
APPGEN

INSTALLING & CONFIGURING THE SOFTWARE

REFERENCE MANUAL

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1300 Veterans Memorial Highway
Hauppauge, NY 11788
(516) 471-3200
(800) 231-0062

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APPGEN

Installing & Configuring the Applications

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CHAPTER 1: INSTALLING THE SOFTWARE

The installation procedure is heavily dependant on the computer upon which you are installing the software (Unix-based, Windows-based) and on the specific version of the Appgen products (PowerWindows, PowerWindows NT, PowerWindows PC+) you are installing.

Installation instructions for the Unix-based products are particular to the exact platform. Chapter 1.1 includes the major portion of the installation instructions. The instruction that is particular to the operating system/server platform is found on the actual distribution media.

Installation instructions for the PC-based PowerWindows Client software are found in Chapter 1.12.

Installation instructions for the WindowsNT/OpenNT version (PowerWindows NT) are found in Chapter 1.2.

Installation instructions for the Windows version (PowerWindows PC+) are found in Chapter 1.3.

Each chapter concludes with post-installation directions to start using the software.

Chapter 1.1: The Unix-based Client/Server Software

The Unix-based client/server software requires, at minimum, the server component of the software installed on to your Unix-based system. (Unix-based systems include SCO Unix, IBM AIX, Linux, Solaris, and Unixware.)

If you will be using only character-based terminals, no other software needs to be installed. If you will be using Windows-based PCs as clients, you will need to install the PowerWindows Client software onto each such PC.

Chapter 1.11: Installing the Server Component

Installing the Appgen PowerWindows server software onto your Unix-based machine is a simple four step process:

1. Link your removable media device to a new Appgen device name.

To start, identify the device name appropriate for the media. Your device name may be one of the following, if your Appgen software came on

3.5" floppy diskettes:	/dev/fd0135ds18 (SCO Unix)
	/dev/fd0 (Linux, IBM AIX RS/6000)
1/4" cartridge tape:	/dev/rct0 (SCO Unix)
	/dev/rmt0 (AT&T, IBM)
	/dev/rst0 (Sun)
	/dev/rt0 (NCR)

Please consult your system documentation if you are not sure of the device name.

Once you have identified the right device you must link it to the proper Appgen name. That name is one of the following, depending on the Appgen media used:

/dev/AGD3	(3.5" floppy diskettes)
/dev/AGTAPE	(1/4" cartridge tape)

The proper Appgen device name is found on the Appgen media label in the 'dd' instruction.

Finally, link the real device to the new Appgen device name: Log on to your computer as superuser (i.e., root) and, at the '#' prompt, type the link command.

For example: # ln /dev/fd0 /dev/AGD3 (for 3.5" diskette on IBM RS/6000)

INSTALLING THE SOFTWARE

The Unix-based Client/Server Software

2. Use the appropriate system administration program supplied with your operating system to create a user name "appgen" whose home directory is the base directory into which you will direct the installation process to install the software. Refer to your operating system's System Administration manual, or consult with your system administrator if you need more information on creating users.
3. Log in as superuser again, and at the '#' prompt, type the following command:

```
umask 0
```

4. While still logged in as superuser, type in the 'dd' instruction found on the Appgen media label.

For example:

```
dd if=/dev/AGD3 | sh
```

You will be guided through the rest of the installation process by a series of screen prompts.

Chapter 1.12: Installing the Client Component

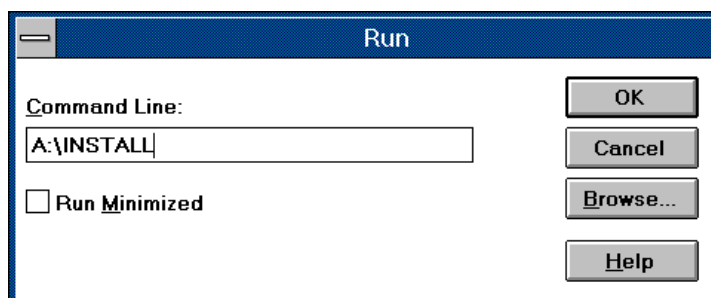
There are two different versions of the PowerWindows Client software: 16 bit and 32 bit. They are virtually identical in functionality. The 32 bit generally performs quicker, but only the 16 bit version may be installed on a PC running Windows 3.x.

Installing the client component on Windows 3.x (16 bit only)

Step 1: Insert the Appgen Client installation disk into the floppy disk drive, typically A: or B:.

Step 2: Run the INSTALL program. This is done by using the Window's Program Manager, selecting the FILE menu, and then selecting the RUN option.

Step 3: Enter the floppy disk drive location A: or B: of the Appgen installation disk, and type the word INSTALL. The following screen will be displayed:



Step 4: Press the OK button to activate the installation program.

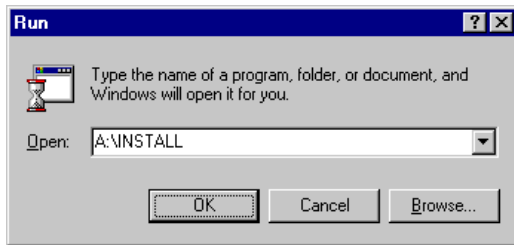
Installing the client component on Windows 95/98/NT

Step 1: Insert the Appgen Client installation disk into the floppy disk drive, typically A: or B:.

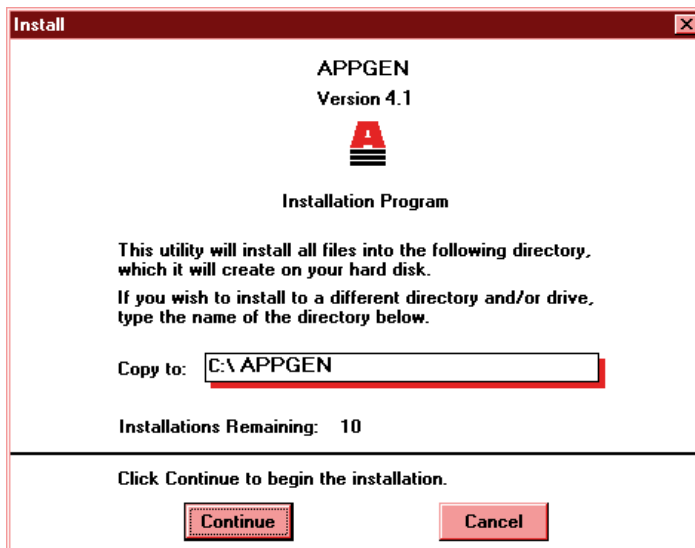


Step 2: Run the INSTALL program. This is done by clicking the Start button on the Taskbar, and then selecting the RUN option.

Step 3: Enter the floppy disk drive location A: or B: of the Appgen installation disk, and type the word INSTALL. The following screen will be displayed:



Step 4: Press the OK button to activate the installation program.



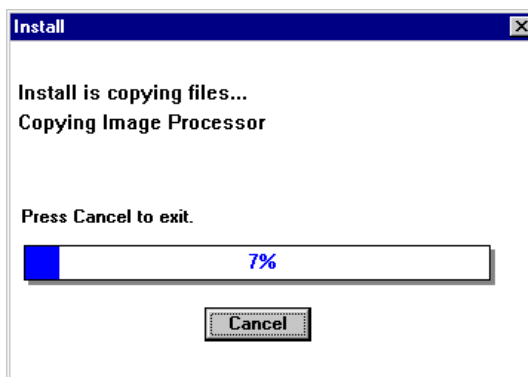
By default, Appgen will be installed to the C:\APPGEN directory on the hard drive. To install to this directory, click the "Continue" button. If installing to a different location, type the name of the directory and/or drive in the text box before clicking "Continue", or click "Cancel" to exit the installation program.

After selecting "Continue", the Appgen installation program will verify that enough disk space is available to install Appgen. If there is insufficient disk space, you will be prompted to select another location for Appgen.

NOTE: It is not necessary to create the directory APPGEN. It will be created automatically if it does not already exist.

Also, if you purchased more than one copy of the Appgen Client, the installation diskette may contain multiple Appgen licenses. You can verify how many licenses are left by referring to the "Installations Remaining" message on the Install screen. This message will not appear for Upgrade installations. To move a license from one PC to another, please refer to the section on Uninstalling Appgen.

The Installation Program will then copy the files and create a Appgen Program Group for the Program Manager. Click the "Cancel" button to stop this process. During the installation, the following Window is displayed showing the files being copied and the percentage of completion:



Step 5: Once the installation program has completed, a final message box will be displayed. Click on the "OK" button to end the installation.

Chapter 1.13: Post Installation Procedures

The Unix-based client/server version of Appgen PowerWindows supports two different interfaces for two different types of users, generally speaking. The character-based interface is typically used by operators who are responsible for data entry and customer service. The PowerWindows Client interface is typically used by management type personnel, and those users who make use of desktop productivity software (e.g., word processing, spreadsheet, etc.). Either, or both of these interfaces may be used simultaneously with a single server. This is described in detail in the second volume of this manual set, 'Operator Orientation'.

Starting up the PowerWindows Client

Under Windows 3.x, launch the PowerWindows Client by returning to the Program Manager and double clicking on the Appgen icon that appears on the screen.



Under Windows 95, launch the PowerWindows Client by clicking the Start button on the Taskbar. Then choose Programs, choose the Appgen group, and choose the Appgen item.



When you start up the PowerWindows Client for the first time, you will be prompted to select the configuration settings for your computer. You will only be asked for this information the first time you start up the PowerWindows Client.

A dialog box showing the emulation type, baud rate, parity, byte size, stop bits, port, flow control, and communications buffer size will be displayed. Each of these items will appear with default settings with the exception of the communications port. Choose TCP/IP, or if you are using a serial connection, an unused communications port on your PC. Configure the other settings as appropriate for the host connection. Select the Save button to record the settings to the configuration file. If more information on these various settings is needed, click the "Help" button. To change the settings at a later time, use the "Configure Terminal..." selection on the "Commands" menu of the client window.

Optionally, you may enter the name of your institution, business or department on the Registration screen. This information appears on the logo screen each time the client is launched. To change the information entered, use the "View Registration" selection on the "File" menu of the client window.

Client-based users must have certain environmental variables set in order to make full use of the client software's features. These should be set up in the logon script as follows:

Bourne Shell (.profile)

```
AGCLIENT=Y
AGTERM=agclient
export AGCLIENT AGTERM
```

C Shell (.login)

```
setenv AGCLIENT Y
setenv AGTERM agclient
```

Character-based Terminal Users

Although Appgen will immediately work with most of today's popular character terminals, you may need to consult Chapter 3.3 in this manual to configure Appgen for use with your terminal. Once you determine the proper terminal name, you must set your terminal variable in your logon script as follows:

Bourne Shell (.profile)

```
AGTERM=xxxxxxx
export AGTERM
```

C Shell (.login)

```
setenv AGTERM xxxxxxx
```

where xxxxxxx is the terminal name.

Starting up Appgen PowerWindows Applications

To access the PowerWindows client/server software, you must first log on to your computer. During the installation process you created a user called 'appgen'. You may use this name to log on the first time, but each user should have their own logon name to ensure proper use of the system. Each user of the PowerWindows software may share the same home directory and logon script (i.e., .profile or .login).

Now that you are logged on and your environment is set correctly, you may just type 'appgen' at the command line. This should bring up your main menu of applications. If it does not, see your System Administrator or VAR (Value Added Reseller) as they may have made changes in the startup procedure to better fit your needs.

Before Getting to Work

The two interfaces were designed to be operated in an intuitive manner, effectively allowing you to move around the applications right away. If you have no prior experience with the kind of interface you will be using, the 'intuitive' quality may be meaningless. Regardless of your experience level, it is highly recommended that you read the chapter for your interface in the 'Operator Orientation' manual (Volume II of this manual set) while seated in front of your computer. It will reveal to you certain features of the interface that make the PowerWindows software uniquely powerful—and your workday much more productive (e.g., Cross Reference).

What's Next?

Before you can start using your PowerWindows applications for your daily work, you need to do two more things: create a new company and enter your master file data. This is described in detail (for each application) in Chapter 2 of this manual.

Getting Help

Chapter 2 of this manual provides you with directions for creating a new company, and for initializing your master data. Volume III of this manual set, 'Using the Applications' provides you with insight into the conceptual and procedural aspects of each of the applications. For field-by-field assistance, help is always only a keystroke away. A click on the 'Help' button (see Operator Orientation) brings up a window containing help text specifically for the field on which your cursor is located. If you need further assistance, please consult your System Administrator or VAR (Value Added Reseller).

Chapter 1.2: The PowerWindowsNT Client/Server Software

The PowerWindowsNT Client/Server software requires the server component of the software installed on to your WindowsNT system and the client component on each of your Windows-based (3.x, 95, 98, NT) PC client computers.

Important - Before starting to install any of the PowerWindowsNT Applications:

The Appgen PowerWindowsNT Development System and Applications are required to be installed in an NTFS file system. If your filesystems are configured only as FAT you can convert a portion of a partition to NTFS. Please consult your Windows Help subsystem ("convert command") for specific instructions on converting file systems.

Also, the original shipment of Windows NT 4.0 has memory problems that cause Appgen to fail. The Microsoft WindowsNT Service Pack #3 solves these problems. This is included on the Base Environment & Utilities CD. To install it, simply click on the file named nt4sp3_i.exe in the base directory of this CD. If you are not sure whether the Service Pack #3 has already been installed you may simply install it again now with no adverse consequences.

Chapter 1.21: Installing the Server Component

In the server component of the PowerWindowsNT software there are two CDs and one 3.5" floppy diskette included in the software license. One CD includes the Appgen PowerWindowsNT Development System and Applications, and the other contains the OpenNT environment in which Appgen will run. The floppy contains information specific to the installation.

NOTE: The TCP/IP software on your Microsoft WindowsNT Server 4.0 CD must be installed and configured properly before any Appgen PowerWindowsNT products are run.

The Base Environment & Utilities must be installed first:

1. Sign on as 'administrator' on the NT Server.
2. Insert the 'Base Environment & Utilities' CD and run the Setup.exe program in the X86 directory on the CD, and follow the on-screen directions.
3. When prompted, enter the following codes for the OpenNT Server product:

vDqTLzcALyE

and the OpenNT Software Development Kit:

HHpfX(aY65E

4. When prompted to choose the type of install you wish to perform, select the first choice:

Install the OpenNT Server

5. When prompted for the destination directory, ensure that it is \OpenNT\ on one of your hard disk drives.
6. When you are presented with a list of packages that are available for installation, you must select the first choice, OpenNT Commands and Utilities.

You must also select the OpenNT Software Development Kit (SDK) if you have any 'C' programs in your applications. You will, however, need to have Microsoft Visual C++ 4.0 (or greater) installed first in order to properly install and use the SDK.

You may optionally select the OpenNT PDF Documentation Set as well.

Once the installation of this Base Environment & Utilities CD is done:

7. Log out and log back in as 'administrator'. Note: the 'administrator' login must be password protected in order for the network program (telnetd) to work properly. Please consult your Windows NT documentation for further information.
8. Start up an OpenNT shell by selecting the 'C' Shell (OpenNT csh) from the OpenNT program group.
9. While in the shell, type the following (the percent sign, %, is a prompt supplied by the shell program and it may appear differently—do not type the prompt, only the text following it):

```
% umask 0
% mkdir /bin
% ln $OPENNT_ROOT/bin/* /bin
```

Note: The Appgen Run Time looks for necessary Unix commands in the '/bin' directory on the local disk drive. If OpenNT and the Appgen Run Time are installed on two different disk drives (partitions) then you must copy the OpenNT bin to the '/bin' directory on the drive that contains the Appgen Run Time, rather than linking it on the local drive as shown above.

For example:

```
% umask 0
% mkdir //D/bin
% cp $OPENNT_ROOT/bin/* //D/bin
```

Then you need to enable telnet by typing the following:

```
% service install -s auto -u administrator -p <passwd> $OPENNT_ROOT/bin/telnetd -k
% service start telnetd
```

To test that telnetd is running, you may type:

```
% service -a
```

Note: This step only needs to be performed once. Each subsequent boot up will start up telnet automatically.

Install the Appgen PowerWindowsNT Development System and Applications:

1. Close any OpenNT windows that are currently open.
2. Insert the Development System & Applications CD, run the Setup.exe program found in the base directory of the CD, and follow the on-screen directions.
3. When prompted to choose the type of Setup you prefer, choose 'All Products' if this is a VAR Starter Kit license, or choose 'Custom' to install only those product licenses actually purchased.
4. When prompted, insert the PowerWindowsNT Installation/Security floppy diskette.

Chapter 1.22: Installing the Client Component

The client component of the PowerWindowsNT client/server software is the same as the client for the Unix-based PowerWindows client/server software. Please follow the directions in Chapters 1.12 and 1.13 to install and start up the PowerWindows Client.

Chapter 1.23: Post Installation Procedures

1. Start up an OpenNT shell by selecting the 'C' Shell (OpenNT csh) from the OpenNT program group.
2. Change directory to the Appgen base directory you specified during the installation process (e.g., `cd /Aghome`).
3. Set up your login profile by typing the following in the shell:

```
% cp ag_profile ../.profile
```

```
% cp ag_login ../.login
```

4. Close the OpenNT window, and start it up again to ensure that your environment is set correctly.

If the login profile does not appear to be working, make sure your user profile has the home directory local path set to the Appgen base directory you specified during the installation process (e.g., `c:/Aghome`). Please consult your Windows NT documentation for further information.

5. The installation is now complete. You may run the applications on any Client PC configured on your NT network, or you may even install a PowerWindows Client license on this NT server so that it may double as a client as well.

Note: If you choose to use the server as a client also, set the IP address in the client to be the same as the server's IP address.

Starting up Appgen PowerWindowsNT Applications

To access the PowerWindowsNT applications, you must first log on to your server from your client PC (see Starting up the PowerWindows Client—Chapter 1.13). Each user should have their own logon name to ensure proper use of the system. Each user of the PowerWindows software may share the same home directory and logon script (i.e., .profile or .login).

Now that you are logged on and your environment is set correctly, you may just type 'appgen' at the command line. This should bring up your main menu of applications. If it does not, see your System Administrator or VAR (Value Added Reseller) as they may have made changes in the startup procedure to better fit your needs.

Before Getting to Work

The client interface was designed to be operated in an intuitive manner, effectively allowing you to move around the applications right away. If you have no prior experience with this kind of interface, the 'intuitive' quality may be meaningless. Regardless of your experience level, it is highly recommended that you read Chapter 3 in the 'Operator Orientation' manual (Volume II of this manual set) while seated in front of your computer. It will reveal to you certain features of the interface that make the PowerWindows software uniquely powerful—and your workday much more productive (e.g., Cross Reference).

What's Next?

Before you can start using your PowerWindows applications for your daily work, you need to do two more things: create a new company and enter your master file data. This is described in detail (for each application) in Chapter 2 of this manual.

Getting Help

Chapter 2 of this manual provides you with directions for creating a new company, and for initializing your master data. Volume III of this manual set, 'Using the Applications' provides you with insight into the conceptual and procedural aspects of each of the applications. For field-by-field assistance, help is always only a keystroke away. A click on the 'Help' button (see Operator Orientation) brings up a window containing help text specifically for the field on which your cursor is located. If you need further assistance, please consult your System Administrator or VAR (Value Added Reseller).

Chapter 1.3: The PowerWindows PC+ Software

The process for installing the software is the same used by most popular Windows-based products:

1. Insert the PowerWindows PC+ CD into your CDROM drive.
2. Click on your Start button.
3. Click on 'Run'.
4. Type X:\Setup (where X is the letter of the CD Drive in which you placed the PowerWindows CD) and click on OK.
5. Follow the on-screen instructions.
6. During the process you will be asked which of the following you would like to install:
 - Demo Version
 - Server
 - Single User
 - Workstation
7. Choose the selection for which you purchased a license, then complete the process by following the on-screen instructions.
8. During the installation process you will be asked to insert the License Diskette. This diskette contains product licensing information and your company name. This diskette is required when installing any of the configurations, except the Demo Version.
9. If you are installing a version other than the Demo, you will also be asked to supply a Master Password during the installation. This will be the password that is required of administrators before they can add or change Appgen passwords that control which tasks users on the system may access.
10. If you are installing the Workstation version, only the Run Time engine will be installed on your system. You will be asked to enter the location of the programs and data files (the base directory of the Server version).

Chapter 1.31: PowerWindows PC+: The Different Versions

PowerWindows PC+ is available in four configurations:

- Demonstration Version
- Single User
- Server
- Workstation

Every PowerWindows PC+ CD is identical. They each contain all the software needed for the four different configurations. A companion License Diskette contains the licensing information. This diskette is not necessary when installing the software in the Demonstration Version configuration.

The Demonstration Version is set up on a single computer with the Run Time, all of the applications, and a set of demonstration data. Demo versions expire 30 days after installation.

The Single User Version is for use on a single computer. This is for installations where no more than one person needs access to the applications at any given time.

The Server Version is provided for LAN-based, multi-user installations. In this configuration, the applications, data files, and dictionaries, all reside on the server. The Run Time engine is also installed on the server so that the server itself may also be used as a workstation.

The Workstation Version is also provided for LAN-based, multi-user installations. In this configuration, however, only the Run Time engine is installed, and, for obvious reasons, requires the server version to be loaded and available on the network.

Note to technical personnel: While PowerWindows PC+ is basically a peer-to-peer system, the ability to keep the PDEFs and RDEFs on the server gives PowerWindows PC+ an important and very unique advantage over other peer-to-peer application systems: Centralized Control. This is a major aspect of any true client/server system that utilizes the desired thin client. It is made possible here by the unique structure of the Appgen environment, in which the Run Time is the group of executable programs and the PDEFs and RDEFs contain the developer—or application specific—code.

Chapter 1.32: Post Installation Procedures

Starting up Appgen PowerWindows PC+

To start up PowerWindows PC+:

- Click on your Start button
- Click on 'Programs'
- Click on PowerWindows PC+
- Click on Master Menu

Note: An alternate method for starting up PowerWindows PC+ would be to simply double-click on the PC+ shortcut icon located somewhere on your desktop.

To start up an application:

- Select the desired company from the combo box on the Master Menu
- Click on any application

Note: An alternate method for starting up a PowerWindows PC+ application would be to simply double-click on the specific application name found in the PowerWindows PC+ program group. The Master Menu is optional, and this method avoids it.

Before Getting to Work

The PC+ interface was designed to be operated in an intuitive manner, effectively allowing you to move around the applications right away. If you have no prior experience with this kind of interface, the 'intuitive' quality may be meaningless. Regardless of your experience level, it is highly recommended that you read Chapter 3 in the 'Operator Orientation' manual (Volume II of this manual set) while seated in front of your computer. It will reveal to you certain features of the interface that make the PowerWindows software uniquely powerful—and your workday much more productive (e.g., Cross Reference).

What's Next?

Before you can start using your PowerWindows applications for your daily work, you need to do two more things: create a new company and enter your master file data. This is described in detail (for each application) in Chapter 2 of this manual.

Getting Help

Chapter 2 of this manual provides you with directions for creating a new company, and for initializing your master data. Volume III of this manual set, 'Using the Applications' provides you with insight into the conceptual and procedural aspects of each of the applications.

General application help is also available on-line. If you click on the help icon when there are no Task Windows open in your Application Workspace, the Application Help appears in a 'browser' window. This window may also be moved, resized, and reshaped. (The browser is the interface used to access the World Wide Web on the Internet.) This help content contains links. Links are words that appear underlined. When you click on any of these links, you are automatically brought to another section of the manual that provides further information about the words on which you just clicked. The browser window contains several buttons on its tool bar which can be very useful as you peruse the manual. Experiment with the browser a little and you will quickly learn how to access what you need from the help manual with ease. Click on the 'X' in the top righthand corner of the browser window to close it.

For field-by-field assistance, simply click on the help icon on your Tool Bar while your cursor is positioned in the data field for which you need help. A window containing that specific help will appear on the right side of your desktop. You can move, resize, and reshape this window. (See your Windows documentation for directions on how to use these features.) This window will stay on your screen until you close it by clicking on the 'X' in the top righthand corner of that window. If you leave it on your desktop, the next time you click on the help icon while your cursor is in a data field, the help message within the window will change accordingly.

The field-level and application help, along with the Operator Orientation manual, are all available in the Help Menu on the Menu Bar of each of the applications.

If you need further assistance, please consult your System Administrator or VAR (Value Added Reseller).

CHAPTER 2: SETTING UP A NEW COMPANY

Once you successfully installed and started up your software, you need to prepare the system for daily use within your company. You must begin by creating a new and empty set of data files in which to keep all your company's information, and also by associating your company with its data files. The directions for this step are found in Chapter 2.1. Once the new company is created, the next step in setting up for daily work is entering master data and initializing balances as described in Chapters 2.2 through 2.12. The directions are the same regardless of the interface being used. The only difference is the specific keystrokes that accomplish the tasks. These differences are noted throughout the text by following the directions parenthetically with the specific interface (i.e., PC+, Client, Character-based).

SETTING UP A NEW COMPANY

Creating a New Company

CHAPTER 2.1: Creating a New Company

The PowerWindows applications are inherently multi-company. This means that with a single license of any one of the applications you may process data for any number of companies in separate sets of data files. (Please refer to your End-User License Agreement for specific limitations.)

When you first load your software, Company 0 (zero) is already there and set up for you to use as a practice company. With Company 0, you can practice and experiment with the application's different functions without fear of damaging your real data. Your real company (or companies) can be set up as Company 1 through 9999.

The setup of a new company is usually performed by your system administrator and/or support personnel.

Creating a New Set of Data Files

Begin the company creation process by creating a set of empty data files that are ready to accept the new company's data. Perform the following steps.

- Select 'Company Setup' on the Master Menu.
- Pull down the 'Main' menu in the Company Setup application
- Select 'Create New Company'.

Enter the number of the company for which you wish to build new data files and click on the Next button (PC +) or press <return> (Client or Character-based).

Setting Up the Company Name

Now that the data files have been created you need to establish the name of the company.

Select the new company from company selection box on the Tool Bar at the top of the Company Setup window (PC +) or change company to the new company by pressing function key number five (Client or Character-based)..

- Pull down the 'Main' menu in the Company Setup application
- Select 'Set Up Company Name'
- Enter the number of the new company
- Type in the name and address of the new company and save the record

Setting Up the Master Company Records

There is a special record in each application for each company that you will be processing. This is called the Master Company record. It contains special information for the operation of the application. Before you can begin using any of the applications, you must perform the following steps for each application for the company you just created.

- Select the application from the Menu bar in the Company Setup application
- Select 'Set Up Master Company Record'
- Create the record for the new company by filling in all the required fields (at minimum) and save it.

You are now ready to begin using your applications with the new company. The next step would be to initialize the data to prepare for current daily processing. This 'data initialization' stage is different for each application. Chapters 2.2 through 2.12 contain the instructions for the individual applications.

CHAPTER 2.2: GENERAL LEDGER

Before you can use the General Ledger application for normal daily work, you need to enter master data and initialize balances. This chapter provides the specific instructions for the final phase of preparing General Ledger. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows General Ledger system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the General Ledger package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. Set up the fiscal year calendar for this company using method 'a' or 'b' as follows:
 - a. Enter records for the current, last, and next fiscal years, describing the beginning and end dates of each period:
 - Select 'Fiscal Calendar' on the Initial Data Entry menu
 - Select 'Add' from the Fiscal Calendar menu and enter the records
 - Print all calendar records by selecting the Edit List option on the Fiscal Calendar menu, and examine all data entered for errors and omissions.
 - Correct, and/or delete, calendar records by selecting the appropriate choices on the Fiscal Calendar menu.
 - b. Automatically create the fiscal calendar records from the information in the Master Company record:
 - Select 'Auto Create Calendar' on the Initial Data Entry menu
 - Press <return> to create the records

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4. Enter the Chart of Accounts records for this company as follows:
 - a. Select 'Chart of Accounts' from the Initial Data Entry menu.
 - b. Select 'Add' from the Chart of Accounts menu and enter your records.
 - c. Print all account records by selecting the Edit List option on the Chart of Accounts menu, and examine all data entered for errors and omissions.
 - d. Correct, and/or delete, account records by selecting the appropriate choices on the Chart of Accounts menu.
5. Create the Budget records for appropriate accounts as necessary in this company, as follows:
 - a. Pull down the Main menu from the menu bar.
 - b. Select 'Budgets' on the Main menu.
 - c. Manually enter budget records by selecting 'Budget Maintenance' on the Budgets menu, or create budgets automatically by selecting 'Auto Create By Year' on the Budgets menu.
 - d. Print all budget records by selecting 'Budget List' on the Budgets menu, and examine all data entered for errors and omissions.
6. Enter the beginning balances for the General Ledger accounts in this company, as follows:
 - a. Perform the fiscal period closing operations from your previous General Ledger accounting system to produce a Trial Balance. The ending balances of all accounts will add up to zero.
 - b. Enter this Trial Balance as one large Journal Entry record using the 'Journal Entries' functions in the Main menu.
 - c. Print and post the journal entry.
7. Enter any Recurring Journal Entries needed using the 'Recurring Journal Entries' functions on the Main menu.

The General Ledger system for the new company is now ready for routine processing operations.

CHAPTER 2.3: ACCOUNTS RECEIVABLE

Before you can use the Accounts Receivable application for normal daily work, you need to enter master data and initialize balances. This chapter provides the specific instructions for the final phase of preparing Accounts Receivable. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Accounts Receivable system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Accounts Receivable package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. Enter the sales rep records to be used by this company as follows:
 - a. Select Sales Reps from the Initial Data Entry menu.
 - b. Select 'Add' from the Sales Reps menu and enter your records.
 - c. Print the sales rep records by selecting the Edit List option on the Sales Reps menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete sales rep records by selecting the appropriate choices on the Sales Reps menu.
4. Enter the shipping codes to be used by this company as follows:
 - a. Select Ship Via Codes from the Initial Data Entry menu.
 - b. Select 'Add' from the Ship Via Codes menu and enter your records.
 - c. Print the Ship Via records by selecting the Edit List option on the Ship Via Codes menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete shipping method records by selecting the appropriate choices on the Ship Via Codes menu.

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5. Enter the payment terms codes to be used by this company as follows:
 - a. Select Payment Terms from the Initial Data Entry menu.
 - b. Select 'Add' from the Payment Terms menu and enter your records.
 - c. Print the Payment Terms records by selecting the Edit List option on the Payment Terms menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete terms records by selecting the appropriate choices on the Payment Terms menu.
6. If the Accounts Receivable package is not to be interfaced to the General Ledger package, you must enter data into the G/L Account file which is contained in the Accounts Receivable package. This file contains the account numbers and descriptions of the General Ledger accounts that accumulate Accounts Receivable information for the General Ledger Distribution report.

Follow the steps below to enter the General Ledger Account data.

- a. Select General Ledger Accounts from the Initial Data Entry menu.
 - b. Select 'Add' from the General Ledger Accounts menu and enter your records.
 - c. Print all G/L Account records by selecting the Edit List option on the General Ledger Accounts menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete G/L Account records by selecting the appropriate choices on the General Ledger Accounts menu.
7. If you collect sales tax from your customers, you must set up the Sales Tax Code records for each sales tax authority (jurisdiction) for which you collect sales tax.

Follow the steps below to enter the Sales Tax Codes.

- a. Select Sales Tax Authorities from the Initial Data Entry menu.
- b. Select 'Add' from the Sales Tax Codes menu and enter your records.
- c. Print all sales tax records by selecting the Edit List option on the Sales Tax Codes menu, and examine all data entered for errors and omissions.
- d. Correct and/or delete tax code records by selecting the appropriate choices on the Sales Tax Codes menu.

8. At this point you must check the validity of the data that you set up in the Master Company file as the system defaults.

Follow the steps below to print the Master Company File List.

- a. Pull down the Reports Menu from the menu bar.
- b. Select Master File Lists from the Reports Menu.
- c. Scroll down the list and choose the last selection, 'Master Company'.
- d. Press return to produce the report.

If you see the message '***NOT ON FILE***' in this list, make the necessary corrections to the Master Company Record (following the steps described above) and rerun the list until that message no longer appears anywhere on the list.

9. Enter a record for each customer as follows:
 - a. Select Customers from the Initial Data Entry menu.
 - b. Select 'Add' from the Customer File menu and enter your records.
 - c. Print all customer records by selecting the Edit List option on the Customer File menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete customer records by selecting the appropriate choices on the Customer File menu.
10. Build the beginning balances for each customer. Select a conversion date that is the last day of your accounting fiscal period. Enter one Sales Entry transaction for each customer; the sales amount should be the account balance for that customer as of the conversion date. The document date should be the conversion date.

Note: This method of entering the beginning balances does not yield accurate aging until the fourth month of usage. However, it is the quickest method of getting accurate beginning balances.

If you desire, you may enter the unpaid invoices for each customer rather than entering the single balance-forward transaction as described above. This method produces accurate aging immediately, but it is more time consuming and may be more prone to data entry errors.

The steps for entering sales transactions are as follows:

- a. Pull down the Main Menu from the menu bar.
 - b. Select 'Sales Entries' from the Main Menu.
 - c. Add sales transactions by selecting Enter & Edit Sales on the Sales Entries menu.
 - d. Print an Edit List to verify correctness of data entered by selecting Sales Edit List on the Sales Entries menu.
 - e. Make any necessary corrections by selecting the Enter & Edit Sales option on the Sales Entries menu.
 - f. Produce a journal of transactions and post the transactions to update the master files by selecting the Sales Journal & Post option on the Sales Entries menu.
11. Clear the Commissions Due file to remove data that is created in step 10 above. Use the conversion date selected in step 10 above as the "Invoices dated thru" date. Your existing accounting system already contains the "commissions due" information for data entered in step 10. Leaving that information in the Commissions Due file would only duplicate that data.

Follow the steps below to clear the Commissions Due file.

- a. Pull down the Main Menu from the menu bar.
 - b. Select 'Sales Commissions' from the Main Menu.
 - c. Select 'Purge Commissions File' on the Sales Commissions menu.
12. Clear the general ledger distributions to avoid integration of old data to your general ledger.

Follow the steps below to clear the general ledger distributions.

- a. Go to the General Ledger system and pull down the 'Integrations' menu.
- b. Select the Accounts Receivable option on the 'Integrations' menu.
- c. Enter the date used in Step 10 as the Cutoff Date and run the process.
- d. Pull down the 'Main' menu and select 'Journal Entries'.
- e. Select 'Void Transactions' on the Journal Entries menu.
- f. Press function key number eight, Select Transactions, and select the transaction containing the Accounts Receivable distributions.

13. Clear the Month-to-Date and Year-to-Date Sales and Costs buckets by following the steps below.
 - a. Pull down the Period-End menu from the menu bar.
 - b. Select 'Clear MTD/YTD Data' from the Period-End menu.
 - c. Select and execute the Customer YTD Sales & Costs option on the Clear MTD/YTD Data menu.
 - d. Select and execute the Sales Rep YTD Sales & Comm option on the Clear MTD/YTD Data menu.

You are now ready to begin entering current transactions into the Accounts Receivable package for the new company.

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CHAPTER 2.4: ACCOUNTS PAYABLE

Before you can use the Accounts Payable application for normal daily work, you need to enter master data and initialize balances. This chapter provides the specific instructions for the final phase of preparing Accounts Payable. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Accounts Payable system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Accounts Payable package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. If the Accounts Payable package is not to be interfaced to the General Ledger package, you must enter data into the G/L Account file which is contained in the Accounts Payable package. This file contains the account numbers and descriptions of the general ledger accounts that accumulate Accounts Payable information for the General Ledger Distribution report.

Follow the steps below to enter the General Ledger Account data.

- a. Select General Ledger Accounts from the Initial Data Entry menu.
- b. Select 'Add' from the General Ledger Accounts menu and enter your records.
- c. Print all G/L Account records by selecting the Edit List option on the General Ledger Accounts menu, and examine all data entered for errors and omissions.
- d. Correct and/or delete G/L Account records by selecting the appropriate choices on the General Ledger Accounts menu.

4. At this point you must check the validity of the data that you set up in the Master Company file as the system defaults.

Follow the steps below to print the Master Company File List.

- a. Pull down the Reports menu from the menu bar.
- b. Select Master File Lists from the Reports menu.
- c. Choose the last selection, 'Master Company'.
- d. Press return to produce the report.

If you see the message '***NOT ON FILE***' in this list, make the necessary corrections to the Master Company Record (following the steps described above) and rerun the list until that message no longer appears anywhere on the list.

5. Enter a record for each vendor as follows:
 - a. Go back to the Initial Data Entry menu and select 'Vendors'.
 - b. Select 'Add' from the Vendor File menu and enter your records.
 - c. Print all vendor records by selecting the Edit List option on the Vendor File menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete vendor records by selecting the appropriate choices on the Vendor File menu.
6. Enter, and assign codes to, the different remit-to addresses for your vendors, as follows:
 - a. Select Remit-To Addresses from the Initial Data Entry menu.
 - b. Select 'Add' from the Remit-To Addresses menu and enter your records.
 - c. Print all records by selecting the Edit List option on the Remit-To Addresses menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete address records by selecting the appropriate choices on the Remit-To Addresses menu.

7. If the Accounts Payable package will not be interfaced to the Job Cost Tracking package, but you wish to use the Job Distribution reports in A/P, you must set up the relevant files as such:
 - a. Select Jobs from the Initial Data Entry menu.
 - b. Select 'Add' from the Jobs menu and enter one record for each of your active job records.
 - c. Print all job records by selecting the Edit List option on the Jobs menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete job records by selecting the appropriate choices on the Jobs menu.
 - e. Select Cost Codes from the Initial Data Entry menu.
 - f. Select 'Add' from the Cost Codes menu and enter one record for each different type of cost for which you want a separate category on the Job Distributions report.
 - g. Print all cost type records by selecting the Edit List option on the Cost Codes menu, and examine all data entered for errors and omissions.
 - h. Correct and/or delete cost type records by selecting the appropriate choices on the Cost Codes menu.
8. Enter all unpaid vendor invoices as of the selected conversion date; this conversion date should be the ending date of one of your fiscal periods. Enter the correct invoice date for each voucher—aging is performed based upon this date.

The steps for entering vendor invoices (vouchers) are:

- a. Pull down the 'Main' menu from the menu bar. Select 'Voucher Entry'.
- b. Select Enter & Edit Vouchers, and enter your vendor invoices as described above.
- c. Select Edit List from the Voucher Entry submenu and print a list of all the transactions you just entered. Identify any data entry errors and omissions.

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- d. Select Enter & Edit Vouchers from the Voucher Entry submenu, and make any necessary corrections. If you need to remove any transactions, select Void/Reinstate Vouchers from the Voucher Entry submenu.
 - e. Select Journal & Post from the Voucher Entry submenu and complete the process.
9. Verify the accuracy of the open vouchers for each vendor by printing the Detailed Aged Payables report and checking it against the aging report from your previous bookkeeping system.
- a. Pull down the 'Reports' menu from the menu bar. Select 'Aged Payables', then select Detailed Report.
 - b. Compare the reports and enter and post reversing and correcting vouchers (as described above in step 8) as needed to get these two reports to match.
10. Clear the general ledger distributions to avoid integration of old data to your general ledger.

Follow the steps below to clear the general ledger distributions.

- a. Go to the General Ledger system and pull down the 'Integrations' menu.
- b. Select the Accounts Payable option on the 'Integrations' menu.
- c. Enter the date used in Step 8 as the Cutoff Date and run the process.
- d. Pull down the 'Main' menu and select 'Journal Entries'.
- e. Select 'Void Transactions' on the Journal Entries menu.
- f. Press function key number eight, Select Transactions, and select the transaction containing the Accounts Payable distributions.

You are now ready to begin entering current transactions into the Accounts Payable package for the new company.

CHAPTER 2.5: BANK RECONCILIATION

Before you can use the Bank Reconciliation application for normal daily work, you need to enter master data and initialize balances. This chapter provides the specific instructions for the final phase of preparing Bank Reconciliation. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Bank Reconciliation system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Bank Reconciliation package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. If the Bank Reconciliation package is not to be interfaced to the General Ledger package, you must enter data into the G/L Account file which is contained in the Bank Reconciliation package. This file contains the account numbers and descriptions of the General Ledger accounts that accumulate Bank Reconciliation information for the General Ledger Distribution report.

Follow the steps below to enter the General Ledger Account data.

- a. Select General Ledger Accounts from the Initial Data Entry menu.
- b. Select 'Add' from the General Ledger Accounts menu and enter your records.
- c. Print all G/L Account records by selecting the Edit List option on the General Ledger Accounts menu, and examine all data entered for errors and omissions.
- d. Correct and/or delete G/L Account records by selecting the appropriate choices on the General Ledger Accounts menu.

4. At this point you must check the validity of the data that you set up in the Master Company file as the system defaults.

Follow the steps below to print the Master Company File List.

- a. Pull down the Reports Menu from the menu bar.
- b. Select Master File Lists from the Reports Menu.
- c. Scroll down the list and choose the last selection, 'Master Company'.
- d. Press return to produce the report.

If you see the message '***NOT ON FILE***' in this list, make the necessary corrections to the Master Company Record (following the steps described above) and rerun the list until that message no longer appears anywhere on the list.

5. Enter the Bank records for this company as follows:
 - a. Select 'Banks' from the Initial Data Entry menu.
 - b. Select 'Add' from the Banks menu and enter your records.
 - c. Print all bank records by selecting the Edit List option on the Banks menu, and examine all data entered for errors and omissions.
 - d. Correct, and/or delete, bank records by selecting the appropriate choices on the Banks menu.
6. Enter the Bank Account records for this company as follows:
 - a. Select 'Bank Accounts' from the Initial Data Entry menu.
 - b. Select 'Add' from the Bank Accounts menu and enter your records.
 - c. Print all bank account records by selecting the Edit List option on the Bank Accounts menu, and examine all data entered for errors and omissions.
 - d. Correct, and/or delete, account records by selecting the appropriate choices on the Bank Accounts menu.

7. The next step is to initialize the account balances. For each of your cash accounts, begin by entering all the transactions that appear on your most recent bank statement. Then reconcile the account to the statement's ending balance.

The transactions normally come from the other PowerWindows packages (Accounts Payable, Payroll, Accounts Receivable). To efficiently initialize the system, you may enter those transactions directly into the Bank Reconciliation system. (Temporarily set the 'Interface?' flags in the Master Company record to 'N'.)

The transactions you enter are most likely already reflected in your general ledger. To avoid double postings to your ledger, you must integrate the Bank Reconciliation transactions into your ledger, and then void the resulting journal entries.

Note: You will most likely repeat this process as you receive your bank statements, until all cash-oriented transactions are flowing from Accounts Payable, Payroll, and Accounts Receivable systems.

The steps for temporarily setting the 'Interface?' flags are as follows:

- a. Pull down the Master Files menu from the menu bar.
- b. Select 'Master Company' from the Master Files menu.
- c. Enter the number of your company.
- d. Enter 'N' for each of the following fields:

```
9.Interface with A/P? N
10.Interface with A/R? N
11.Interface with P/R? N
```

Note: Make sure to set these flags back to the appropriate settings after you finish setting up this company.

The steps for entering the transactions are as follows:

- a. Pull down the Main menu from the menu bar.
- b. Select 'Transaction Entry' from the Main menu.
- c. Add transactions by selecting Enter & Edit Transactions on the Transaction Entry menu.
- d. Print an Edit List to verify correctness of data entered by selecting Transaction Edit List on the Transaction Entry menu.
- e. Make any necessary corrections by selecting the Enter & Edit Transactions option on the Transaction Entry menu.
- f. Produce a journal of transactions and post the transactions to update the master files by selecting the Transaction Journal & Post option on the Transaction Entry menu.

The steps for reconciling the account are as follows:

- a. Pull down the Main menu from the menu bar.
- b. Select 'Account Reconciliation' from the Main menu.
- c. Enter the statement date, prior balance, ending balance, and any service charge and interest earned as they are on your bank statement.
- d. Complete the process by selecting all transactions cleared on the statement. If any are missing, you may enter and post them at that point, or let the program make an adjusting entry for you.

When you are done with each account, integrate the distributions into your General Ledger system and void the resulting journal entries (see Chapter 2 in 'Using the Applications' - Volume III of this manual set)

Note: Make sure to set the flags in your Master Company record back to the appropriate settings.

The Bank Reconciliation system for the new company is now ready for routine processing operations.

CHAPTER 2.6: BILLING

Before you can use the Billing application for normal daily work, you need to enter master data. This chapter provides the specific instructions for the final phase of preparing Billing. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Billing system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Billing package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. Enter the shipping codes to be used by this company as follows:
 - a. Select Ship Via Codes from the Initial Data Entry menu.
 - b. Select 'Add' from the Ship Via Codes menu and enter your records.
 - c. Print the Ship Via records by selecting the Edit List option on the Ship Via Codes menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete shipping method records by selecting the appropriate choices on the Ship Via Codes menu.
4. Enter the payment terms codes to be used by this company as follows:
 - a. Select Payment Terms from the Initial Data Entry menu.
 - b. Select 'Add' from the Payment Terms menu and enter your records.
 - c. Print the Payment Terms records by selecting the Edit List option on the Payment Terms menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete terms records by selecting the appropriate choices on the Payment Terms menu.

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5. Enter the sales rep records to be used by this company as follows:
 - a. Select Sales Reps from the Initial Data Entry menu.
 - b. Select 'Add' from the Sales Reps menu and enter your records.
 - c. Print the sales rep records by selecting the Edit List option on the Sales Reps menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete sales rep records by selecting the appropriate choices on the Sales Reps menu.
6. If the Billing package is not to be interfaced to the General Ledger package, you must enter data into the G/L Account file which is contained in the Billing package. This file contains the account numbers and descriptions of the General Ledger accounts that accumulate Billing information for the General Ledger Distribution report.

Follow the steps below to enter the General Ledger Account data.

- a. Select General Ledger Accounts from the Initial Data Entry menu.
 - b. Select 'Add' from the General Ledger Accounts menu and enter your records.
 - c. Print all G/L Account records by selecting the Edit List option on the General Ledger Accounts menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete G/L Account records by selecting the appropriate choices on the General Ledger Accounts menu.
7. At this point you must check the validity of the data that you set up in the Master Company file as the system defaults.

Follow the steps below to print the Master Company File List.

- a. Pull down the Reports Menu from the menu bar.
- b. Select Master File Lists from the Reports Menu.
- c. Scroll down the list and choose the last selection, 'Master Company'.
- d. Press return to produce the report.

If you see the message '***NOT ON FILE***' in this list, make the necessary corrections to the Master Company Record (following the steps described above) and rerun the list until that message no longer appears anywhere on the list.

8. If you collect sales tax from your customers, you must set up the Sales Tax Code records for each sales tax authority (jurisdiction) for which you collect sales tax.

Follow the steps below to enter the Sales Tax Codes.

- a. Select Sales Tax Authorities from the Initial Data Entry menu.
 - b. Select 'Add' from the Sales Tax Codes menu and enter your records.
 - c. Print all sales tax records by selecting the Edit List option on the Sales Tax Codes menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete tax code records by selecting the appropriate choices on the Sales Tax Codes menu.
9. Enter the price class records to be used by this company as follows:
- a. Select Price Classes from the Initial Data Entry menu.
 - b. Select 'Add' from the Price Classes menu and enter your records.
 - c. Print the price class records by selecting the Edit List option on the Price Classes menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete price class records by selecting the appropriate choices on the Price Classes menu.
10. Enter the product and service records to be used by this company as follows:
- a. Select Products & Services from the Initial Data Entry menu.
 - b. Select 'Add' from the Products & Services menu and enter your records.
 - c. Print the product and service records by selecting the Edit List option on the Products & Services menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete product and service records by selecting the appropriate choices on the Products & Services menu.

11. The customer file in the Billing system is the same as the one in the Accounts Receivable system. Customer records may be added or modified in either system. If needed, enter the customer records to be used by this company as follows:
 - a. Select Customers from the Initial Data Entry menu.
 - b. Select 'Add' from the Customers menu and enter your records.
 - c. Print the customer records by selecting the Edit List option on the Customers menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete customer records by selecting the appropriate choices on the Customers menu.

12. Enter the ship-to address records for each customer in this company as follows:
 - a. Select 'Ship-to Addresses' from the Initial Data Entry menu.
 - b. Select 'Add' from the Ship-to Addresses menu and enter your records.
 - c. Print all address records by selecting the Edit List option on the Ship-to Addresses menu, and examine all data entered for errors and omissions.
 - d. Correct, and/or delete, address records by selecting the appropriate choices on the Ship-to Addresses menu.

The Billing system for the new company is now ready for routine processing operations.

CHAPTER 2.7: PAYROLL PROCESSING

Before you can use the Payroll Processing application for normal daily work, you need to enter master data and initialize balances. This chapter provides the specific instructions for the final phase of preparing Payroll Processing. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Payroll Processing system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Payroll Processing package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. If the Payroll package is not to be interfaced to the General Ledger package, you must enter data into the G/L Account file which is contained in the Payroll package. This file contains the account numbers and descriptions of the General Ledger accounts that accumulate Payroll information for the General Ledger Distribution report.

Follow the steps below to enter the General Ledger Account data.

- a. Select General Ledger Accounts from the Initial Data Entry menu.
- b. Select 'Add' from the General Ledger Accounts menu and enter your records.
- c. Print all G/L Account records by selecting the Edit List option on the General Ledger Accounts menu, and examine all data entered for errors and omissions.
- d. Correct and/or delete G/L Account records by selecting the appropriate choices on the General Ledger Accounts menu.

4. At this point you must check the validity of the data that you set up in the Master Company file as the system defaults.

Follow the steps below to print the Master Company File List.

- a. Pull down the Reports Menu from the menu bar.
- b. Select Master File Lists from the Reports Menu.
- c. Scroll down the list and choose the last selection, 'Master Company'.
- d. Press return to produce the report.

If you see the message '***NOT ON FILE***' in this list, make the necessary corrections to the Master Company Record (following the steps described above) and rerun the list until that message no longer appears anywhere on the list.

5. Enter the cost type records to be used by this company as follows:
 - a. Select Cost Codes from the Initial Data Entry menu.
 - b. Select 'Add' from the Cost Codes menu and enter your records.
 - c. Print all cost type records by selecting the Edit List option on the Cost Codes menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete cost type records by selecting the appropriate choices on the Cost Codes menu.
6. Enter the jobs to be used by this company as follows:
 - a. Select Jobs from the Initial Data Entry menu.
 - b. Select 'Add' from the Jobs menu and enter your records.
 - c. Print all job records by selecting the Edit List option on the Jobs menu, and examine all data entered for errors and omissions. Correct and/or delete job records by selecting the appropriate choices on the Jobs menu.
 - d. Correct and/or delete job records by selecting the appropriate choices on the Jobs menu.

7. Enter the deductions and earnings types to be used by this company as follows:
 - a. Select Deductions/Earnings Codes from the Initial Data Entry menu.
 - b. Select 'Add' from the Deductions/Earnings menu and enter your records.
 - c. Print all deduction and earning type records by selecting the Edit List option on the Deductions/Earnings menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete deduction and earning type records by selecting the appropriate choices on the Deductions/Earnings menu.
8. Enter a record for each employee as follows:
 - a. Select Employees from the Initial Data Entry menu.
 - b. Select 'Add' from the Employees menu and enter your records.
 - c. Print all employee records by selecting the Edit List option on the Employees menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete employee records by selecting the appropriate choices on the Employees menu.
9. Build the year-to-date and quarter-to-date history information for each employee by entering manual checks. If you are adding this new company at the beginning of a fiscal year, skip this step. Otherwise, perform either sub-step a, b, or c below depending upon the payroll conversion data you have selected.
 - a. Conversion date within Fiscal Quarter 1. Use these procedures if you have already performed the first, but not the last, payroll run in the first quarter of the calendar year. Enter one manual check per employee containing the quarter-to-date payroll history information; see Manual Check Directions below.
 - b. Conversion date at the end of Fiscal Quarter 1, 2, or 3. Use these procedures if you have already performed the last payroll run of a fiscal quarter. Enter one manual check per employee containing the year-to-date payroll history information; see Manual Check Directions below. After entering and posting the manual checks for each employee, perform the Clear Quarter-to-Date function (Period-End; Quarterly; Clear QTD Figures).

- c. Conversion date within Fiscal Quarter 2, 3, or 4. Use these procedures if you have already performed the first, but not the last, payroll run in Fiscal Quarter 2, 3, or 4. Enter one manual check per employee containing the year-to-date payroll history information as of the end of the previous fiscal quarter; see Manual Check Directions below. Then perform the Clear Quarter-to-Date function (Period-End; Quarterly; Clear QTD Figures). Then enter one manual check per employee containing the quarter-to-date payroll history information for the current fiscal quarter.

Manual Check Directions

1. Enter a manual check record (Main; Manual Checks; Enter & Edit).
 2. List all or selected manual check records (Main; Manual Checks; Edit List).
 3. Correct/Delete a manual check record (Main; Manual Checks; Enter & Edit).
 4. Print a journal and post the selected manual check records (Main; Manual Checks; Journal & Post).
-
10. If the payroll history information entered in the previous step above is complete through the end of a fiscal quarter of the calendar year, perform the quarterly operations as described in Using the Applications (Volume III of this manual set).
 11. Purge the G/L Distribution file through the dates used for the manual checks entered in the step above. This function is accessed by pulling down the Appgen Quick Menu (press function key number four), and choosing option two (G/L Distribution Purge).

You are now ready to begin daily processing with this Payroll package for the newly created company. Repeat these steps for each company that you wish to initialize.

CHAPTER 2.8: INVENTORY CONTROL

Before you can use the Inventory Control application for normal daily work, you need to enter master data and initialize balances. This chapter provides the specific instructions for the final phase of preparing Inventory Control. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Inventory Control system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Inventory Control package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. Enter the price class records to be used by this company as follows:
 - a. Select Price Classes from the Initial Data Entry menu.
 - b. Select 'Add' from the Price Classes menu and enter your records.
 - c. Print all Price Class records by selecting the Edit List option on the Price Classes menu, and examine all data entered for errors and omissions.
 - d. Correct, and/or delete, Price Class records by selecting the appropriate choices on the Price Classes menu.
4. Enter the warehouses to be used by this company as follows:
 - a. Select Warehouses from the Initial Data Entry menu.
 - b. Select 'Add' from the Warehouses menu and enter your records.
 - c. Print all warehouse records by selecting the Edit List option on the Warehouses menu, and examine all data entered for errors and omissions.
 - d. Correct, and/or delete, warehouse records by selecting the appropriate choices on the Warehouses menu.

5. If the Inventory Control package is not to be interfaced to the General Ledger package, you must enter data into the G/L Account file which is contained in the Inventory Control package. This file contains the account numbers and descriptions of the General Ledger accounts that accumulate inventory transaction information for the General Ledger Distribution report.

Follow the steps below to enter the General Ledger Account data.

- a. Select General Ledger Accounts from the Initial Data Entry menu.
 - b. Select 'Add' from the General Ledger Accounts menu and enter your records.
 - c. Print all G/L Account records by selecting the Edit List option on the General Ledger Accounts menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete G/L Account records by selecting the appropriate choices on the General Ledger Accounts menu.
6. At this point you must check the validity of the data that you set up in the Master Company file as the system defaults.

Follow the steps below to print the Master Company File List.

- a. Pull down the Reports Menu from the menu bar.
- b. Select Master File Lists from the Reports Menu.
- c. Scroll down the list and choose the last selection, 'Master Company'.
- d. Press return to produce the report.

If you see the message '***NOT ON FILE***' in this list, make the necessary corrections to the Master Company Record (following the steps described above) and rerun the list until that message no longer appears anywhere on the list.

7. Enter a record for each unit of measure (for all items) as follows:
 - a. Select 'Units of Measure' from the Initial Data Entry menu.
 - b. Select 'Add' from the Units of Measure menu and enter your records.
 - c. Print all records by selecting the Edit List option on the Units of Measure menu, and examine all data entered for errors and omissions.
 - d. Correct, and/or delete, records by selecting the appropriate choices on the Units of Measure menu.

8. Enter a record for each inventory item as follows:
 - a. Select 'Inventory Items' from the Initial Data Entry menu.
 - b. Select 'Add' from the Inventory Items menu and enter your records.
 - c. Print all item records by selecting the Edit List option on the Inventory Items menu, and examine all data entered for errors and omissions.
 - d. Correct, and/or delete, item records by selecting the appropriate choices on the Inventory Items menu.

9. Enter any alternate item codes necessary as follows:
 - a. Select 'Alternate Item Codes' from the Initial Data Entry menu.
 - b. Select 'Add' from the Alternate Items menu and enter your records.
 - c. Print all alternate code records by selecting the Edit List option on the Alternate Items menu, and examine all data entered for errors and omissions.
 - d. Correct, and/or delete, alternate code records by selecting the appropriate choices on the Alternate Items menu.

10. Enter Receivings transactions to set up the beginning inventory stock for each item and warehouse as follows:

The steps for entering Receivings transactions are as follows:

- a. Pull down the 'Main' menu from the menu bar.
- b. Select 'Inventory Receipts' from the Main menu.
- c. Add receipt transactions by selecting 'Enter & Edit Receipts' on the Inventory Receipts menu.
- d. Print an Edit List to verify the correctness of the data entered by selecting 'Edit List' on the Inventory Receipts menu.
- e. Make any necessary corrections by selecting the 'Enter & Edit Receipts' option on the Inventory Receipts menu.
- f. Produce a journal of transactions and post the transactions to update the master files by selecting the 'Journal & Post' option on the Inventory Receipts menu.

You are now ready to begin entering current transactions into the Inventory Control package for the new company.

SETTING UP A NEW COMPANY _____
Inventory Control

CHAPTER 2.9: SALES ORDER PROCESSING

Before you can use the Sales Order Processing application for normal daily work, you need to enter master data. This chapter provides the specific instructions for the final phase of preparing Sales Order Processing. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Sales Order Processing system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Sales Order Processing package and select the company you wish to initialize.
2. Enter the ship-to addresses for each customer having additional shipping addresses.
 - a. Enter a new Ship-to Address record (Master Files; Ship-to Addressess).
 - b. Print all Ship-to Address records (Master Files; Master File Lists; Ship-to Addresses), and examine all data entered for errors and omissions.
 - d. Correct/Delete a record (Master Files; Ship-to Addresses).
3. Enter any special or promotional pricing records.
 - a. Enter a new Special/Promo Price record (Master Files; Special/Promo Prices).
 - b. Print all price records (Master Files; Master File Lists; Special/Promo Prices), and examine all data entered for errors and omissions.
 - c. Correct/Delete a record (Master Files; Special/Promo Prices).

The Sales Order Processing system is now ready for all phases of operation.

SETTING UP A NEW COMPANY _____
Sales Order Processing

CHAPTER 2.10: PURCHASE ORDER PROCESSING

Before you can use the Purchase Order Processing application for normal daily work, you need to enter master data. This chapter provides the specific instructions for the final phase of preparing Purchase Order Processing. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Purchase Order Processing system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Purchase Order Processing package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. Enter, and assign codes to, the various shipping methods to be used by this company as follows:
 - a. Select Ship Via Codes from the Initial Data Entry menu.
 - b. Select 'Add' from the Ship Via Codes menu and enter your records.
 - c. Print the Ship Via records by selecting the Edit List option on the Ship Via Codes menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete shipping method records by selecting the appropriate choices on the Ship Via Codes menu.
4. Enter, and assign codes to, the buyers for this company as follows:
 - a. Select Buyers from the Initial Data Entry menu.
 - b. Select 'Add' from the Buyers menu and enter your records.
 - c. Print the buyer records by selecting the Edit List option on the Buyers menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete buyer records by selecting the appropriate choices on the Buyers menu.

5. Enter, and assign codes to, the different people in this company who are authorized to make purchase requisitions, as follows:
 - a. Select Requesters from the Initial Data Entry menu.
 - b. Select 'Add' from the Requesters menu and enter your records.
 - c. Print the Requester records by selecting the Edit List option on the Requesters menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete Requester records by selecting the appropriate choices on the Buyers menu.

6. Enter, and assign codes to, the different Ship-To Addresses for this company as follows:
 - a. Select Ship-To Addresses from the Initial Data Entry menu.
 - b. Select 'Add' from the Ship-To Addresses menu and enter your records.
 - c. Print all address records by selecting the Edit List option on the Ship-To Addresses menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete address records by selecting the appropriate choices on the Ship-To Addresses menu.

7. Enter, and assign codes to, the different Remit-To Addresses for your vendors, as follows:
 - a. Select Remit-To Addresses from the Initial Data Entry menu.
 - b. Select 'Add' from the Remit-To Addresses menu and enter your records.
 - c. Print all address records by selecting the Edit List option on the Remit-To Addresses menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete address records by selecting the appropriate choices on the Remit-To Addresses menu.

8. Enter, and assign codes to, the Vendors to be used by this company as follows:
 - a. Select Vendors from the Initial Data Entry menu.
 - b. Select 'Add' from the Vendors menu and enter your records.
 - c. Print all vendor records by selecting the Edit List option on the Vendors menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete vendor records by selecting the appropriate choices on the Vendors menu.
9. Enter all Inventory Items through the Inventory Control system. Consult the Inventory chapter for details.
10. Enter all currently Open Orders as follows:
 - a. Select Enter Purchase Orders from the Main menu.
 - b. Select Enter & Edit POs, and enter your open orders.
 - c. List all open orders by selecting the Edit List option on the Enter Purchase Orders menu.
 - d. Select Enter & Edit POs, and make any necessary corrections to the orders. (Select Void/Reinstate Orders to remove any orders that should not have been entered.)
 - e. Select 'Print Purchase Orders' on the Main menu and print the newly entered orders. This can be done on plain white paper.
 - g. Select 'Post Purchase Orders' on the Main menu to post the orders to the permanent files.

11. If you entered your Open Orders in their original entirety, you may have already received partial shipments. If you have, your next step would be to enter in any partial receipts against those orders as follows:
 - a. Select Receive Merchandise from the Main menu.
 - b. Select Enter & Edit Receipts, and enter transactions reflecting what has already been received on the open orders.
 - c. Select Edit List on the Receive Merchandise menu and review all transactions entered.
 - d. Select Enter & Edit Receipts to make any necessary corrections.
 - e. Select Journal & Post from the Receive Merchandise menu to post the transactions to the permanent files.

You are now ready to begin daily processing with this Purchase Order package for the newly created company. Repeat these steps for each company that you wish to initialize.

CHAPTER 2.11: JOB COST TRACKING

Before you can use the Job Cost Tracking application for normal daily work, you need to enter master data. This chapter provides the specific instructions for the final phase of preparing Job Cost Tracking. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Job Cost Tracking system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Job Cost Tracking package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. Enter, and assign codes to, the cost categories to be used by this company as follows:
 - a. Select Cost Codes from the Initial Data Entry menu.
 - b. Select 'Add' from the Cost Codes menu and enter your records.
 - c. Print the cost code records by selecting the Edit List option on the Cost Codes menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete cost code records by selecting the appropriate choices on the Cost Codes menu.
4. Enter all active jobs this company as follows::
 - a. Select Jobs from the Initial Data Entry menu.
 - b. Select 'Add' from the Jobs menu and enter your records.
 - c. Print all job records by selecting the Edit List option on the Jobs menu.
 - d. Correct and/or delete job records by selecting the appropriate choices on the Jobs menu.

The Job Cost package for the new company is now ready for routine processing operations.

SETTING UP A NEW COMPANY ---

Job Cost Tracking

CHAPTER 2.12: BILL OF MATERIALS

Before you can use the Bill of Materials application for normal daily work, you need to enter master data. This chapter provides the specific instructions for the final phase of preparing Bill of Materials. In a multi-company environment you will have to repeat these procedures for each company.

Initializing Your Data for Daily Use

NOTE: The use of this software package assumes that you know how to logon to your system, access the PowerWindows Bill of Materials system, choose menu selections and enter data into the data entry screens. This knowledge may be gained from reading 'Operator Orientation' (Volume II of this manual set).

Please follow these step-by-step instructions:

1. Log in to the Bill of Materials package and select the company you wish to initialize.
2. Pull down the 'Setup' Menu from the menu bar, and then select 'Initial Data Entry' to pull down its menu.
3. Enter, and assign codes to, the Cost Code records to be used by this company as follows:
 - a. Select Cost Codes from the Initial Data Entry menu.
 - b. Select 'Add' from the Cost Codes menu and enter your records.
 - c. Print the cost code records by selecting the Edit List option on the Cost Codes menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete cost code records by selecting the appropriate choices on the Cost Codes menu.
4. Enter the bill of materials records to be used by this company as follows:
 - a. Select Bills Of Material from the Initial Data Entry menu.
 - b. Select 'Add' from the Bills Of Material menu and enter your records.
 - c. Print all BOM records by selecting the Edit List option on the Bills Of Material menu, and examine all data entered for errors and omissions.
 - d. Correct and/or delete BOM records by selecting the appropriate choices on the Bills Of Material menu.

You are now ready to begin using the Bill Of Materials system to produce reports and perform cost calculations.

SETTING UP A NEW COMPANY _____
Bill of Materials

CHAPTER 3: TECHNICAL INFORMATION

The chapter is provided to supply technically-oriented, system administration type personnel with information that may be useful during the initial setup of, and throughout the use of, the software.

It is highly recommended that personnel who do not fully understand the information contained in this chapter do not make attempts to administer their system with any of the information provided herein.

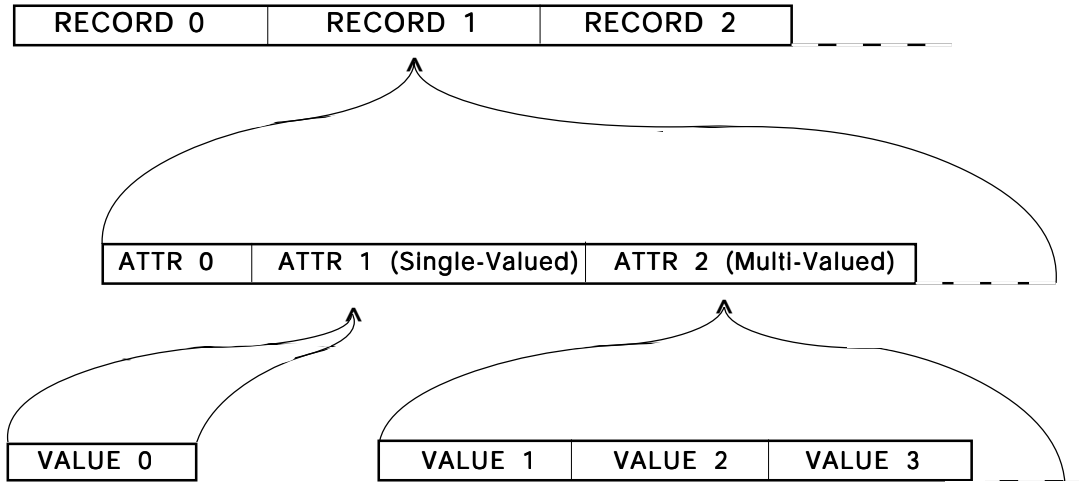


Figure 3.11
Appgen File Structure

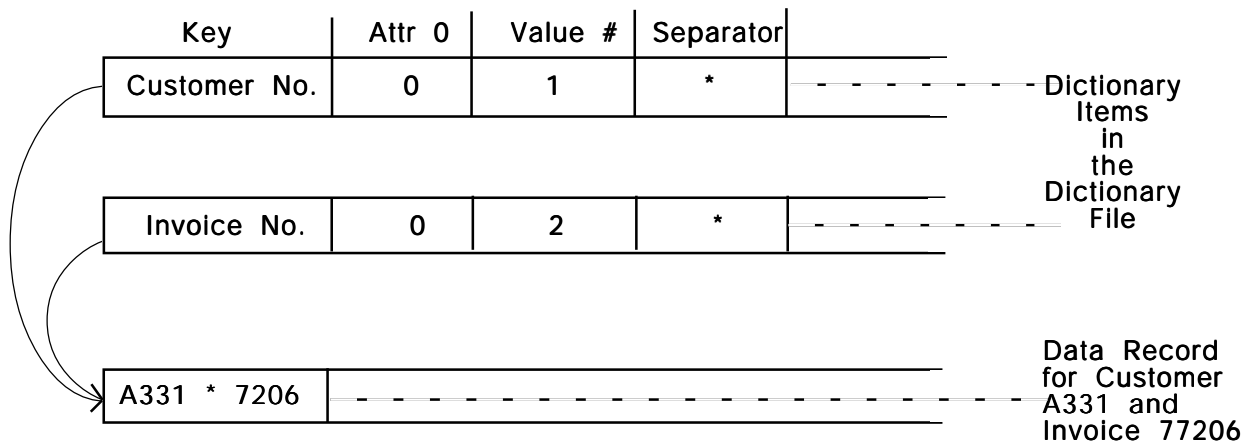


Figure 3.12
Multi-part Keys

CHAPTER 3.1: The Appgen File Structure

Appgen data files contain data in a flexible format. Each record may change in size as data is added to or deleted from it. Fields are variable in length and can be subdivided with special delimiters, creating any number of variable-length "values". Therefore, the Appgen File system contains:

- any number of files, which may contain:
- any number of records, which may contain:
- any number of multiple fields, which may contain:
- any number of multiple values.

NOTE: Within the Appgen file structure, fields are called "attributes". To stay consistent with Appgen, the words "attribute" and "field" should be considered interchangeable. Also, the terms "record" and "item" are used interchangeably.

Multi-Valued Attributes

The Appgen file structure contains a unique feature known as a multi-valued attribute. It allows you to store an indeterminable number of values within a record in a regular and consistent way.

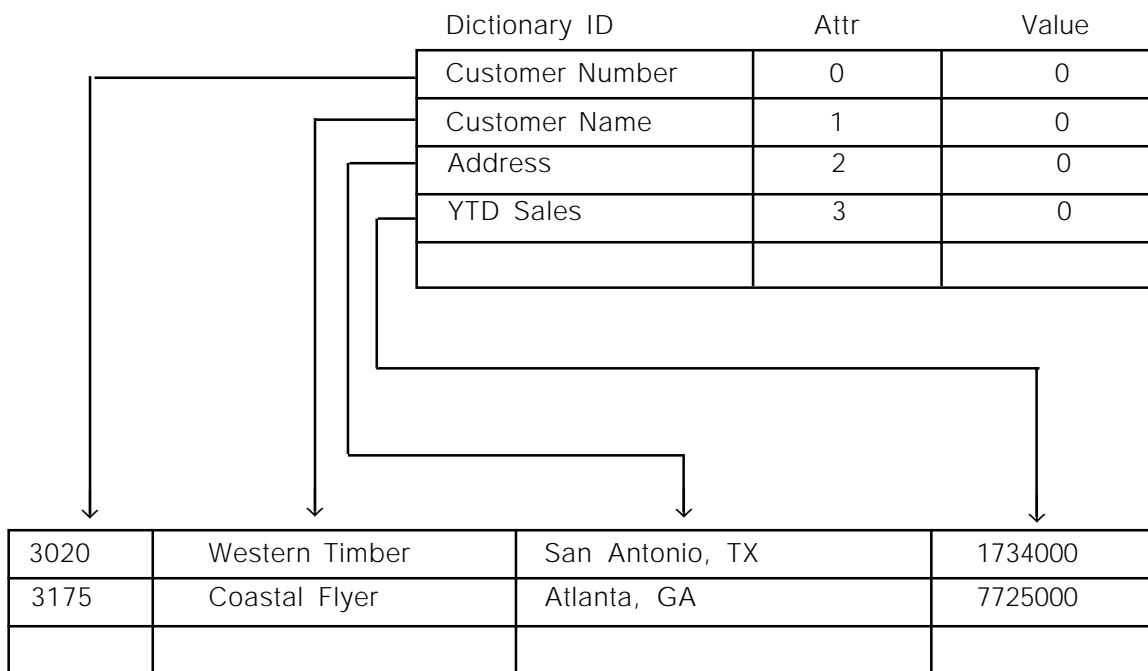
Most attributes contain a single value. For example, in a customer record, the attribute for the city would contain only one city name. Some types of attributes can have several values though. If the customer record included a list of all open invoices for the customer, there might be an attribute called OPEN ITEMS. This single attribute would contain only one type of data (invoice numbers), but multiple occurrences of that data.

There might also be an attribute called INVOICE DATE which would contain a date associated with each of the invoices. There might also be other associated attributes which contain invoice amount, balance, etc. Each would be a single attribute with multiple occurrences of data. If there were five invoice numbers in the OPEN ITEMS attribute, there would be five dates in the INVOICE DATE attribute and five amounts in the invoice amount attribute, etc.

Figure 3.11 shows the basic relationship between a record and its single-valued and multi-valued attributes. Attributes are numbered sequentially within a record and will all be present even if the value of the attribute is null.

The number of values contained in a multi-valued attribute vary from record to record depending upon the data contained in the record. There are two types of multi-valued attributes: controlling and dependent. A Controlling attribute may have as many values as required by the data in each record (and may vary from record to record). Dependent attributes are associated with a Controlling attribute and must have the same number of values as the Controlling attribute.

DICTIONARY FILE



DATA FILE

Figure 3.13
Dictionary & Data Files

When the number of values in the Controlling attribute is changed, the number of values in each of the Dependent multi-valued attributes is also changed.

In Figure 3.11, RECORD 1 consists of several attributes, ATTR 0, ATTR 1, ATTR 2, etc. ATTR 1 contains a single value, VALUE 0. ATTR 2 contains several values, VALUE 1, VALUE 2, VALUE 3, etc. ATTR 2 is multi-valued.

Multi-Part Keys

The key of a data file record is contained in Attribute 0 of the record and cannot be multi-valued. The key may have more than one part however. The key to an invoice record, for example, may consist of the customer number and the invoice number. A delimiter (the character “*”) is used to separate the two parts of the key. The first part may be accessed by a Dictionary item with Attribute 0, Value 1, Separator “*”. The second part of the key is accessed by a Dictionary item with Attribute 0, Value 2, Separator “*”. (See Figure 3.12)

Please note that a multi-part key is single-valued. It has a single unique value consisting of several different types of data. This is different from a multi-valued attribute. A multi-valued attribute consists of several values of a single type.

NOTE: The use of a “*” as a separator for multi-part keys is a convention used in all Appgen application packages from Appgen Business Software, Inc. Other application packages may not conform to this convention.

Any Appgen-created data file consists of two separate files, the Data file and an associated Dictionary file which contains records describing the characteristics of the data file record layout. Typically, there is one Dictionary file record for each attribute in the data record. Figure 3.13 shows the relationship between the Dictionary items (records) in the Dictionary file and the attributes of the data file record layout. The actual filename of the Dictionary File is the data filename preceded by “D.”. The Dictionary file for “CUST” is “D.CUST”.

The key to each Dictionary item is the literal value of the fieldname of the attribute being described. For example, in the “CUST” data file, Attribute number 1 is the customer number. The Dictionary item key for this attribute is CUST.NO.

The purpose of a Dictionary item is to identify the location of the data within the record layout (Attribute number, value number, separator) and describe the output conversion process to use when displaying/printing the data value(s). Both AQL (Appgen Query Language) and Appgen applications use these Dictionary item parameters when accessing data from the file.

Dictionary items may optionally contain extra parameters used only by AQL, such as functions to be performed upon the data value(s) prior to output and parameters which allow AQL to extract associated data values from secondary files.

When an Appgen application creates a data file, there is typically a one-to-one correspondence between Dictionary items and fields (attributes) within the data file record layout. There can be more than one Dictionary item pointing to the same attribute in a data file; these additional Dictionary items would have different literal fieldnames and contain different parameters. Typical usage of an alternate Dictionary item accessing the same data value would be to use AQL to print the output in a different format (scaling factor, justification, maximum field length, etc.).

CHAPTER 3.2: THE APPGEN UTILITIES

AGCS

NAME

AGCS - specify the national currency symbol

DESCRIPTION

The default currency symbol used by Appgen in displaying and printing monetary figures is the dollar sign (\$).

A Unix shell environmental variable *AGCS* may be set to any printable character. When set, this is the symbol that will be displayed by all Appgen programs that use the dollar sign in their format and/or conversion specifications (e.g., \$5.00, MR22,\$).

EXAMPLES

To set the *AGCS* variable in the Bourne Shell, type:

```
AGCS=#;export AGCS
```

In the 'C' shell, type:

```
setenv AGCS #
```

agdate

NAME

agdate - convert dates between external and Appgen internal formats

SYNOPSIS

agdate datenum

DESCRIPTION

All Appgen dates are stored internally as a Julian type date (sequential integer) where 1 equals 01/01/68. You can use *agdate* to quickly convert dates from the Appgen internal representation to the normal external format of MM/DD/YY. This can be a handy tool during debugging and user support.

'*datenum*' should be an integer or a date in the format MM/DD/YY. If the integer is six bytes long, *agdate* assumes you are supplying a date in the format MMDDYY to be converted to the internal format, otherwise integers are converted to MM/DD/YY.

If '*datenum*' is not specified, *agdate* will display both formats of the current date.

EXAMPLES

```
You type:      agdate 01/01/68
agdate displays: Internal Format: 1
```

```
You type:      agdate 082192
agdate displays: Internal Format: 9000
```

```
You type:      agdate 8599
agdate displays: External Format: 07/17/91
```

```
You type:      agdate -100
agdate displays: External Format: 09/22/67
```

ag_defconv

NAME

ag_defconv - create run time definition files (RDEFs) from specified parameter definition files (PDEFs)

SYNOPSIS

ag_defconv filename ...

DESCRIPTION

ag_defconv creates an Appgen RDEF (Run Time Definition) file from each specified valid PDEF file. The RDEF is given the same file name as the PDEF, e.g., PDEF.XX010000 is converted to RDEF.XX010000. *ag_defconv* checks for certain records and attributes to determine if the specified file requires an RDEF to execute properly. Only if the specified file meets the required criteria will an RDEF be made. If the RDEF already exists, it will be overwritten without notification.

EXAMPLES

```
ag_defconv PDEF.AR*
```

In this example the program will examine each file in the current directory that begins with the characters PDEF.AR and then create an RDEF for each that requires one.

```
ag_defconv *
```

In this example the program will examine every file in the current directory and then create an RDEF for each that requires one.

SEE ALSO

DefConv

AGFORK

NAME

AGFORK - control number of process

DESCRIPTION

To limit the number of concurrent processes (i.e., forks - Quick Programs) for each user, set the UNIX shell environmental variable *AGFORK* to the limiting number.

EXAMPLES

To set the *AGFORK* in the Bourne Shell, type:

```
AGFORK=10; export AGFORK
```

In the 'C' shell, type:

```
setenv AGFORK 10
```

AGHOME

NAME

AGHOME - specify Appgen Home (base) Directory

DESCRIPTION

The standard method of installing Appgen software is to have all application directories, the Appgen bin directory, and the Appgen Development System directory, as subdirectories to a common base directory. This base directory is referred to as the Appgen Home Directory.

A common directory structure would be:

/usr/appgen	-	base directory
/usr/appgen/bin	-	Appgen bin directory
/usr/appgen/develop	-	Development System directory
/usr/appgen/AR	-	Accounts Receivable directory
/usr/appgen/AP	-	Accounts Payable directory
etc.		

A UNIX shell environmental variable *AGHOME* may be set to this base directory so that the Appgen startup program, run, can know where to find the application that you wish to execute. The *AGHOME* variable is also accessed by AQL to find the master dictionary file.

EXAMPLES

To set the *AGHOME* variable in the Bourne Shell, type:

```
AGHOME=/usr/appgen; export AGHOME
```

In the 'C' shell, type:

```
setenv AGHOME /usr/appgen
```

AGINIT

NAME

AGINIT - Appgen environmental variable

DESCRIPTION

See International_Dates and Spooler Redefinition in this appendix.

AGPWD

NAME

AGPWD - specify Appgen password file directory

DESCRIPTION

The Appgen security system is based on a file named '.agpasswd'. The first time a password is assigned, this file is built. This file normally resides in the /etc directory and is normally used by all Appgen users. If you have a requirement to assign users different passwords for the same password levels, you can assign them to use different .agpasswd files.

A Unix shell environmental variable *AGPWD* may be set to any valid directory. When passwords are assigned or referenced while this variable exists, Appgen will use (or build) the .agpasswd file in the directory specified by *AGPWD*.

EXAMPLES

To set the *AGPWD* variable in the Bourne Shell, type:

```
AGPWD=/usr/$HOME; export AGPWD
```

In the 'C' shell, type:

```
setenv AGPWD /usr/$HOME
```

ag_showti

NAME

ag_showti - list terminal names and codes in Appgen terminfo database

SYNOPSIS

ag_showti

DESCRIPTION

The *ag_showti* program will produce a simple listing of all the terminal names, and their codes, in the Appgen terminfo database. This program does not need the environmental TERM variable to be set. *ag_showti* is most useful when you are about to run Appgen on a terminal that you have never used before and are not sure if it is currently in the data base.

The output from this program may be piped to the spooler, or to the Unix program 'pg', or 'more'.

agterm

NAME

agterm - build an Appgen terminfo entry from Unix termcap/terminfo

SYNOPSIS

agterm [tname]

DESCRIPTION

The *agterm* program will build an entry into the Appgen terminfo data base from the terminal information supplied in the Unix termcap or terminfo, depending on which one is used in your particular installation.

USAGE

agterm tname - *tname* should be the name of a terminal in your Unix terminfo or termcap (whichever is being used in your particular installation).

agterm - with no *tname* supplied, *agterm* will attempt to retrieve the terminal information from the Unix terminfo/termcap based on your local TERM variable.

CAVEATS

The information in the Unix terminfo (or termcap) is rarely complete and frequently incorrect. This program is used as a starting point in order to bring up Appgen and complete the entry using the 'TI' programs. See Chapter 3.3 - Appgen Terminfo.

AGTERM

NAME

AGTERM - environmental variable for terminal description

DESCRIPTION

When the setting of the shell environmental variable TERM for Appgen conflicts with the use of this variable in another package being used on the same system, you may set AGTERM instead. When AGTERM is set, Appgen never looks at the TERM variable.

EXAMPLES

To set the *AGTERM* in the Bourne Shell, type:

```
AGTERM=wyse50; export AGTERM
```

In the 'C' shell, type:

```
setenv AGTERM wyse50
```

appgen, run, demo

NAME

appgen, run, demo

SYNOPSIS

appgen XX company

run XX company

demo XX company

DESCRIPTION

appgen is the program you use to start up an Appgen application. *appgen* and *run* are identical. 'XX' is the application's initials. 'company' is an optional company number. *appgen* will expect to find a directory with the name 'XX'. It searches for the directory in this order:

- 1 - it first backs up one directory level and examines all sub-directories;
- 2 - if it does not find it there, it goes back to your current directory and examines all its sub-directories;
- 3 - if it is still not found, the program attempts to access the *AGHOME* variable to find out where the Appgen Home Directory is located (see *AGHOME* in this chapter). If the variable is not set, the program fails. If the variable is set, the program goes to the Appgen Home Directory and examines its sub-directories;
- 4 - if it is still not found, the program fails.

Once the directory is found, *appgen* will attempt to open the Applications Master File, *PDEF.INIT*. If the file is not found, the program fails. Once the file is open, *appgen* will look for the record *INIT.XX*, where *XX* is, once again, the application's initials. If the record is not read successfully, the program fails. Once the record is read, the Appgen Banner Screen appears and the application begins execution.

Unlike *appgen*, *demo* does not search for a directory, but instead expects to find the *PDEF.INIT* file in your current directory. Otherwise, *demo* performs the same function of starting up the requested application.

cksum

NAME

cksum - generates check sums for text and data base files

SYNOPSIS

cksum [-t] [-s] filename ...

DESCRIPTION

Cksum produces a check sum and statistical data about the file or files named. The check sum is used to compare files for identity. If two files are identical, their check sums will be identical. If the check sums for two files are identical, it is almost certain the files are identical (there are fewer possible check sums than possible files, so duplicate check sums are possible, but unlikely, for non-identical files). *Cksum* calculates check sums differently for Appgen data base files than other types of files (referred to generically as "text" files).

For Appgen data base files, the numbers calculated and displayed are:

- number of records
- check sum of record block structure
- check sum of data
- check sum of record locks, file locks and file opens

For text files, the numbers are:

- number of lines
- number of words
- number of characters
- check sum of the characters

For both types of files, all four numbers will agree if two files are identical.

If the fourth number, check sum of locks and opens, for an Appgen data base file is not zero and the file is currently not in use by any process, *cleanup* should be run on the file to remove any extraneous locks or opens.

USAGE

The switches are used as follows:

- t all files named are treated as text files.
- s silent mode. Do not report errors if a text file is named when the -t switch is not given.

If the -t switch is not given, *cksum* initially treats each file as if it were an Appgen data base file. If the file is a text file, however, it will not have the structural information contained in an Appgen data base file and *cksum* will report errors to this effect. *Cksum* will then proceed to generate a text file type check sum for the file. The -s switch is used to suppress these error messages.

If the -t switch is given, every file is treated as a text file, even Appgen data base files. Two Appgen data base files can have exactly the same records with exactly the same data and yet have different check sums if the check sums are generated, assuming the files are text files.

Cksum can be used to ensure that files have been ported between two machines without damage. *Cksum* the files on the source machine before porting and save the check sums generated. Port the files to the target machine and use *swab* on them. *Cksum* the files on the target machine. Compare the check sums generated on the target machine to those from the source machine. If the check sums are the same, the files arrived safely. Files whose check sums differ should be retransmitted.

cleanup

NAME

cleanup - file repair

SYNOPSIS

cleanup [-v -n] filename [key] [key] ...

DESCRIPTION

Cleanup is a utility program used to release locked records and repair some types of damage caused by system crashes, power failures, etc. *Cleanup* requires a file name and an optional list of keys. If *cleanup* is called with a list of keys, only those records specified are unlocked. If no keys are specified, *cleanup* searches the whole file and unlocks any locked records it finds. Either form also cleans up the FIA (Fixed Information Area), i.e., the header of the named file. This involves clearing file locks and file opens. *Cleanup* warns you if it finds any opens or locks on the file and asks if you wish to proceed. It is very important to ensure that no one is using the file before allowing *cleanup* to continue.

WARNING: *Cleanup* should not be run on a file which is in use by any other process. No other process should attempt to use the file while *cleanup* is running. Damage to the file could result in either of these cases.

To produce a clean file, it is sometimes necessary for *cleanup* to remove objects which disrupt the integrity of the file. These objects may once have been legitimate data records, now damaged beyond recognition. Or they may be artifacts, created by the damaging effect, and never contained real data. If the object removed was once a real data record, then you have now lost some of your data. *Cleanup* cannot determine what the object once was; but, whenever it removes one of these objects it will display the following message:

This file needs to be restructured using the *dbar* utility.

If this message appears you should do 3 things:

1. Run *dbar* on the file to restructure it.
2. Check the contents of the file carefully to determine what data, if any, was removed.
3. Reconstruct any missing data.

USAGE

-v verbose
-n report any problems in summary format only

EXAMPLES

```
cleanup AR-CUSMAS "1" "100" "ABC"
```

This would clean up the file called AR-CUSMAS and unlock the customer records with the keys 1, 100, ABC.

```
cleanup PR-EMPLOY.1
```

This would clean up the file PR-EMPLOY.1, the payroll employee file for Company 1. It would unlock any locked records it might encounter.

SEE ALSO

dbar, dbck

dbar

NAME

dbar - file archiver

SYNOPSIS

**dbar {clxt} [{+ -}v] [-f] [-a archivefile][[{+ -}l logfile] [-b blocksize]
[[-h hashsize] [-R size] [-I increment] [-O overhead] [A] file] ...**

DESCRIPTION

Dbar is a utility program used to condense one or more Appgen data files in an archival format for storage on diskette, tape, cartridge, etc. A subsequent execution of *dbar* could then recreate the original files from the archive. *Dbar* also repairs certain types of damage, can change the tunable parameters of data files, and returns unused space to the operating system's file system.

As *dbar* creates the archive, all records are stored in a clean form, with no locks or read counts. When *dbar* recreates the file from the archive, a new FIA and hash table are constructed, resulting in a clean file with no file locks or opens. Thus the combination of running *cleanup* and *dbar* on a file will result in a completely sound data file with no corruption.

When recreating files from an archive it only produces R1.8 (and higher) type files.

USAGE

One of the following must be specified [MODES]:

- c read data file and create an archive
- l produce only a log from data file - no archive produced
- x extract a data file from an archive and recreate it
- t list the table of contents from an archive - no files created

The l and t modes are the inactive versions of the c and x modes respectively, and set the file level verbose flag.

Other flags can be listed separately before any data file names, or may be tacked onto the MODE flags:

- o output archive file, (valid for c and l modes only)
- i input archive file, (valid for x and t modes only)
- a archive name (valid for any mode)

Optional flags:

- f force (c mode ignores file opens, x mode overwrites existing data files)
- v verbose, list file names and number of records in x or c modes, set the record level verbose flag in t or l mode
- +v set both verbose level flags
- l log file name, supercedes the terminal
- +l log file, in addition to the terminal
- b archive file blocking factor (default is 512)

A list of file names is required for the c and l modes. A list of file names in x or t modes specifies which files to extract from the archive. If no files are listed in x mode, all files in the archive are extracted.

Optional file level flags*:

- h Each data file name may be preceded by a -h hashsize flag to set the hash size (MAX RECORDS parameter) for each individual file. In x mode this specifies the hash size to use when recreating the data file. In c mode this specifies the hash size to store in the archive for the file. The hash size stored in the archive is used in x mode if no -h is specified for a given file. Prime numbers are recommended for hash sizes. Minimum hash size is 113. If no hash size is specified, file assumes its original size.
- R Record Size. Smallest block size (in bytes) the file will create. (Default size when a file is created is 128 bytes).
- l Free List Increment. Creates break points for the sorted free list.
- O Additional Overhead (%). Records larger than Record Size will contain % of additional space for growth.
- A Append Mode. No free list checking; new records always add to the end of the file.

* **WARNING:** Consult Chapter 30 (Data Base Tuning) of the Appgen Development System Reference Manual before attempting to adjust any of these values. The archive file is a sequence of file images, each consisting of a file structure code, the tunable parameters of the file, and the name of the file; a sequence of records is similarly constructed, with a record structure code, the size of the record, the key of the record, and the data belonging to it. A zero size record marks the end of a file's data.

EXAMPLES

```
dbar cv -o ARCHIVEFILE AR-CUSMAS -h 2017 AR-OPEN AR-SLSMAN
```

This would create an archive called ARCHIVEFILE which would contain compressed versions of the Appgen data files AR-CUSMAS, AR-OPEN, and AR-SLSMAN. The v switch would make dbar verbose. AR-OPEN would have its current hash size (MAX RECORDS) overwritten with the number 2017. AR-CUSMAS and AR-SLSMAN would be stored with their current hash sizes.

```
dbar xvfa ARCHIVEFILE -h 211
```

This would essentially reverse the action of the previous example. It would take the archive file called ARCHIVEFILE as input and recreate the data files compressed there. The f flag would force creation of the data files even if the files still existed, so the old copies of AR-CUSMAS, AR-OPEN, and AR-SLSMAN would be overwritten. Each of the three files would be created with a new hash table size of 211. If the -h flag was not present, each of the files would be recreated with the hash size stored in the archive. Again, dbar would be verbose.

SEE ALSO

cleanup, dbck, dbstat

dbck

NAME

dbck - file validity checker

SYNOPSIS

dbck filename

DESCRIPTION

Dbck is a utility program which performs a validity check on the specified data file. If any errors are listed, cleanup and/or dbar should possibly be used on the file to repair the damage.

WARNING: *Dbck* should not be run on a file which is in use by any other process. No other process should attempt to use the file while *dbck* is running. Damage to the file could result in either of these cases.

Dbck prompts you with the question:

```
Are you sure no one is using this file?
```

To proceed with *dbck* type "Y" or "y" and press <RETURN>. If you are NOT sure if someone is using the file, just press <RETURN> and the program will quit without doing anything to the file.

SEE ALSO

cleanup, dbar

dbcp

NAME

dbcp - record copier

SYNOPSIS

dbcp [-k keystack] [-{fg}] keyfile [-{don}] source destination

DESCRIPTION

Dhcp is a utility program which copies records from the source file to the destination file.

USAGE

- k keystack Specify a particular key. Keystack may contain the wildcard characters '*' and '?'.
- f keyfile Specify a key file which is a flat text file produced using any text editor or AQL. The file should consist of one key string per line. The records with those keys are copied from the source file to the destination file.
- g keyfile Specify a key file (like in the -f option) that contains two keys per line separated by spaces or tabs. The records from the source file are read using the first key on the line and copied to the destination using the second key on the line as the new key to the record in the destination file. This form, along with the -d option described below, can be used to change the keys of records within the same file (source and destination file can be the same). NOTE: This does not work on keys with embedded spaces.
- d deletes source record after copy.
- o overwrites existing records in the destination file.
- n copy only if the key already exists in the destination file.

Dhcp creates the destination file if it does not exist. If the -o option is not used, then copying a key to the destination file which already exists in the destination file will fail. Use ** or *, and \? to escape the * and ? in a keystack.

EXAMPLES

```
dbcp -k "*" Myfile Yourfile
```

This would copy all records from Myfile to Yourfile.

With AQL (Appgen Query Language) you can create a file of selected keys from a data file called THROWAWAY by doing this:

```
show THROWAWAY WITH A1 EQ "999" > file_of_keys
```

Then the records in THROWAWAY that contain the value '999' in the attribute addressed by the dictionary name 'A1' could be copied to another file, NEWFILE, with the following command:

```
dbcp -f file_of_keys -o -d THROWAWAY NEWFILE
```

The -o option forces overwrite of records in NEWFILE which have the same key as any in THROWAWAY. The -d option forces deletion of each record in THROWAWAY after it is copied.

This utility does not copy or delete locked records.

dbdiff

NAME

dbdiff - find differences in Appgen files

SYNOPSIS

dbdiff filename filename

DESCRIPTION

dbdiff is used to compare two Appgen data files or PDEFs and identify the differences between them. *dbdiff* will show all differences in attributes by displaying the contents of the attribute from the first file and then the contents of the attribute in the second file along with the key to the records. If a record exists in one file and not the other, the program will display the record in its entirety along with a message about in which file it was found.

This can be very useful in supporting remote locations where you modify a PDEF on your local computer and then send it to the remote one. When it gets there, you can use *dbdiff* to ensure that the only differences are the modifications you just made. Programmers have frequently modified an old copy of a PDEF and, after installing it on the target machine, the users lose the more recent modifications that were made.

dbdump

NAME

dbdump - file dumper

SYNOPSIS

dbdump filename

DESCRIPTION

Dbdump is a utility program which lists the FIA (fixed information area), or header of a data file, as well as its hash table and header information for each block or record in the file. This information is useful when attempting to diagnose or repair damaged files.

dbed

NAME

dbed - Appgen data base file editor.

SYNOPSIS

dbed filename [-w] [-filename] [key] [key] ...

DESCRIPTION

Dbed is a basic line editor for viewing and modifying Appgen data base files directly.

WARNING: Unless you thoroughly understand an application, you should not use this editor to correct data entry errors. This is because transaction data is typically distributed to several files during posting. There are normal data entry reversing and correction processes in each package that will correct the errors in a coordinated manner.

USAGE

- filename the name of an Appgen data file to be edited.
- w sets the autowrite feature. Records are automatically written when the 'N' (Next) function is used.
- filename a flat text file containing a list of keys (one to a line) of the file to be edited.
- key optional key(s) of record(s) to be edited.

If no keys are defined, the editor prompts for an initial key.

To edit all records in a data file, do not enter any key(s). When the editor prompts for a key, enter "*" to edit all records.

Dbed operates in two modes: attribute mode and value mode. Upon entry to *dbed*, attribute mode is assumed. Value mode edits the multi-values of a multi-valued field.

Commands to *dbed* conform to the following general conventions: lower case commands denote line level operations; upper case commands denote item level operations.

[ESC]	Clear command buffer.
[^U]	Up one half page.
[^D]	Down one half page.
[^B]	Back (up) one full page.
[^F]	Forward (down) one full page.
{nn}[d]	Delete current {nn} line(s).
[e]	Edit the current line. If the line is multi-valued, value mode is automatically invoked. While in this edit mode, all the Appgen data editor functions and default terminal function keys (see Chapter 3) are effective. Exit the Edit Mode by pressing <return>.
{nn}[g]	Go to line number {nn}.
[i]	Insert before current line. Insert mode is exited by pressing <RETURN> at the beginning of a new attribute or multi-value.
{nn}[j]	Down {nn} line(s).
{nn}[l]	Change {nn} line(s) to lower case.
{nn}[k]	Up {nn} line(s).
[m]	Merge in lines from another record. (Dbed prompts for the key and attribute range. The merged text is inserted before the current attribute.)
[q]	Exit value mode.
[u]	Undo last (d)elele, (e)dit, (i)nsert, (l)ower, or (m)erge.
[v]	Enter value mode.
[C]	Copy current item to new file and key; retain original.
[D]	Delete current item.
[F]	File (write) current item; prompt for next key.
[G]	Go. Editor prompts for next key.
[M]	Move current item to new file and key; results in deletion of current item.
[N]	Next; Exit current item, proceed to next item.

TECHNICAL INFORMATION

The Appgen Utilities

- [P] Previous; Exit current item, return to last edited item.
- [Q] Quit; Exit current item, terminate edit session.
- [U] Undo all changes since last write on current item.
- [W] Write current item.
- [X] Perform no update to current record. Exit current item without changes and proceed to next item.

DIAGNOSTICS

If item requested is currently locked, the option of unlocking is presented.

CAVEATS

Assumes attributes contain no more than 80 characters, including value marks; only displays and accepts 75 characters per field.

dbgrep

NAME

dbgrep - search an Appgen database file for a pattern

SYNOPSIS

dbgrep [-k key] [-a attr-no] [-f keys-file] [-i] [-v] pattern filename...

DESCRIPTION

Dbgrep is similar to the UNIX 'grep' command, except that it operates on Appgen data base files. The *dbgrep* command searches a data base file or set of files for a pattern and prints all fields that contain that pattern. A 'field' is an attribute or, in the case of a multi-valued attribute, a value. The field's location is also printed along with the file name, record key, attribute number, and value number.

When specifying the pattern to be searched, a period (.) can be used as a wild-card to represent any single character. This special meaning for the period cannot be escaped.

If the pattern contains any characters that have a special meaning to the shell, such as parentheses or spaces, these characters should be preceded by a backslash (\), or the entire pattern should be enclosed in single quotes ('...').

Command line options are:

- k Search for the pattern only in the record(s) with the specified key.
- a Search for the pattern only in the specified attr-no of each record in the file(s).
- f Write the keys of all the records in which the pattern is found into the specified keys-file.
- i Ignore upper/lower case distinction during comparisons.
- v Print the name of each file as it is being searched.

EXAMPLE

```
dbgrep -i -a1 Williams AR-CUSMAS.1
```

This will locate all customer records that contain the word Williams in the name field (attribute #1) regardless of the alpha case used in the stored name.

NOTES

The list of keys generated with the `-f` option provides a convenient way to examine or change specified records in a file. For example, if you want to use the `dbed` utility to examine attribute 30 of all the records in AR-CUSMAS for which that attribute is not null, first use `dbgrep` to prepare a list of desired keys:

```
dbgrep -a30 -fkeys . AR-CUSMAS
```

Then use this "keys" file in the `dbed` command as follows:

```
dbed AR-CUSMAS 'cat keys'
```

When running with the `-f` option, *dbgrep* will not allow a keys-file name that looks like the name of a standard Appgen database file ("XX-...") or a Pdef ("PDEF.XX..."). This is to avoid accidental overwriting of a data base or Pdef by incorrectly using the command. Also, if keys-file already exists, the program will not overwrite it without the operator's permission.

dbstat

NAME

dbstat - display Appgen data file structure statistics

SYNOPSIS

dbstat -s [-v] [-S] [-f] [-b] [-m minimum] [-i increment] filename ...

DESCRIPTION

dbstat is a program which produces a graphical display and statistical data of the structure of any Appgen data file. This information can be useful in analyzing performance problems and tuning the data base parameters.

If the performance of an Appgen program is in a degrading condition, the file(s) may need to be tuned.

NOTE: There are many factors that affect the performance of a program, and tuning is not a cure-all.

The only parameters that usually need to be addressed are the MAX RECORDS and RECORD SIZE parameters.

WARNING: The other parameters should only be changed by a very experienced programmer who understands the data base idiosyncrasies and who can analyze the factors involved. Normally, this is learned in an advanced training course.

MAX RECORDS should be a prime number roughly equal to the maximum number of records in a file. If MAX RECORDS falls far below the actual number of records, it should be adjusted using *dbar*.

RECORD SIZE should be roughly equal to the largest, most frequently used record size. If a majority of the records in the file have a size exceeding RECORD SIZE, this parameter should be adjusted using *dbar*.

*** Please refer to CHAPTER 30 - Data Base Tuning -
in the Appgen Development System Reference Manual***

dbstat can be very useful to determine if these MAX RECORDS and RECORD SIZE parameters are well tuned.

USAGE

- v verbose (show the FIA - fixed information area).
- S silent mode.
- s display graphical and statistical data about the bytes used in each data block.
- f display graphical and statistical data about the space used by the empty blocks on the free list.
- b display graphical and statistical data about the space allocated to the data blocks.
- m display graphical and statistical data showing what the file would look like with a different minimum record size.
- i display graphical and statistical data showing what the file would look like with a different free list increment.

SEE ALSO

dbar

dbutil

NAME

dbutil - file utilities

SYNOPSIS

dbutil

DESCRIPTION

Dbutil is a utility program which performs a variety of file related activities. When executed, the following menu is displayed:

FILE OPERATIONS	RECORD OPERATIONS	FIELD OPERATIONS
1 create file	9 set data type	16 extract field
2 open file	10 create record	17 replace field
3 close file	11 read record	18 insert field
4 lock file	12 release record	19 delete field
5 unlock file	13 write record	
6 delete file	14 delete record	
7 set file open	15 unlock record	
8 dump file more		

A file must be created or opened before any record level operations may be performed. A record must be created or read before any field operations may be performed. You must write a record to make any field changes permanent. A file create (#1) also does an open. Any opened file will be closed automatically upon exiting. To exit from the program, type "end" when prompted for a selection.

DefConv

NAME

DefConv - PDEF to RDEF Converter

SYNOPSIS

DefConv [-f] pdeffile

or

DefConv -i

DESCRIPTION

DefConv creates an Appgen RDEF (Run Time Definition) file from its associated PDEF file. The RDEF is given the same file name as the PDEF, e.g., PDEF.XX010000 is converted to RDEF.XX010000. Any time changes are made to the PDEF, *DefConv* must be run to recreate the RDEF before the changes become effective. RDEFs are not transportable between dissimilar computers. *DefConv* must be run on all *Maint* and *Menu* type PDEFs on the target machine.

-f this option forces *DefConv* to return to the shell. If not given, *DefConv* will attempt to chain to the Appgen Development main menu when done.

-i this option invokes the interactive version of *DefConv*

EXAMPLES

DefConv -f PDEF.XX010000 will create RDEF.XX010000

DefConv -f PDEF.XX* will create RDEFs for all XX PDEFs

SEE ALSO

ag_defconv

demo, run, appgen

NAME

demo, run, appgen

SYNOPSIS

demo XX company

run XX company

appgen XX company

DESCRIPTION

run is the program you use to start up an Appgen application. *run* and *appgen* are identical. 'XX' is the application's initials. 'company' is an optional company number. *run* will expect to find a directory with the name 'XX'. It searches for the directory in this order:

- 1 - it first backs up one directory level and examines all sub-directories;
- 2 - if it does not find it there, it goes back to your current directory and examines all its sub-directories;
- 3 - if it is still not found, the program attempts to access the *AGHOME* variable to find out where the Appgen Home Directory is located (see *AGHOME* in this chapter). If the variable is not set, the program fails. If the variable is set, the program goes to the Appgen Home Directory and examines all of its sub-directories;
- 4 - if it is still not found, the program fails.

Once the directory is found, *run* will attempt to open the Applications Master File, *PDEF.INIT*. If the file is not found, the program fails. Once the file is open, *run* will look for the record *INIT.XX*, where *XX* is, once again, the application's initials. If the record is not read successfully, the program fails. Once the record is read, the Appgen Banner Screen appears and the application begins execution.

Unlike *run*, *demo* does not search for a directory, but instead expects to find the *PDEF.INIT* file in your current directory. Otherwise, *demo* performs the same function of starting up the requested application.

instlog

NAME

instlog - list the contents of the installation log

SYNOPSIS

instlog [-v]

DESCRIPTION

Instlog lists the contents of the installation log. The installation log contains a history of all Appgen applications on your system. The log lists each package that has been installed, partially installed, and uninstalled. It lists the date that each of those events occurred, the initials of the operator, and the directory involved.

This log is produced and maintained by the Appgen software installation process. The log only lists applications installed and uninstalled using the installation process. Only applications with a release number of R1.6 or greater will be listed.

USAGE

-v verbose - list the entire contents of the log. The information maintained in the log includes a complete list of directories that must be removed when an application is uninstalled. This list is normally suppressed when the log is listed. The -v option will include this list for each package. The resulting output may take several lines per package.

International_Dates

NAME

International_Dates - Enabling International Date Format

DESCRIPTION

The Appgen software allows dates to be entered and displayed using the International convention of day/month/year. When this option is enabled, dates are entered in the form DDMMYY such as 311285 for December 31, 1985. Dates will be displayed as DD/MM/YY, such as 31/12/85.

This feature is enabled by adding an element to the shell variable AGINIT. To enable the International date format, do one of the following:

from the Bourne shell:

```
AGINIT="AGDATE='I'"; export AGINIT
```

from the C shell:

```
setenv AGINIT "AGDATE='I'"
```

To reenable American style dates, either remove all reference to AGDATE from the AGINIT shell variable or do one of the following:

from the Bourne shell:

```
AGINIT="AGDATE='A'"; export AGINIT
```

from the C shell:

```
setenv AGINIT "AGDATE='A'"
```

If you are also using AGINIT to redefine the spooler, append the reference to AGDATE to your spooler definition.

EXAMPLE

```
AGINIT="FORMSPOOLER='lp' SPOOLER='lp' AGDATE='I'"; export AGINIT
```

(For more information see the section in this chapter on spooler redefinition.)

For convenience it is recommended that this definition be added to your .profile for the Bourne shell or .login for the C shell.

pwdadmin

NAME

pwdadmin - Appgen password maintenance

SYNOPSIS

pwdadmin

DESCRIPTION

pwdadmin is the program you use to maintain Appgen passwords for the password levels set in your Menu PDEFs. The invoker of *pwdadmin* must have write privileges for accessing the directory '/etc'; normally this would be the super-user. The first time the program is used a new master password must be entered. On all subsequent invocations, you must enter the master password before you are allowed to proceed and maintain the other passwords.

USAGE

When you start up *pwdadmin*, you are prompted with:

Please enter master password:

When you enter the correct master password (when this program is used for the first time, any master password is correct), you will be prompted with:

Enter password number to change:

Now enter the new password:

The password number relates to the password levels assigned in the Appgen Menu PDEFs. See Chapter 9.9 - Menu Passwording - in the Appgen Development System Reference Manual for complete information on password levels.

Type 'end' to leave *pwdadmin*.

run, demo, appgen

NAME

run - start up an APPGEN application

SYNOPSIS

run XX company

demo XX company

appgen XX company

DESCRIPTION

run is the program you use to start up an Appgen application. *run* and *appgen* are identical. 'XX' is the application's initials. 'company' is an optional company number. *run* will expect to find a directory with the name 'XX'. It searches for the directory in this order:

- 1 - it first backs up one directory level and examines all sub-directories;
- 2 - if it does not find it there, it goes back to your current directory and examines all its sub-directories;
- 3 - if it is still not found, the program attempts to access the *AGHOME* variable to find out where the Appgen Home Directory is located (See *AGHOME* in this chapter). If the variable is not set, the program fails. If the variable is set, the program goes to the Appgen Home Directory and examines its sub-directories;
- 4 - if it is still not found, the program fails.

Once the directory is found, *run* will attempt to open the Applications Master File, *PDEF.INIT*. If the file is not found, the program fails. Once the file is open, *run* will look for the record *INIT.XX*, where *XX* is, once again, the application's initials. If the record is not read successfully, the program fails. Once the record is read, the Appgen Banner Screen appears and the application begins execution.

Unlike *run*, *demo* does not search for a directory, but instead expects to find the *PDEF.INIT* file in your current directory. Otherwise, *demo* performs the same function of starting up the requested application.

spooler redefine

NAME

spooler redefinition for Printem/AQL/Documentors

DESCRIPTION

The Appgen program, *Printem*, is used to produce printed reports within all the Appgen Applications. A report PDEF may be specified to send output to a printer unconditionally or it may be specified to prompt the operator for output direction:

Enter (S)creen, (P)rinter, (B)oth, (F)ile, or (O)ther Printer:

If the printer is specified, *Printem* opens a pipe to the spooler program. The default name for the spooler program varies from machine to machine. The default when printing special forms, such as checks and invoices, is also machine dependent. It is usually the same spooler with the appropriate options to suppress the printing of banners and formfeeds which are undesirable for preprinted forms. Some operating systems have additional spoolers and/or different options, and the default spooler name and options supplied with *Printem* can cause error messages to be displayed and even core dumps. Therefore, Appgen has provided a facility for redefining the name of the spooler that *Printem*, AQL (Appgen Query Language), and the documentation program use. This is accomplished by defining a UNIX environmental variable, AGINIT, which is a string containing information for Appgen. To define an alternate spooler, The AGINIT string is defined as "SPOOLER=x", where x is the name of the alternate spooler.

EXAMPLES:

For instance, if the spooler you would like to use is named "dotprinter", and you are using the Bourne shell (sh), you should type:

```
AGINIT="SPOOLER=dotprinter";export AGINIT
```

This line could be put in the file .profile in your home directory using any text editor.

If you are using the C shell (csh), you should enter:

```
setenv AGINIT "SPOOLER=dotprinter"
```

This line could be put in the file .cshrc in your home directory using any text editor.

NOTE: If the spooler command was defined as "dotprinter", as in the above example, you should be able to send output to that same spooler by typing the following command at the shell prompt:

```
cat filename | dotprinter
```

When *Printem* is called with a PDEF that has the "LINES PER PAGE" set to a negative number, it assumes you are doing pre-printed forms such as checks or invoices. In this case, *Printem* wants to invoke the spooler with options to turn off banners and form feeds at the beginning or end of the report. *Printem* looks in the environment for an entry in AGINIT called FORMSPOOLER and uses this instead of the SPOOLER entry. As above, if you are using the Bourne shell and the option for your spooler to turn off banners and form feeds is "-f:", you should type:

```
AGINIT="FORMSPOOLER='dotprinter -f' SPOOLER=dotprinter";export AGINIT
```

If the C shell is being used, you should enter:

```
setenv AGINIT "FORMSPOOLER='dotprinter -f' SPOOLER=dotprinter"
```

It is easier to put the proper entry in your .profile or .login file (as appropriate for your shell) than to type the entry every time you log in to your machine.

Also note that the same idea can be used to direct the output of *Printem* to a hold file on disk. For example:

```
setenv AGINIT "SPOOLER='cat>>hold' FORMSPOOLER='cat>>holdforms'"
```

To send output to different printers without having to set or change your AGINIT variable you can choose the 'Other Printer' option. When you do so, you will be prompted for a 'filename'. This 'filename' should either be a UNIX shell script or a UNIX print command. In either case Appgen will pipe the report to 'filename'.

EXAMPLE

At the prompt:

```
Enter (S)creen, (P)rinter, (B)oth, (F)ile, or (O)ther Printer:
```

you enter: o <return>

you are then prompted with:

```
Filename:
```

to which you respond:

```
print lp3 or lp -dlaser or upstairs
```

'print' is the spooler print command in AIX and lp3 is a specific printer.

'lp' is the spooler print command on most other UNIX and XENIX systems and the '-d' option forces the direction of output to the printer defined by the system's 'laser' printer interface file.

'upstairs' may be a shell script that contains a UNIX spooler command to print on an IBM printer located upstairs:

```
lp -dIBM
```

This last version is the most user-friendly since the operator can easily relate to the word 'upstairs' instead of being concerned about any cryptic command syntax. Ideally, these keystrokes should be defined in a terminal function key.

swab

NAME

swab - general purpose data base byte-ordering utility

SYNOPSIS

swab [-v] [-d] [-p permutation] [-u permutation] file [...]

DESCRIPTION

Swab is a utility program used to change the ordering of bytes within long integers embedded on Appgen data base files (including PDEFs). The sole purpose of the program is to facilitate moving PDEFs, data files, and dictionaries between machines whose internal representation of long integers differ.

USAGE

- v *verbose*. Describe what action was taken on each file.
- d *debug* mode. Swab prints trace messages of what it is doing. Implies *verbose*.

The options -p and -u are only given under special circumstances when the operator wishes to force *swab* to take a certain action. Each of these options specifies a particular *permutation* of the ordering of the bytes. *Permutation* must be a four-character numeric string in which each of the digits 0, 1, 2, and 3 is represented exactly once. *Swab* assumes that the current byte ordering of long integers within the data base file is 0123 and changes them to be that specified by *permutation*. For example, the permutation, 1032 would swap bytes 1 and 0 and swap bytes 3 and 2 within each long integer.

- p permute the bytes in long integers in the file(s) according to *permutation*. This option should only be used on the target machine.
- u The *u* option prepares data base files for use on another machine prior to sending the files to that machine. It reorders the bytes in long integers in the file(s) according to *permutation*. It should only be used on the source machine.

If *file* is a valid Appgen data base file, the following two commands issued in sequence should re-order the bytes and then restore them to their original condition:

```
swab -v -u 3210 file
swab -v -p 3210 file
```

If neither *-u* nor *-p* is specified, *swab* operates as follows:

For each possible permutation of the ordering of long integers in the file, make a pass through the file and see if the file would make sense if that ordering were applied. If such a permutation is found, then make a pass through the file, physically changing the ordering of the bytes. If no such permutation is found, print an error message and do not change the file at all.

NOTES

The recommended usage of *swab* is as follows: If you are transferring files between two different machines, there is a possibility that the internal representation of long integers is different. The following command will reorder bytes in any files which need to be reordered and will not harm any other files. On the target machine, *cd* to the directory containing data base files and type:

```
swab -v *
```


CHAPTER 3.3: APPGEN TERMINAL INFORMATION (TERMINFO) DATA BASE

The Appgen Terminfo is a data base describing the capabilities of individual character-based computer terminals (CRTs/VDTs) and how certain necessary operations are performed (e.g., moving the cursor or initializing the terminal). The Appgen character-based interface, from Version 2.0 and up, uses this data base only - not the standard Unix terminfo data base. The Appgen Terminfo is maintained through a typical Appgen file maintenance screen, needs no compiling, and has no effect on other software that may be running on the same computer.

Starting Up

Before you can start up Appgen, you must have an appropriate entry for your terminal in this data base. Many standard entries are already provided. To see what is currently available, at the Unix shell prompt type:

```
ag_showti
```

This will produce a list of the terminal names and descriptions of all the current entries. If you find the one you need, just set your environmental 'TERM' variable to its code.

For example:

At the shell prompt type:

```
ag_showti
```

A listing such as this will appear:

APPGEN TERMINAL INFORMATION DATA BASE

<u>Terminal Code</u>	<u>Description</u>
ansi	Any ansi terminal
adds	ADDS Viewpoint
ibm3161	IBM 3161
wyse50	WYSE Model 50
wy50	WYSE Model 50
w50	WYSE Model 50
vt100	DEC vt100

NOTE: This is not a real listing. This listing may be quite long; therefore, you may want to pipe it through your spooler, as such:

```
ag_showti | lp
```

If you are using a terminal on this list, set your environmental variable TERM to the terminal code on the list.

For example:

If you are using a WYSE Model 50 terminal, in the BOURNE shell type:

```
$TERM=wyse50
$export TERM
```

in the 'C' shell type:

```
%set term = wyse50
```

You are now ready to run Appgen.
At the Unix shell prompt, type:

```
$appgen XX
```

where XX are the initials of an installed Appgen package.

Verifying the Termino Entry

If you are using a terminal with character attributes (ansi/vt100 type), your screens should appear with certain features:

- The top 'Title' line of your screen and the bottom Function Key Label line should appear in reverse video;
- The Menu Headings should appear normal;
- All operator entries should appear normal;
- The Menu and Screen Prompts should appear half bright;
- All lines and boxes should appear solid (using the terminal's graphic set - not dashes and plus signs, or stars);
- When a Menu first appears, the first prompt should be reverse; and, each time an arrow key is pressed, the corresponding menu choice will change to reverse while the previous selection changes to half bright.

If you are using a terminal with embedded attributes (tvi920/wyse50 type), the capabilities are limited, and your screens should appear as such:

- The top 'Title' line of your screen and the bottom Function Key Label line should appear half bright;
- The Menu Headings should appear normal;
- All operator entries should appear normal;
- The Menu and Screen Prompts should appear half bright;
- All lines and boxes should appear solid (using the terminal's graphic set - not dashes and plus signs, or stars);
- When a Menu first appears, the first prompt should be normal; and, each time an arrow key is pressed, the corresponding menu choice will change to normal while the previous selection changes to half bright.

Since there are no strict standards among the terminal manufacturers, your particular terminal might not display screens in the exact manner described. If it does not, you can manipulate the terminfo entry until it does.

New Terminfo Entries

If your terminal does not appear on the current list, you can try choosing one that is similar and then creating a new entry using the Appgen Terminfo file maintenance program.

If there is no terminal on the list that you can use, you can create one from the UNIX terminfo data base. To do this just type:

```
agterm
```

This will build an entry in the Appgen Terminfo file based on the current setting of your UNIX environmental TERM variable. Chances are that you will still need to tweak the entry in order for your terminal to behave as described above - the UNIX terminfo files are rarely complete and/or accurate.

If you wish to create entries for other terminals that are in the UNIX terminfo, just type:

```
agterm termname
```

where termname is an existing entry in the UNIX terminfo. Once again, you will probably still need to tweak the entry in order for your terminal to behave as described above.

The Appgen Terminfo File

The actual Appgen Terminfo file itself is named AG-TERM. This file has a corresponding cross-reference index file AG-XTERM (see Operator Orientation - Cross Referencing). These files reside in the directory defined by the AGHOME environmental variable (see Chapter 3.2 - AGHOME).

Terminfo File Maintenance and List Programs

You can access the Appgen Terminfo file maintenance and list programs by choosing the 'Terminal Information Setup' selection on the Utilities menu of the Appgen Development System.

On machines where there is no Development System, you can access the same programs from the Unix shell by typing:

```
appgen TI
```

In the file maintenance program you would just enter the necessary escape and/or control sequences as they are described in your terminal's user guide (supplied by the terminal's manufacturer). Take advantage of the on-line help (function key number two) while using the file maintenance program, to aid you in making correct entries.

Alternate Terminal Codes

You may be using a terminal, let's say a WYSE Model 50, on your computer running Appgen, along with a word processing package and a spreadsheet. These other software packages may use the Unix terminfo; for your terminal that might be 'w50'. In the Appgen Terminfo you might find that the WYSE Model 50 has the code 'wyse50'. To accommodate different codes for the same Terminfo entry, there is an 'Alternate Terminal Codes' file maintenance program. This allows you to assign an unlimited number of codes for any single entry. With this feature you would not have to reset your TERM variable as you move between Appgen and other software packages. Take advantage of the on-line help (function key number two) while in the Alternate Codes file maintenance program, to aid you in assigning alternate codes correctly.