the up and down arrows. When the value which you wish to enter into the field is highlighted, press Enter. The value is put into the field, and the list of values box is closed. Press Enter to accept that value for the field and move to the next. You don't even need to display the List of Values for a field which has one; you may just type in the response to the field.
- 6.To skip over a field that is to be left blank, simply press Enter while positioned at that field. To move back to a previous field, press the [previous field].
- 7.To display the meanings of all the keys, press Ctrl-K. A key map is displayed, listing a function (Previous Field, Exit, Next Block, etc.) followed by the key or key combination required to perform that function. Sometimes more than one key combination will perform the same function. When you see "KP-" on the key map screen, this is referring to the keypad. Hence KP-2 is the 2 key on the keypad, not on the main keyboard.
- 8.After completing the final field displayed on one page of a multi-page form, pressing Enter at the field will scroll the form forward to the next enterable field.

9. When you have completed entering data for a form, pressing Enter at the final field of the form will redisplay the beginning of the form.

Save your data to the database by pressing the [commit] key. It is recommended that you press [commit] to commit (or save) your data after each form you enter.

At this time you may either verify the data key-entered (refer to "Saving, Verifying Your Data" section) or you may enter data for another form. It is recommended that you Verify your data right away.

Form 11 (Visit Form) should be entered and verified within 3 days of the date the visit was held. By entering Form 11 in a timely manner, any errors which may occur in dispensing randomized meds can be identified and corrected.

Saving & Verifying Your Data and Exiting the Form

1. Entering data for one or more forms as described above does not automatically save it to the database. To save your data, you must do what is called "committing it to the database." This is accomplished by pressing the [commit] key. Upon committal, a message will be displayed at the bottom of the screen indicating how many new records (forms or sections of forms) were added to the database.

2. You may commit data as often as you like: after every form, or just prior to leaving that form type. Whatever needs to be saved is committed. If you attempt to leave the form without committing, you'll be warned that you are doing so and will be asked if you want to commit your data. Be sure to choose Yes, otherwise all of your hard data entry work will be lost. It is recommended that you commit after entry of each form, to limit your losses in case of network problems.

3. After you have entered and committed your data, your forms will require double data entry for verification purposes. This is known as Rekey Entry or Verification. In the future, if error rates are low, you may be notified that some forms no longer require rekeying.

a. Initiate the verification by navigating to the beginning of the data entry screen and enter "V" in the field labelled verify. This will put you in "Enter Query" mode.

b. Keyenter the first field or the few fields (the primary key fields) for the form you are entering. Typically, these fields include the patient ID, and the visit number information.

c. Press the [execute query] key.

d. The "Verify" option in the upper left of your screen will disappear, and the screen will be blank. Key enter the data for the second time.

- e.If a discrepancy is detected between the 1st and 2nd entry, a pop-up message will be displayed on your screen that says "Discrepancy Encountered--please re-enter value." Key enter the correct value and proceed to the next field. Note, if the value entered at the time of the discrepancy is different from the first value entered, you will need to press the [accept value] key in order to proceed.
 - f.When you have reached the end of the form after typing it in for the second time, while the cursor is positioned on the last field, press [commit] to save the verified data. The data is now officially in the database. Note: You must be at the last field of the form to commit it after verifying it.
- 4.After you have entered and committed your verified data, exit the current form by pressing the [exit] key. You are returned to the menu of AASK Study forms.
 - 5.To enter forms for another form type, select that form type from the menu as before. A blank form will be displayed. Continue to enter data as before.
 - 6.To get out of the Oracle data entry application, simply press the [exit] key when at the menu of study forms. You will be returned to the bach% prompt.

Common Oracle Error Messages

When Oracle needs to display a message to you, the user, it will display it on the second line from the bottom of the screen (this is also the hint line, as described above), or it will be displayed in a pop-up message box on your screen. Some common messages you may see:

"Field must be entered": You attempted to skip over a field (by just pressing Enter) that must have a valued entered into it. These are typically important identification fields, as a visit date, or critical data that is collectable for every patient. Enter the value for the field and press Enter to continue to the next field.

"Invalid value for <fieldname>": You entered a value that is not a possible value for that field. For example many, No/Yes fields may take only the values 0 and 1; anything else would generate such a message. Enter a valid value for the field and press Enter to continue.

"Legal characters are 0-9 + and -" You entered a non-numeric character (a letter or symbol) into a numeric field. You may enter only the digits 0 through 9, the plus sign (+), or the minus sign (-). Enter a numeric value to the field and press Enter.

"Field is protected against update." You have attempted to update a value that has previously been committed to the database. In order to make the update to that field, initiate the Data Change Process. See Section 11.5.

11.5 Instructions: How to Change Study Data in the Database

To protect the study data from being changed without notice months or years after data entry, the

DCC uses the following system: Data which has been entered and committed to the database can be changed by that center if it is within a certain number of days of when it was originally entered. Typically, data can be modified within 7 days. If more than 7 days has elapsed, you can request a formal data change by submitting a Data Inquiry Request to the DCC.

A)Clinical Center Change to Data within 7 Days when the New Value is Acceptable by Database Rules

- 1.Query up the verified data on the appropriate screen. Data must be verified before the change/inquiry system can be used.
- 2.Position cursor on field to be changed and press the <change mode> key.
- 3.A pop-up box should appear that says `Change Mode Enabled.'
- 4.Type the new value into the field and press the <commit> key. The change should be posted to the database. This can be confirmed by clearing the screen and querying up the data again. The new value should be there.
- 5.A report is available to list the changes made using the change/inquiry system. The report is entitled `Clinical Center Data Change Report' and can be run from the `Data Change/Inquiry System' menu.

To run the report, select the `Data Change Report' option. A pop-up box will appear where information required by the report must be entered (see Figure A). The clinical center number entered here must be the center for the person who is requesting the report. The report will list all data changes made by the specified center between the specified beginning and ending date.

(FIGURE A)

AASK Study
Data Change/Inquiry System

Enter Parameter Value (s)

Clinical Center # _____

Beginning Date (mm/dd/yy) _____

End Date (mm/dd/yy) _____

E-Mail Address: _____

Enter your choice: _____

B) Clinical Center Change to Data within 7 Days when the New Value is not Acceptable by Database Rules

1. Query up the verified data on the appropriate screen.
2. Position the cursor on field to be changed and press the <change mode> key.
3. A pop-up box should appear that says 'Change Mode Enabled.'
4. Press the <enter> key only. Make sure that no other keys are pressed. A pop-up box should appear that says "the old value and new value are the same, do you want to send an inquiry to the DCC?" Press the 'Y' key.
5. A new screen will appear that will allow you to enter a requested value and an explanation. When the data on this screen is committed, a report entitled 'CC Initiated Data Inquiry Report' will be sent to the DCC and the clinical center. The DCC will use this report to investigate the request.
6. After investigating, the DCC will take the appropriate action. The DCC will then use the DCC Sign-Off screen to indicate the final status of the request. This will cause a report entitled 'DCC Sign-Off to CC Initiated Data Inquiry' to be sent to the DCC and CC. No further action is required by either the DCC or the CC.

C) Clinical Center Change to Data after 7 Days

1. Query up the verified data on the appropriate screen. Data must be verified before the change/inquiry system can be used.
2. Position cursor on field to be changed and press the <change mode> key.
3. A new screen will appear ("Submit a Data Inquiry to the DCC") that will allow you to enter a requested value and an explanation. Enter the new value as well as text describing the desired change. While on the text field, you may press the <edit> key to type a longer description. When the data on this screen is committed, a report entitled 'CC Initiated Data Inquiry Report' will be sent to the DCC and the clinical center. The DCC will use this report to investigate the request. The cursor will then be returned to the original (or calling) data entry screen. To cancel the inquiry, press the <exit> key.
4. After investigating, the DCC will take the appropriate action. The DCC will then use the DCC Sign-Off screen to indicate the final status of the request. This will cause a report entitled 'DCC Sign-Off to CC Initiated Data Inquiry' to be sent to the DCC and CC. No further action is required by either the DCC or the CC.

11.6 Instructions: Responding to DCC Initiated Inquiries

In addition to the clinical centers modifying the database, a data change can also be initiated by the DCC via the "Inquiry" System.

A) DCC Enters the Inquiry

1. DCC Enters an inquiry at the form where the field to be changed is located. When the change system is invoked, a new screen will appear for the DCC to enter the relevant information regarding the change (see Figure B).
2. When the DCC commits this information, a DCC inquiry report is sent to the DCC and the appropriate clinical center entitled 'DCC initiated Data Inquiry Report.' The clinical center will use this report to respond to the inquiry.

(FIGURE B)

Send a Data Inquiry to a Clinical Center			
Inquiry Number: _____			
Patient ID Number:	999999	Visit Type:	SV
Patient Namecode:	XXXXXX	Visit Number:	0
Date of Visit:	_____	Visit Sequence Number:	0
Name of this field: <u>GENDER</u>			
Current value of this field: <u>1</u>			
Enter text explaining inquiry: _____			
Press F3 to submit the inquiry, F4 to abort the inquiry			

In the event the DCC identifies data that they would like clarification on, an Inquiry Report will be sent to the Clinical Center. Upon receipt of this report:

B)Clinical Center Response to a DCC Initiated Inquiry

1. Upon receipt of a DCC initiated inquiry (e-mail report), investigate the question
2. Select "Data Change and Inquiry System Menu" from the Main Menu
3. Select "Respond to a DCC Initiated Inquiry" from the Data Change/Inquiry System Menu
4. When the screen appears, you will already be in query mode.
 - a) Either enter the inquiry number of the inquiry that you intend to reply to by entering a specific inquiry number and pressing the <Execute Query> key.
OR
 - b) Press the <Execute Query> key to 'query' or 'retrieve' all DCC initiated inquiries for your center that have not been responded to. The <Next Record> key will take you to the next DCC initiated inquiry, if any.

5. Cursor down the screen to the field "DCC's question concerning this field"
6. Press the <Edit> key if you want to read the entire explanation from the DCC as to why you are being queried.
7. Press the <Exit> key once again to take you out of the window which revealed the entire explanation from the DCC to you.
8. Press <Next Field> to move to "Enter new value for this field"
9. Type in the appropriate response to the query. Be as concise as possible. This should refer only to a reply to the field inquiry question. If the field named in the query is not the field that requires a change, leave it blank or enter N/A for not applicable.
10. Press <Next Field> to select "Enter explanation for this value". This field **must** be answered in order for the DCC to take action. Please make sure that your explanation is specific and complete. Note: You can use up to 240 characters to type in your explanation. Press the <Edit> key. This will enable you to see the entire explanation that you are entering and sending to the DCC. Press the <Commit> key to save the text you have typed. Press <Exit> if you do not want to save that text.
11. Press the <Commit> key if you want this sent to the DCC or the <Exit> key to abort your response if you do not want this sent to the DCC. If you <Exit>, this will remain as an unanswered DCC initiated inquiry.
12. When the <Commit> key is selected, a report titled "CC Response to DCC Initiated Data Inquiry Report" will be sent to the DCC and also to your AASKxxxx e-mail account.
13. The DCC will then make the appropriate updates to the database and a "sign-off" report of action taken will be sent to the clinical center.
14. It is very important that clinical centers respond to DCC Initiated Data Inquiries within 3 business days. The number of days it takes to reply to an inquiry will be monitored.

C) DCC Signs-Off on the DCC Initiated Query

1. After receiving the clinical center's response to the DCC inquiry, the DCC will take the appropriate action, such as updating the database.
2. After taking the appropriate action, the DCC will use the 'DCC Sign-Off to DCC Inquiry' screen to indicate the final action to the inquiry (Figure C).
3. When the data on this screen is committed, a report will run entitled 'DCC Sign-Off to DCC Initiated Data Inquiry Report.' This report will be e-mailed to the clinical center and to the DCC.

(FIGURE C)

DCC Needs to Take Action and Sign-Off on These

INQ_N _____

PID	_____	NAMECODE	_____	CC N	_____	VISIT DT	_____
VIST	_____	VISN	_____	VISSEQ	_____		
DB TABLE	_____						
APP	_____					FORM #	_____
FIELD	_____						
STATUS	_____						
OLD VALUE	_____						
NEW VALUE	_____						
CC TEXT	_____						
CC DT	_____					CC USER	_____
DCC SO STATUS	_____						
DCC SO TEXT	_____						
DCC SO USER	_____					DCC SO DT	_____
DCC SO N	_____						

11.7 Changing Your Password

For security reasons, it is highly recommended that all users of the Biostatistics & Epidemiology Sun computer network change their passwords periodically. Neither personal Oracle passwords, nor DCC Sun account passwords are meant to be shared with other users; in the event that another user learns your password, the password needs to be changed in order to maintain the integrity of the system. Either the Sun account or Oracle account passwords can be modified after accessing the computer at the DCC.

11.7.1 Modifying Your DCC Sun Account Password

1. If you are on the Ashley computer, at the ashley% prompt type "rlogin bach" and press Enter. In a few moments you will be on bach, at the bach% prompt. If you were on bach to begin with, you may skip this step.

2. At the bach% prompt type "passwd" and press Enter.

3. You will see the following:

```
Changing password for <username> on bach.  
Enter login (NIS) password:  
Where <username> is your account name (aaskxxxx)
```

4. Type in your old password as prompted, then press Enter. It will not be displayed on the screen as you type.

5. You will then see the prompt:

```
New password:  
Type in a new password of your choosing (see page 14 of Section 11 of the MOP  
for choosing a password) and press Enter. If you mistyped the old password  
at Step 4, it will instead say "Sorry" and you will need to return to Step 2.
```

6. You will next see the prompt:

```
Retype new password:  
Type in your new password again and press Enter. Don't forget that passwords are  
case-sensitive.
```

7. If the second instance of your new password matches the first, you will simply be returned to the bach% prompt and your password has been changed. If it does not match, you will see the message "Mismatch - password unchanged." Begin again at Step 2.

8.If you were on Ashley originally (i.e., you did Step 1), at the Ashley% prompt type:

logout

and press Enter. You will be returned to the Ashley% prompt.

CHOOSING A PASSWORD:

There are few guidelines for choosing an appropriate password. First, it must be six characters or greater in length. Second, it should not be a common word or name such as "carrot" or "William" nor should it be the same as your account name. Thirdly, it is preferable to include some special characters in it; for example, one or more of the following: . , ! ? * etc. Lastly, a password is case-sensitive; that is, "a" and "A" are regarded as different characters.

11.7.2 Modifying Your Personal Oracle Password

1. Access the AASK Study Main Menu as usual
2. Select "Utilities Menu"
3. Select "Change Oracle Password" and follow the directions
- 4.The Sun Password change may not take effect immediately; i.e., if you log out right away, you may still need to use your old password but it will be eventually updated with your new password.

11.8 Electronic Mail

All database related reports and most routine correspondence will take place via electronic mail. Each clinical center and central lab will have an AASK Study specific mail address (typically, aaskxxxx@.bio.ri.ccf.org).

When you log onto the DCC's computer you will have access to a mail utility called "Pine." Pine is a program for Internet News and Email. It is a screen-oriented message-handling tool. Pine is described in Section 11.11.

Pine's basic feature set includes:

- View, save, export, delete, print, reply, and forward messages.
- Compose messages in a simple editor (The editor is named PICO).
- Full screen selection and management of message folders.

- Address book to keep a list of long or frequently used addresses. Personal distribution lists may be defined (see 11.8.1 for public distribution lists).
- New mail checking and notification occurs automatically every 2.5 minutes and after certain commands, e.g., refresh screen (ctrl L).
- On-line help screens.

The following main menu-choices are available upon accessing Pine:

?	HELP	-	Get help using Pine
C	COMPOSE MESSAGE	-	Compose and send/post a message
I	FOLDER INDEX	-	View messages in current folder
L	FOLDER LIST	-	Select a folder OR news group to view
A	ADDRESS BOOK	-	Update address book
S	SETUP	-	Configure or update Pine
Q	QUIT	-	Exit the Pine program

Refer to Section 11.11 for more information.

11.8.1 Public Distribution Alias Lists

From your center's aaskxxxx study account at the DCC, you will have access to several pre-defined distribution lists. These include:

aaskall -lists every known e-mail address for any AASK study participants including the clinical centers, central labs, drug companies, NIH personnel, committee members, etc.

aask_cc -lists all 20 clinical centers, plus the DCC

aask_cl-lists all central labs

11.9 PC Specifications

The following was recommended by the DCC:

CPU: A 486 PC executing at 50Mhz or better with a 250MB hard disk and 4MB of memory. DOS and Windows 3.x should come standard with most machines.

Monitor: Super VGA style monitor.

Modem: (Only for centers connecting to the Internet through a Dial-Up line to a Third party Internet provider, e.g., NetCom, PSINet) 14.4 bps Modem (Hayes, Supra, AT&T)

Communications Software: (Only for centers connecting to the Internet through a Dial-Up line to a Third party Internet provider, e.g. NetCom, PSINet) Crosstalk

Ethernet Adapter: (Only for those centers connecting to the Internet through an existing network setup at clinical site) 3Com 3c503 or equivalent ethernet card

Telnet and E-Mail Software: Only for those centers connecting to the Internet through an existing network setup at clinical site. See your local network support personnel for their preferred package. Software that provides this functionality is in the public domain.

The modem is a device that allows you to send and receive computer information over a standard telephone line. You will be using this modem to communicate to other computers, primarily your Local Internet Provider.

The most important piece of software that you will be using on your personal computer is a program that allows you to communicate to your LIP and then to the DCC's computer. The recommended communications package is called Crosstalk Mk.IV. Crosstalk makes use of your modem to provide a friendly interface for using it to connect to your LIP.

When you connect to another computer from your PC, your communications software appears, to the remote computer, as if it were a dumb terminal, i.e., just a screen and keyboard without any processing power. This is known as terminal emulation. Crosstalk will be emulating a VT220 terminal.

11.10 Sample AASK Computing Menus

AASK Study

- 1.Screen/Baseline Visit Form Menu
- 2.Follow-Up Form Menu
- 3.Data Change and Inquiry System Menu
4. Pine Email
4. Exit Menu

Enter your choice:

AASK Study

Screening/Baseline Visit Forms

- | | | |
|----|-------------------------|-----------|
| 1. | Chart Review Form | (Form 1) |
| 2. | Screen Visit 1 (SV - 1) | (Form 2) |
| 3. | Screen Visit 2 (SV - 2) | (Form 4) |
| 4. | Blood Pressure Form | (Form 10) |
| 5. | Randomization Form | (Form 52) |
| 6. | Previous Menu | |

Enter your choice:

AASK Study

Data Change/Inquiry System

1. Respond to a DCC initiated Inquiry
2. View CC initiated Data Changes
3. Previous Menu

Enter your choice:

11.11 Pine Mail Utility

11.11.1 Introduction

THE "COMPOSE MESSAGE" command (available on MAIN MENU, FOLDER LIST, FOLDER INDEX, and MESSAGE TEXT screens) takes you into the Pine message composer and permits you to create and send a new message.

The "FOLDER INDEX" command (available on MAIN MENU, FOLDER LIST, and MESSAGE TEXT screens) takes you to the FOLDER INDEX screen which displays a summary caption for each message in the currently-open folder. One message will be highlighted; this is the "Current" message. The message commands available from this screen (e.g. View, Reply, Forward, Delete, Print, Save, etc) apply to the current message.

The "ADDRESS BOOK" command (available only from the MAIN MENU) takes you to the ADDRESS BOOK management screen. From here, your personal address book(s) may be updated.

To compose a message, select "C" from the Main Menu.

11.11.2 The "To" Field

The address you enter here must be a valid address which is reachable from your site. If it is not, you will get a error message after sending the message.

11.11.3 E-mail Address Format

You may enter a full name and address, a local address that Pine will complete for you, the nickname of someone in an address book, or a local mail alias defined by your system administrator. When you move the cursor out of this field, the nicknames will be expanded to the addresses in your address book, and the local names will be expanded to include the actual user name. You may enter as many addresses as you wish, but they must be separated by commas. You can move around this and other header fields with the arrow keys and use many of the usual composer editing keys.

A valid email address on the Internet has a user name, an "@" sign and then a domain. For example, jsmith@art.nowhere.edu is the email address of a person with the username "jsmith" who has an account with "art.nowhere.edu." The number of segments on the right of the "@" sign can vary depending on how the address is structured for the particular host.

If you are sending to someone on the same system as you are, you can leave the "@" and all the information to its right off of the address, and Pine will fill it in automatically. Sometimes you can also abbreviate the right part of the address if you are at the same domain. When sending message across gateways to other networks, the addresses get more complicated. Ask your local consultant for the correct syntax from your site to the network you are trying to reach.

11.11.4 Description of the FOLDER INDEX Screen

To view message in your current folder, choose "I" for folder index from the main menu. The Folder Index displays the headers or summary information of each message in the current folder. This is useful if you want to quickly scan new messages, or find a particular message without having to go through the text of each message, or to quickly get rid of junk messages, etc. If the list is too long to fit on one screen, you can page up and down in the list with the -/SPACE commands. The current message is always highlighted, and its message number is shown in the status line. Each message line contains the following columns:

STATUS: The markings on the left side of the message tell you about its status. You may see one or more of the following codes on any given message.

- "D" for Deleted. You have marked this message for deletion but not yet eXpunged the folder.
- "N" for New. You have not looked at the text of the message yet.
- "A" for Answered. Any time you reply to a message it is considered to be answered.
- "+" for direct-to-you. The "+" indicates that a message was sent directly to your account, your copy is not part of a cc: or a mailing list.
- "X" for selected. You have selected the message by using the "select" command. (Some systems may optionally allow selected messages to be denoted by the index list being displayed in bold type.)
- "*" for Important. You have previously used the "Flag" command to mark this message as "important."

NUMBER: Messages in a folder are numbered, from one through the number of messages in the folder, to help you know where you are in the folder.

DATE SENT: The date the message was sent. By default, messages are ordered by arrival time, not by date sent. Most of the time arrival time and date sent (effectively departure time) are similar. Sometimes, however, the index will appear to be out of order because a message took a long time in delivery.

SENDER: The name or email address of the sender. If you are the sender, then the first recipient's name is shown here.

SIZE: The number of parentheses is the number of characters in the message.

SUBJECT: As much of the message's subject line as will fit on the screen.

11.11.5 Description of the Address Book Screen

This screen lets you edit any and all entries in your address book. It also acts as a short-cut for composing messages to people in the address book. When, from this screen, you press "C" for Compose, the message starts "pre-addressed" to whatever address book entry is currently selected.

Pine's address book helps you keep a list of addresses you send mail to so you do not have to remember addresses that are often complex.

11.11.6 Delete, Reply, and Forward

After reading or viewing existing messages in the Folder Index, you will either want to delete, reply, and/or forward the message. To delete the message that is currently being viewed, simply type "D" to mark the message for deletion. When quitting from Pine you will be prompted to confirm the deletion of the marked messages.

Replying (R) and Forwarding (F) are your two alternatives for following up on the message you are reading. You would use reply if you want to get email back to the author of the message and/or the other people who have already seen it. You use forward if you want somebody new to see the message.

In the normal case, the only thing that you must supply when forwarding a message is the name/email address of the new recipient. Pine will include the text of the forwarded message. Pine will also include any attachments to the message if you have requested them. There is space above the forwarded text for you to include any comments.

When replying, you usually have to answer some questions. If the message is to multiple people and/or specified with a Reply-to: header, then you will have to decide who should get the reply. You also need to decide whether or not to include the previous message in your reply. Some of this is configurable. Specifically, see the include-header-in-reply and include-text-in-reply configuration features.

11.11.7 Additional Help

For additional help in any of these areas, choose the (context sensitive) help option which is available in every screen in the Pine program.

11.12 Keymapping

There are two keymappings that can be used for the AASK study. The keymappings define which keystrokes will be used to send an instruction to the database. The keymapping depends upon the type of terminal emulator your communications software (i.e. Crosstalk, NCSA telnet) offers and the ability to remap the sequences of some keys.

Depending on the communications software being used at each center, one of the following keymappings will be used for the Data Entry functions and movement.

VT100 Mapping	VT220 Mapping
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<u>Database Function</u>	<u>Key</u>	<u>Database Function</u>	<u>Key</u>
Accept/Commit	PF3 or ^A	Accept/Commit	F3
Accept Value	PF1 2 or ^J	Accept Value	F6
Change Mode	PF1 5 or ^N	Change Mode	F5
Clear Block	PF1 B	Clear Block	^V
Clear Field	^U	Clear Field	F11
Clear Form/Rollback	^X	Clear Form/Rollback	F12
Count Query Hits	PF1 PF3	Count Query Hits	F1 F3
Delete Backwards	Delete	Delete Backwards	Del
Delete Record	^D	Delete Record	^D
Display Error	PF2	Display Error	F1 F2
Down	Down	Down	Down
Edit	^O	Edit	F8
End of Line	PF1 Right		
Enter Query	^W	Enter Query	F9
Execute Query	^E	Execute Query	F10
Exit	^Z	Exit	F4 or ^Z
Help	PF2	Help	F1 F4
Insert Record	^F	Insert Record	^F
Insert/Replace	PF1 I	Insert/Replace	Insert
Left	Left	Left	Left
List	^L	List	F7
Menu	^T	Menu	^G
Next Block	^B	Next Block	Page Down
Next Field	Tab	Next Field	Tab
Previous Field	PF1 Ret or ^G	Previous Field	F2
Print	PF1 0	Print	^P
Refresh	^R	Refresh	^R
Return	Return	Return	Return
Right	Right	Right	Right
Show Keys	^K	Show Keys	^K
Up	Up	Up	Up
Change Mode	PF1 5 or		

^ = Ctrl Key

The VT100 keys will come by default as long as your software is emulating a VT100 terminal. If you want to use the VT220 mapping which uses the function keys, you will need to contact your technical support people to remap the keys.

The following sequences are what need to be remapped:

Devise Key Name	Physical Terminal Sequence
F1	\e[11~
F2	\e[12~
F3	\e[13~
F4	\e[14~
F5	\e[15~
F6	\e[16~
F7	\e[18~
F8	\e[19~
F9	\e[20~
F10	\e[21~
F11	\e[23~
F12	\e[24~

Where "\e~ represents the escape sequence.

Once you have determined which mapping you will be using, please inform Laurie Tuason or Ron Stewart at the DCC so that your programs which run the menu system for the database can be properly customized. For the interim, you will have access to the system in one of two ways. Type "aask-menu" at the "bach%" prompt, if you are using the VT220 mapping. Type "aask-menu-vt100" at the "bach%" prompt if you are using the VT100 mapping.

11.13 Retrieving Data From Forms

11.13.1 Introduction

Data can be retrieved in several ways from the form application. In order to "query" data available in the database for the information on a given form application, the [Enter Query] and [Execute Query] keys can be used. The screen will be populated with the first set of patient data for the form application being accessed. By pressing the [next record] or [previous record] keys, you will have the ability to view the next or previous set of data.

There are different ways to retrieve data. You can execute simple queries that meet specific

criteria, as well as complex queries that satisfy several conditions. The following topics are discussed.

- Matching exact values
- Entering variable conditions
- Matching values that meet a specified pattern

11.13.2 Matching Exact Values

Suppose you want to check on all instances of visits of the 'FV' type for a given patient ID (10001 for example). The data entry screens can retrieve the record(s) that contains specifically these values. The following are general steps for retrieving records that match exact values:

- 1)Access the appropriate form via the menu system.
- 2) Press [Enter Query]
- 3) type the values you want to match into the appropriate fields.
For this example, cursor to the Patient ID field and type 10001.
- 4)Press [Execute Query]
- 5)Press [Next Record] or [Previous Record] to view the retrieved data.

NOTE: If there is not any data that meets the specified criteria, the following message will be displayed on the status line of your screen:

"FRM-40301: Query caused no records to be retrieved. Re-enter."

11.13.3 Entering Variable Conditions

Sometimes it is not practical to enter the exact values that you want retrieved data to match. For example, you might want to retrieve the following:

- All Form 11's with visit type = FV and visit number >6
- All Form 11's after 12/31/95

Rather than entering an exact data value, you can enter a relational operator before the data values in one or more fields.

The following table shows some relational operators typically used:

Operator	Meaning	Example
=	equal to	= '01/01/96'
!=	not equal to	!=6
>	greater than	>6
>=	greater than or equal to	>=6
<	less than	<6
<=	less than or equal to	<=6

For example, to select data that have a visit number >6, press [Enter Query] and type >6 on visit number field and press [Execute Query]. To select any Form 11's after 01/01/96, press [Enter Query], type >=01/01/96, and press [Execute Query].

11.13.4 Using Pattern Matching

Pattern matching provides the capability to fetch data where a value for a field fits a certain pattern. This is useful when specifying search criteria on "string" or character value fields.

When specifying a pattern "_" represents any single character and "%" represents any combination of characters. The "_" and "%" symbols are referred to as wild cards.

For instance, suppose you are interested in all NDC codes in the Drug database that have the medication CATAPRES listed in the name of the medication.

- 1) Access the Drug database via the Form 40 data entry screen.
- 2) Retrieve the medication data for a specific patient.
- 3) Place your cursor on a blank NDC field.
- 4) Press the [List] key. You will be presented with a blank screen titled "Current Drug Pricing Database." Notice that you are already in "Enter Query" mode.
- 5) Place the cursor on the field labelled "BRAND NAME:"
- 6) Type %CATAPRES%.
- 7) Press [Execute Query] key.
- 8) Press the [Next Record], [Previous Record] keys to view the retrieved data.

To further refine the search, for all Catapres medications with TTS in the label, restart the process by pressing [Enter Query], type \$CATAPRES%TTS% in the Brand name field, press [Execute Query].

11.13.5 Count Query Hits

If you are interest in simply a count of how many records meet your search criteria, press the [Count Query Hits] key in place of the [Execute Query] key. Rather than having a screen full of data returned to your screen, you will receive a message indicating the number of "records" that meet the search criteria. Using the Catapres example above, if you search on %CATAPRES%TTS%, with the [Count Query Hits] key, you will receive the message:

"FRM-40355: Query will retrieve 3 records"

This function can be helpful if you are interested in determining a count of patients that meets some specific criteria. For instance, suppose you are interested in knowing how many patients have a Classification code of II for Funduscopic exam on the Annual Physical Exam form. Access Form 12 from the menu. Cursor to the Patient ID field. Press [Enter Query]. Cursor to item #5. Type a value of 2 for the field. Press the [Count Query Hits] key.

Notes:

Queries can be issued in the first block of multi-block forms.

Queries cannot be specified on namecode. This is a lookup field and thus not searchable.

11.14 Dialing In To the DCC Computer (1-800 #)

The AASK database can now be accessed by dialing 1-800-867-5515. This number is to be used when your center is temporarily disconnected from the Internet or when your connection to the Internet is so slow that data entry is unbearable. Please use it only in these situations.

If your Internet connection is always unbearably slow, you should try using a different local internet provider. The DCC can help you find one.

To connect to the 800 number, dial 1-800-867-5515 from your favorite dial-up communications software (Crosstalk, Hyperterminal, Procomm, etc.). Keep all of the settings the same as they would have been for calling the phone number of your local internet provider; just add the 800 number as a menu option for yourself, so you have a choice of dialing either your local internet provider or our 800 number whenever you use your communications package.

To use the number, dial 1-800-867-5515. You will begin connecting to our system.

When you have connected to the system you will see a greeting ("Welcome to the Cleveland Department of Biostatistics and Epidemiology") and a Login: prompt.

At the Login: prompt, type your system username (your aaskxxxx account name) and press Enter. You will be greeted with a Password: prompt.

At the Password: prompt, type in your system password and press Enter. If you have logged in correctly, you will be presented with another Password: prompt.

Type your password again and press Enter. If you enter your password properly at this point, you will get logged in to Ashley and will see the ashley% prompt. You may proceed to work as usual from there.

Please be sure that once you have completed your session, you exit the menu system as well as log off the server (log off of "ashley%" so that the charges for using the 800 number end).

If you experience any complications, please call the DCC for assistance.

11.14.1 Dialing In To The DCC Computer Directly (Clinical Center will be Charged)

As of 10/01/97, there has been a change in the computer setup at the AASK DCC and, as a result, the method of dialing into the AASK study computer (ashley) using the non-800 number has changed. Previously, the number to dial was (216) 444-3888. When the connection was made, a "#" would appear and a special password was entered.

This is no longer the way the toll call connection works. Instead, if the internet is not working adequately and you wish to dial in using the toll phone number, it can be done as follows:

- 1) Program your computer to dial (216) 421-3560.
- 2) You will be prompted for a userid. Enter aaskxxxx where aaskxxxx is the id for your center.
- 3) You will be prompted for the password for your aaskxxxx id. Enter the password.
- 4) You will be prompted to enter the password again. Enter the same password again as in step 3 above. This is a security feature.
- 5) If the user id and passwords are correct, you will then be connected to the "ashley" computer. You can then get to the AASK system in the usual manner.

Again, this is to be used hopefully only in rare cases when the internet is unbearably slow. If this happens consistently, you should consider trying a different internet access provider.

If you have any questions, contact the DCC.