Manual Version: 1.0

Clinic Modeler User Manual

By VW International, Inc.

Contents

Purpose

The purpose of this document is to provide a user's guide and overview of the VWI Clinic Modeler Application (CM). This Clinic Modeler was developed using Computer Associates Visual Objects windows database system. This document provides a manual for the operation of this software while also providing some background on the goals of the software.

Background

ERMC Facilities has the task of developing project requirements in support of rapidly changing medical operational inputs. These changing inputs include: relocation of existing facilities to new installations, dramatic changes in population supported (both in quantity and demographic mix), alterations and replacement of existing facilities. The first task is to quickly respond to the short suspense for a budget line estimate of the likely amount of money required to meet the facility requirements. The goal at this stage is to provide an estimate of construction based upon a total square footage requirement. The details of what is to go into the square footage is not required at this stage and will likely change once the near term planning and design is begun. However, the cost estimate provided must be supportable and defendable from the perspective of detailing the overall functions and the critical input assumptions that went into making the estimate determination.

In the early 1980's a tool (see Figure 1) was developed that provided such a gross estimate of square footage with the understanding that the goal was to arrive a GSF estimate for the footprint on the ground and not a detailed program for design. This early tool's output was compared against detailed PFDs and found to be within the targeted goal of 90% accurate for total GSF (typically on the high site). Error on the high side was preferable so as to allow sufficient budget flexibility as the project progressed.

Today, however there is no tool that would permit such quick and accurate answers. The earlier tool is not about 80% accurate but on the low side, and is not based upon the latest planning and design

criteria. Today what is needed is a tool that would provide the bottom line GSF estimate with likely costs (based upon appropriate OSD guidance) with a minimal of effort. But this new tool must also allow a more detailed view of the interim steps in the process so as to enable adjustments, as the politics of the decision require.

Such a tool would support responding to regional modernization and strategic planning issues and BRAC planning requirements.

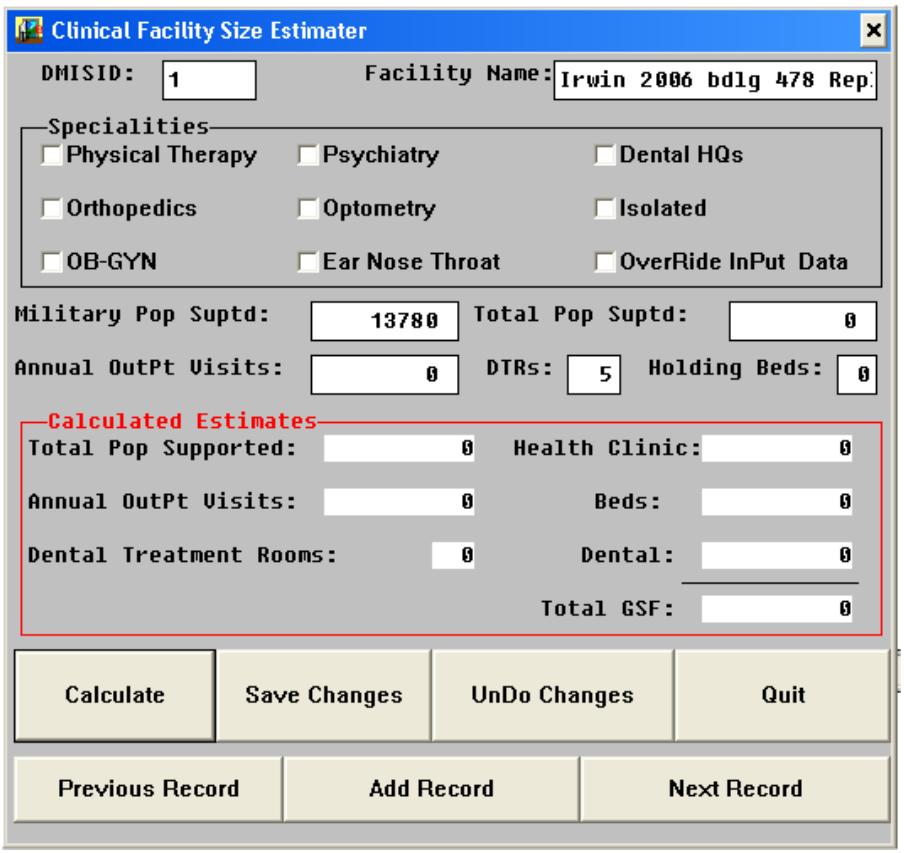

Figure 1: Screen of early estimation tool

As a result of this need, a planning tool was developed. The basic scope follows.

Scope

This document is the user's manual in support of the VWI Clinic Modeler as called for in the basic scope.

The goal of the software tool is to permit the quick determination of a Gross Square Footage (GSF) requirement for a clinical type of medical facility. This tool will require at a minimum the user entry of the likely population supported by the clinic. To the extent possible the tool will permit a “single button” method of execution with a minimal

amount of user input, allowing the user to entry the population supported and the tool then generating the estimated total GSF.

The tool will be limited to buildings of the types: medical clinic, dental clinic, or combination medical/dental clinic. Inpatient and ambulatory surgery facilities are excluded from this initial development.

This software tool will be capable of running on Windows2000 or WindowsXP equipped personal computers.

The tool will, in addition to determining the GSF requirement, estimate the likely construction cost for such a clinic after the user has entered the following data: fiscal year, and project location. This construction estimate will utilize planning factors of the OSD and Corps of Engineers for estimating military construction costs.

The tool will permit user interaction at specific assumption stages of the calculation model. The user will be able to make changes to the following interim stages: utilization factors (overall or at a MEPRS service level), workload expected at a macro level or at a MEPRS service level, expected staffing (at a provider total level or a detailed level), and space program at a PFD line item level.

The user will be able to edit estimating factors used in determining the likely construction cost of the clinic.

Software will be capable of printing reports to printer, HTML or MS Word.

Output files will be exportable to: dBase file format, comma delimited, CSV (excel compatible) or XML.

Specific output reports of the tool will include:

- Statement of Input Assumptions
- Summary of Requirement (mock front page DD1391 cost estimate)
- Summary of Requirement (inputs, summary of interim stages: utilization, workload, staff, space)
- Program for Design (PFD)

The software tool will be capable of saving the input, interim stages, assumptions and outputs for each clinic estimation.

Applicability

This document is applicable to the users of the VWI Clinic Modeler software system.

About this Manual

This manual is not intended to provide instruction on Microsoft Windows. It is assumed that the user of VWI Clinic Modeler will be familiar with the graphical user interface of MS Windows and the typical methodology for interacting with a Windows program.

This manual will provide specific information regarding what is to be entered in each of the fields of the Clinic Modeler and how that information interacts with other entries.

This manual is also available in Acrobat "pdf" file format suitable for printing. The file is included as part of the VWI Clinic Modeler installation process and is named "VWI Clinic Modeler Manual.pdf". To view or print this file you will require Adobe Acrobat reader, which is available from the Adobe web site: www.Adobe.com.

Organization

This manual is organized into several major sections as follows:

- This introductory section orienting you to the background of the software, this manual and its conventions.
- The next section targets the users of the software. It is this section that is also available as an electronic help file from within the application. Within this section are:
  - A quick get started chapter that tells you the software goals, how to quickly get started, how to quit the program and how to get help.
  - The next chapter **"**Main Menu**"** provides an orientation to the main menu with descriptions of the various choices.
  - The following chapter discusses the navigation menu and button bar, both of which appear when a data window has been opened.
  - The chapter **"**Creating a Plan**"** provides a narrative description of the process to create a new clinic plan.

- The chapter "Importing and Exporting" describes how to import from or export a plan to a compressed zip file. This chapter covers the process of how a plan can be transferred from one computer to another plan.
- The chapter "Editing a Plan" describes the main plan explorer window and how the user may adjust the plan's output and the intermediate assumptions used in the plan's creation.
- The last chapter in this section provides a description of the pre-designed reports provided with the application.

- The next major section **"**Administrator's Guide**"** provides background information from a system administrator perspective. Topics covering software installation, data file paths, the data files and their structures, other required application files, and technical support. This section on administration is also available from within the application as a windows help file.
- The final section provides a conceptual level of the software processes and methodology used in estimating a clinic plan.

Conventions

This manual uses the following typographical conventions when indicating actions you should take in using the software application.

Convention	Description
"BOLD"	Words in bold and quotation marks are used to indicate the labeling for application buttons or Menu selections.
Esc	The names of specific keys are written as they are labeled on the keyboard and are in italic bold.
Ctrl*+*C	Key combinations are written with a plus sign between the key labels and indicate that the first key must be held down while pressing the second key.

In addition to the above conventions, some simple graphics will be used to indicate items of note, tips, or warnings.

	This icon of a notepad will be used to indicate a note of interest or background regarding the topic in question.
	This icon is used to indicate a tip that may enhance your use of the software.
	This icon is used to indicate a warning. It is meant to alert you to take care or there may be loss of information or errors made in data entry.

User's Guide

The User's Guide provides information for the typical user of the Clinic Modeler application.

Getting Started

Software Goals

The goal of the software tool is to permit the quick determination of a Gross Square Footage (GSF) requirement for a clinical type of medical facility. This tool will require at a minimum the user entry of the likely population supported by the clinic. To the extent possible the tool will permit a "single button" method of execution with a minimal amount of user input, allowing the user to entry the population supported and the tool then generating the estimated total GSF.

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The user will be able to edit estimating factors used in determining the likely construction cost of the clinic.

Software Installation

Installation is completely described in the section for administrators. The Clinic Modeler application is provided on a CD and comes with its own installation program. If the application will be installed on an individual machine in an unshared environment, then run the *"Setup.exe"* file on the CD and accept the defaults for installation paths.

Running this program will first display a small dialogue box confirming that the user wants to begin the setup program. If the clicks ok then the installation wizard will begin, see Figure 2.

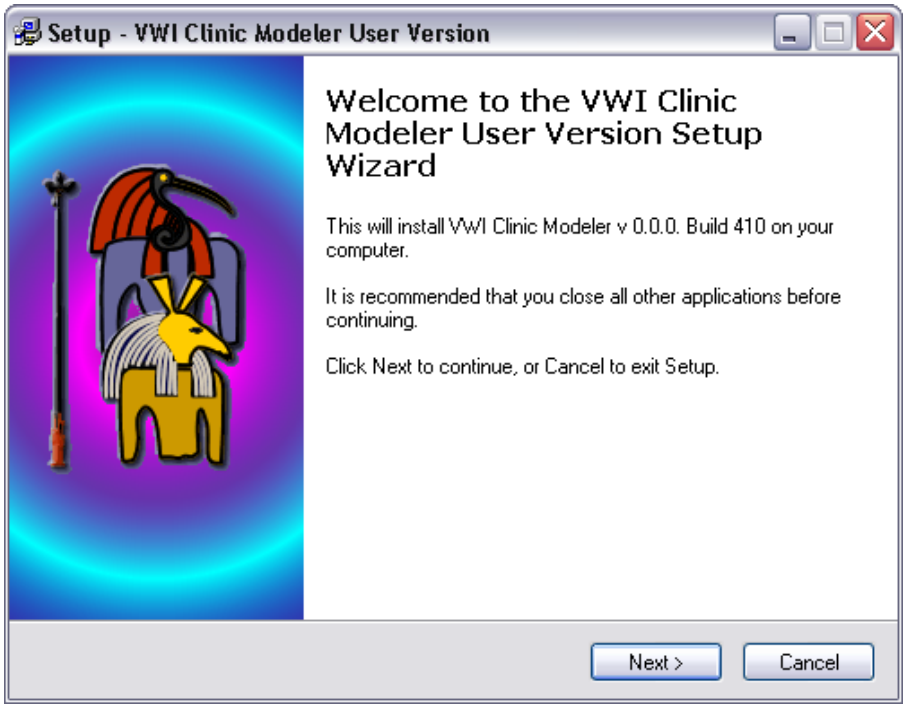

Figure 2: Install Wizard introduction screen.

The next screen of the installation wizard will prompt for the directory of where the application is to be installed, following that decision, the user will be prompted as to the type of installation desired (the default for the first installation is “full installation” which includes all the necessary files required for operation). At some later time in the future, installing only portions of the application may be desired, such as installing updated knowledge repository files, or new SEPS criteria files (the other two component choices for installation). You can change the installation components by selecting from the combo-box control.

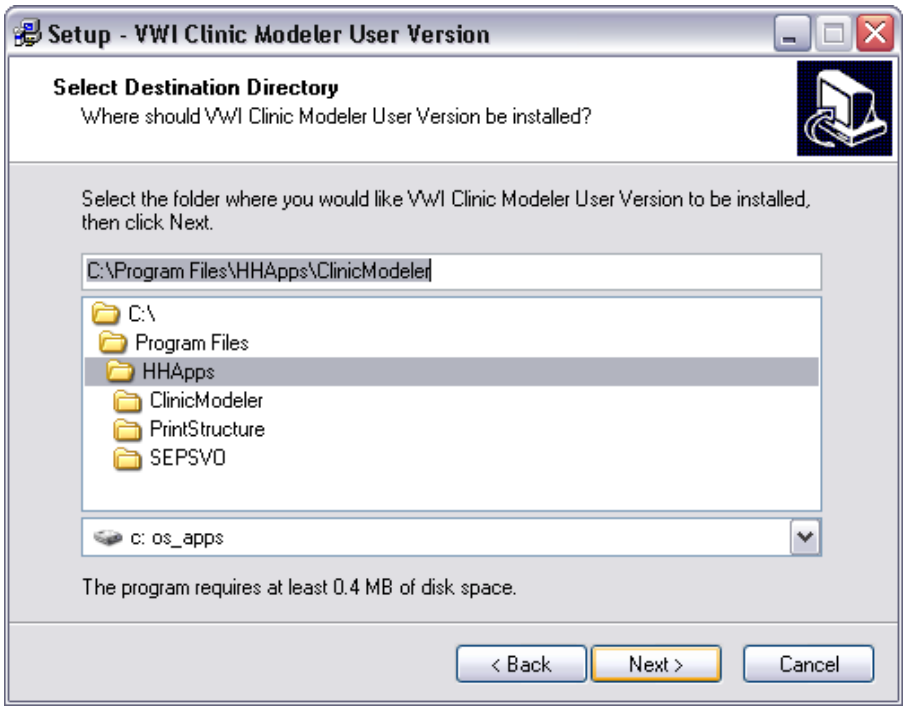

Figure 3: Install wizard directory selection

Accepting the default installation path will allow you to run the application with minimal adjustments for paths, see Figure 8.

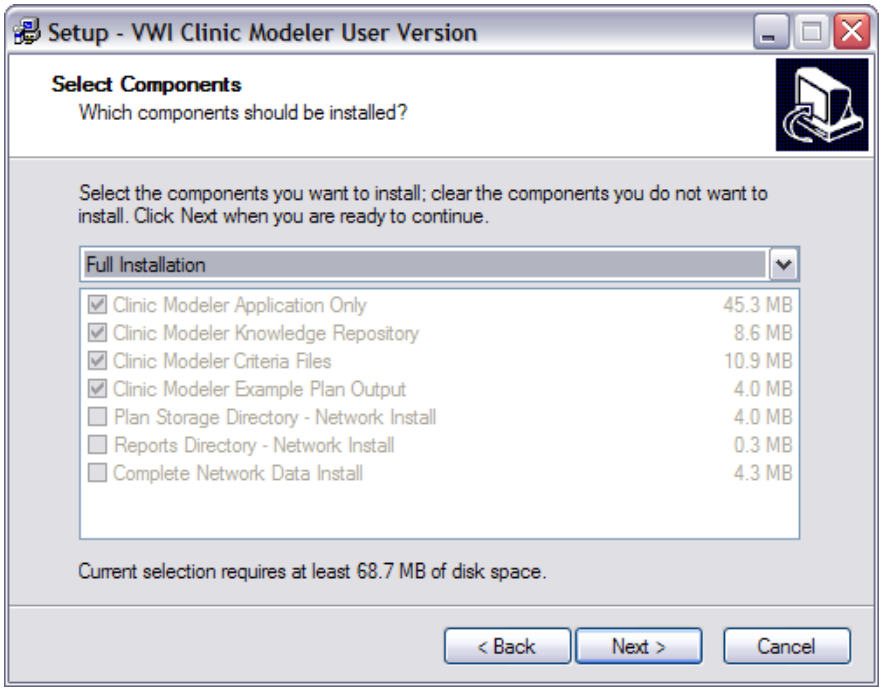

Figure 4: Install wizard component selection, showing the default Full Installation

The installation process will continue to walk the user through the procedure, asking if shortcuts should be placed on the desktop or in the quick start menu.

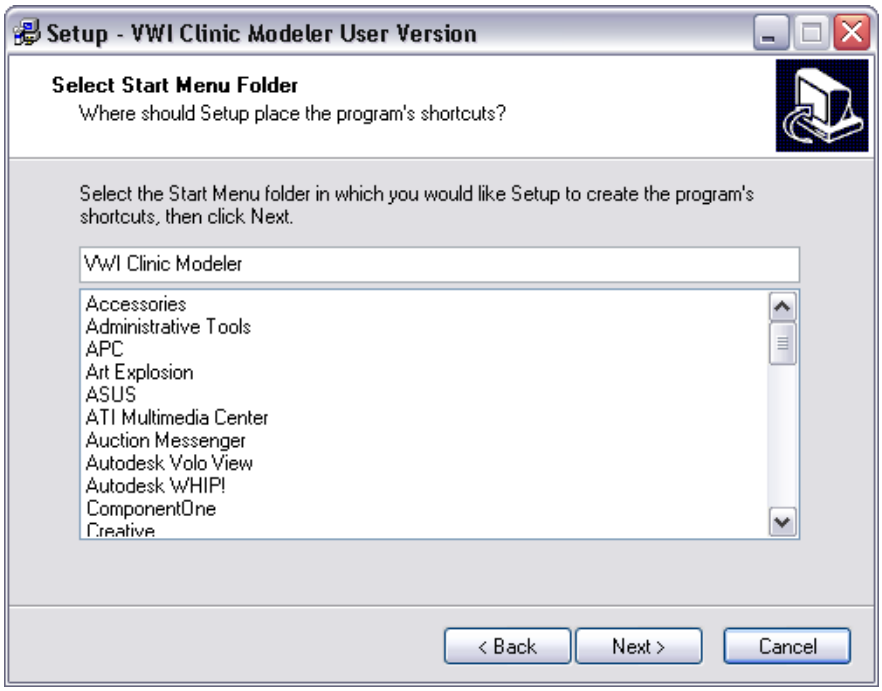

Figure 5: Selecting the startup folder where Clinic Modeler shortcuts will be installed

When the installation wizard is complete, it will present a summary screen showing the actions the user has selected, and presenting a final opportunity to halt the installation process, see Figure 6.

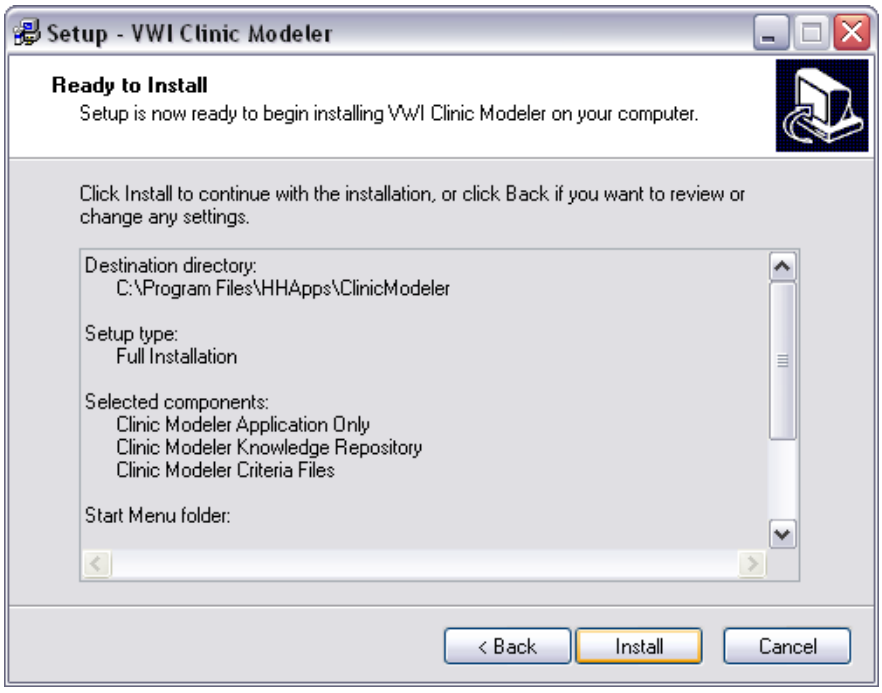

Figure 6: Install wizard summary and install confirmation screen

During this installation process the wizard will place several items into the program start group, named by default “VWI Clinic Modeler” (the user may change this during the installation wizard, see Figure 5).

These “start Group Options” include quick links to the help file for the application, the application itself, the uninstall option, the help file for the report designer, the acrobat version of this manual, and finally to the “read me” file. *This read me file contains any last minute information about the application that could not be put into the help file, or this manual prior to release.*

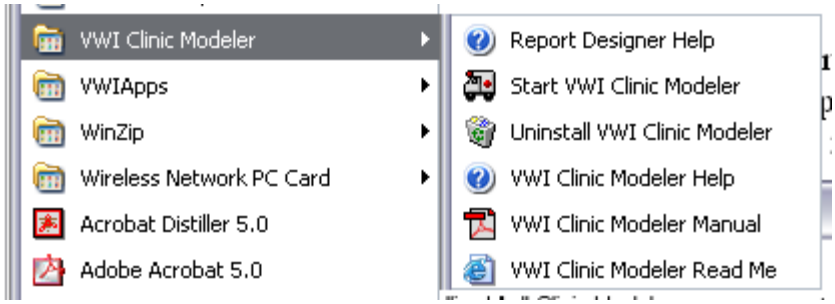

Figure 7: The VWI Clinic Modeler start group on the main windows start programs menu

Note: *If it becomes necessary for the user to uninstall the clinic modeling software, the uninstaller will not remove the data files, especially those plan files that the user has created, similarly reinstalling the complete application will prompt the user if a data file already exists on the computer, as to whether or not to overwrite that file with the install’s version.*

Network Installation

If the program or its databases are to be installed in a shared user environment on a local area network, please refer to the administrator section “Installing for Network Use”.

Editing Paths

When the application is first started, it will display a window requesting the user to identify the locations of the main database files used by the clinic modeling software. If the user accepted the default locations for the files, and the application is only accessing local files, the user should accept the initially identified paths. If the user is going to be using data files that are on a shared network computer, then the appropriate paths need to be entered. These paths can quickly be set by clicking on the browse button next to the paths. These paths must be entered correctly or the application will not function. The paths may be changed later, if the location of the files is changed. The application will also allow maintaining up to two separate path locations, one considered as the local path settings, and one considered to be the network locations. This allows the user of a laptop to readily run the application accessing either the network files or the local laptop files. Refer to section “Edit Paths Settings” for more information.

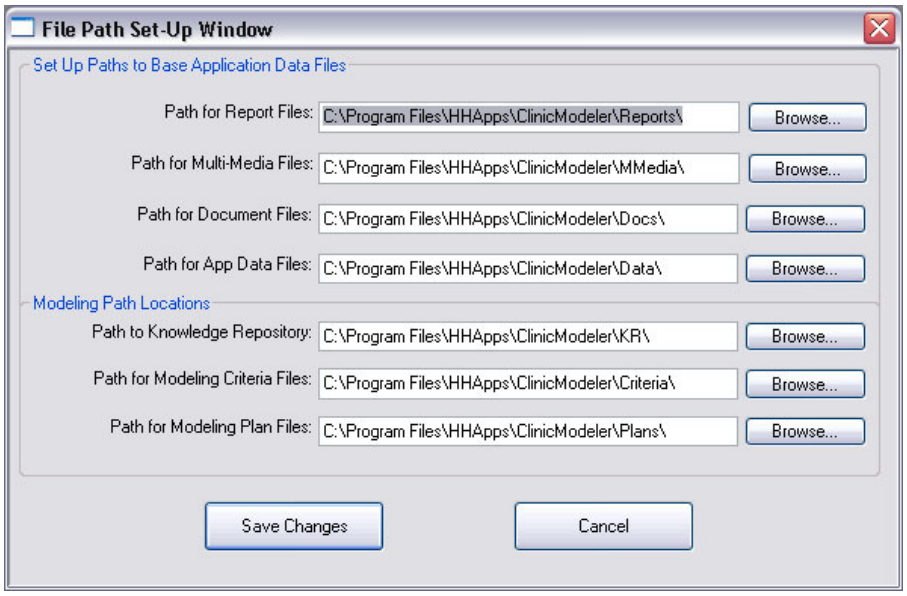

Figure 8: File path set-up window upon initial program start-up

Starting Clinic Modeler

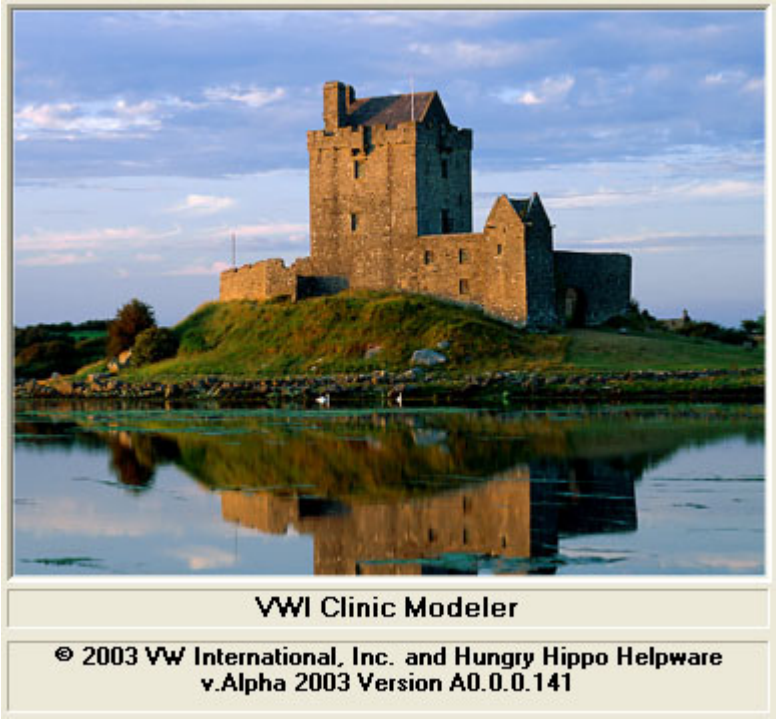

Figure 9: Main application splash window of the Clinic Modeler

As part of installing the Clinic Modeler application, an application start group will be created and added to your Windows' start menu and, if selected during the installation, a shortcut will also be placed on the user's desktop or in the quick start menu. This main program application group is labeled "VWI Clinic Modeler". From this start

menu, click on the icon-label for "VWI Clinic Modeler". This will initiate the program.

If you are running the application directly from a centrally located network server using a shortcut as described above under installation, then double-click on the shortcut.

After initiating the program, a “splash screen” will appear announcing the start-up of the Clinic Modeler software as shown in Figure 9.

If this is the first time that you have used the Clinic Modeler application you will be prompted to enter your first and last names and your initials. See Figure 10.

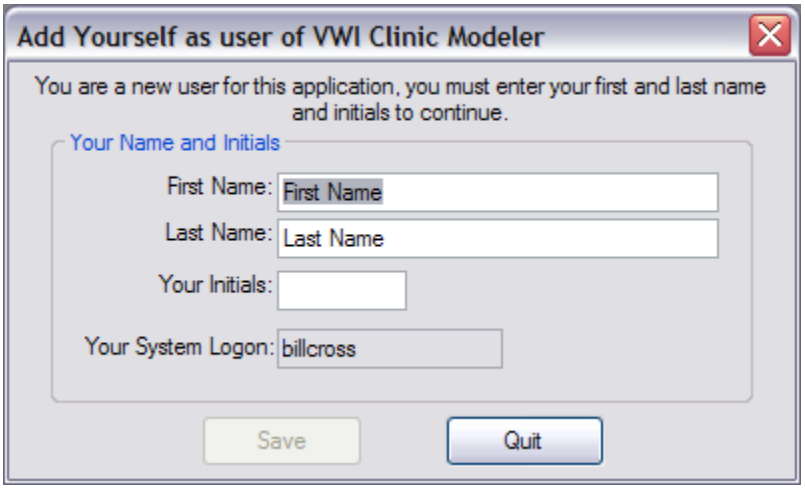

Figure 10: Adding yourself as a user of the Clinic Modeler application

This window will show your logon as taken from the MSWindows operating environment. The application will use your system logon to identify you whenever you start the Clinic Modeler software. This means that if you use different logons for each client environment (e.g. one logon for a laptop when it is on the network, and another logon for the laptop when it is not connected) you will be prompted for each logon to enter your name and initials. Also, if the user is accessing files stored on the network, the user may be prompted to again enter their name and initials since the data on the network is unaware of the user.

After the user has entered their name and initials, they should no longer be prompted for entering their name again, except in the cases identified above.

Should you decide to not enter your name and initials, and press the **“Quit”** button, the application will not run and the following message will appear.

Figure 11: Failed to enter your name to use the application

Network Access

When the application first loads it determines the settings for network access. If during the previous session the user was connected to the network and accessing data files located on a shared network server, the application will pop-up a window confirming that the user wishes to remain in network access mode. This initial check is to preclude problems caused by trying to access remote network files when the user's laptop is no longer connected to the network. If the user is no longer on the network, then he or she should respond "No" to this window.

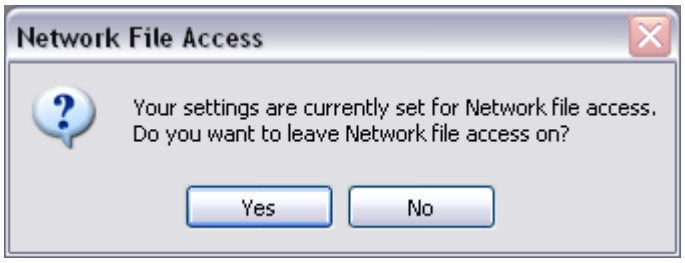

Figure 12: Network file access confirmation window

Exiting Clinic Modeler

To exit the Clinic Modeler, do one of the following actions:

- From the main menu, click on **"File-Exit"**.
- Click on the close button in the upper right corner of the main application window. This button has an **"X"** on it.
- From the Windows program bar, typically located at the bottom of your screen, right click on the button for the Clinic Modeler application. From the resulting pop-up menu, select **"Close"**.

After performing one of the above, you will then be prompted as to whether or not you really want to exit the Clinic Modeler application. If data windows were open, you may also be prompted as to whether or not you really want to close them. To continue with exiting, continue to click **"Ok"**. If you do not want to exit the application, click on **"Cancel"** at this prompt.

Creating a Plan

To create a new plan select from the main menu “File-Create New Plan” or select from the main tool bar the “Create Plan” icon. After performing the above the “Clinic Plan Creation Wizard” is opened, see Figure 13. This wizard will walk you through the steps to create a plan, refer to section “Creating a Plan”.

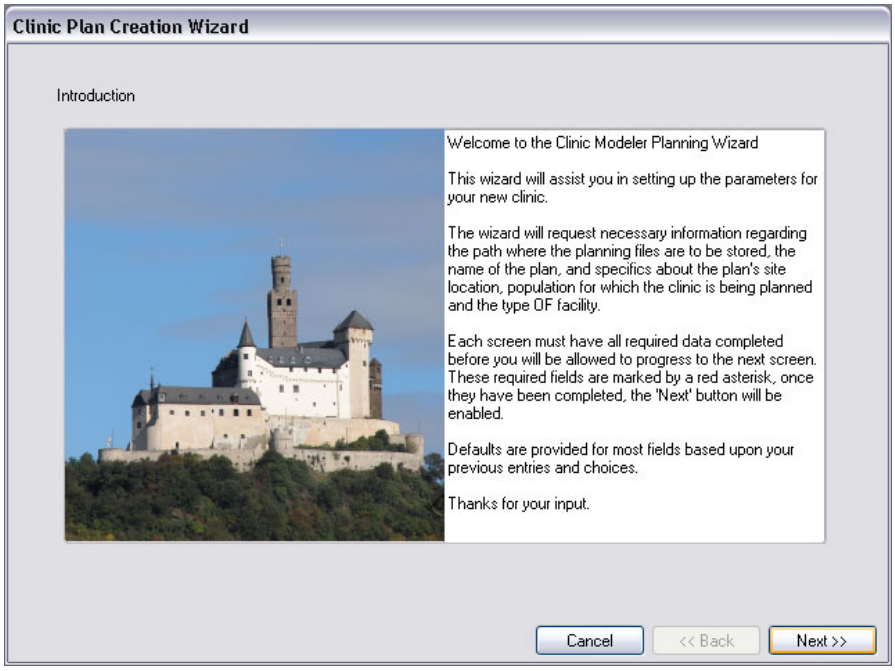

Figure 13: Create a New Plan Wizard

Importing a Plan

To import a previously exported plan select “Import a Plan” from the main file menu. This option will open a window that will allow you to browse to the desired zip file containing the plan to be imported. The application will initially look in the “\transfer” folder within the main folder where the clinic modeler application was installed. Once selected, the application will walk you through the creation of the new plan directory and add the plan to your listing.

Exporting a Plan

This option is only available if an existing plan is currently open in either the “Plan Explorer” window or the “Plan List” window. This option will open another window allowing you to export the currently selected plan to a single compressed zip file. The application will propose a sensible default file name although it will allow the user to change or accept the file name and the location where the zipped file is to be created.

Note: *By default all the files will be exported to the "\transfer folder within the main application folder.*

Reporting a Bug

The Clinic Modeler software allows the user to identify any bugs that they may find. This option is available from the "Tools" menu, and permits you to report a bug to the central VWI server, or to create the record locally on your own network, or personal computer. The window will indicate either "*Local*" or "*Remote*" in the caption. This bug database may function as a learning resource as each user can also review previously identified bugs.

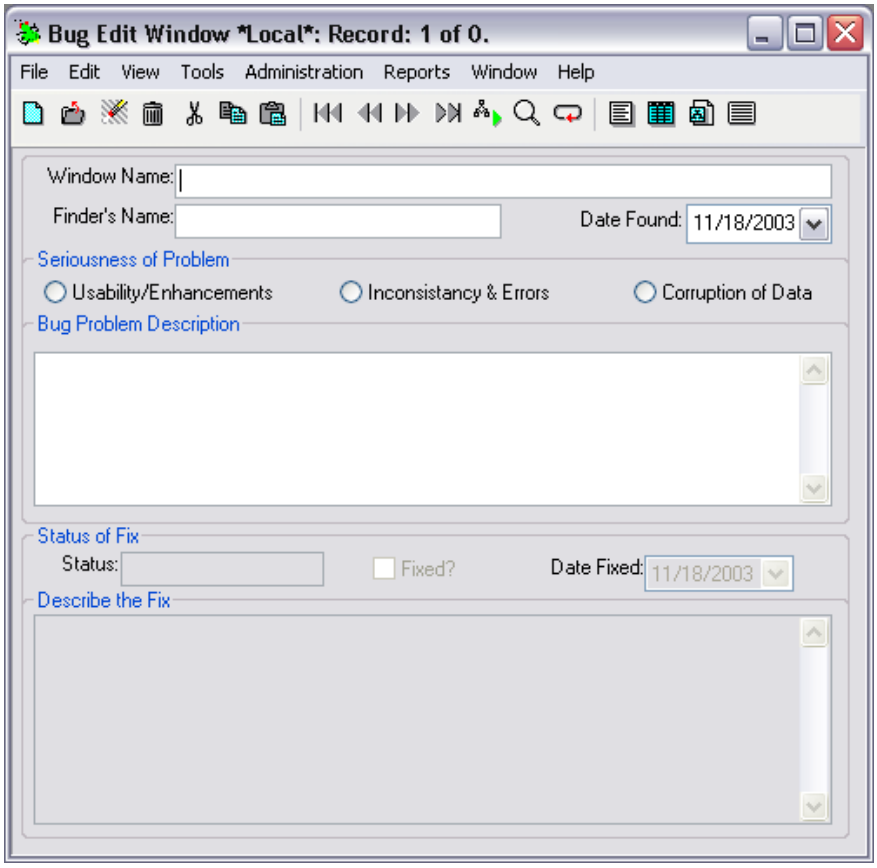

Figure 14: Bug report window, local mode indicated

Getting Help

This portion of this manual is also available in electronic form as part of the Clinic Modeler help system. This help file is labeled *"VWIClinicModeler.hlp"* and may be found in the directory where the Clinic Modeler software was installed. The file may be viewed using the MS Windows help viewer that is readily accessible by double

clicking on the *"VWIClinicModeler.hlp"* file from Windows explorer. This file is available from the computer start-programs menu group for the VWI Clinic Modeler application. Finally, the help file is accessible from within the software through the main help-menu, or by pressing ***F1*** for help. You may freely copy the help file.

Main Menu

This section will provide information about the Clinic Modeler application's main menu.

Main Menu Overview

The purpose of the main menu is to provide access to the various databases used in the Clinic Modeler application, to support specific administrative actions, print and create reports, and to access help. The principle options for managing the clinic models and outputs are located on the **"File"** menu option.

The main menu provides five categories of options: file, tools, administration, reports and help. The following will provide illustrations and an overview of each main menu option.

The **"File"** menu provides access to the databases that will be typically used in the operation of the Clinic Modeler. This menu is shown in **Figure 15**. From this menu, Clinic plans may be created, edited, imported or exported (the latter is only available if the plan list, or plan explorer windows are open).

Access to the printer setup is also available. The second to last option enables the user to exit the application.

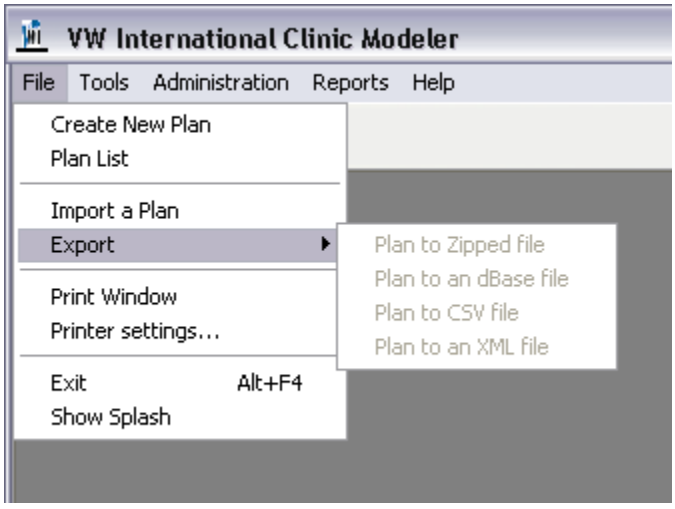

Figure 15: File menu on main window

Tools Menu

The **"Tools"** menu provides access to the bug reporting utility of the Clinic Modeler. This menu is shown in **Figure 16**. From this menu, the user may enter a bug that they have found in the program. The user may also toggle whether or not the bug reported will be to their local system, or to the central bug database located on the www.VWI.com web site.

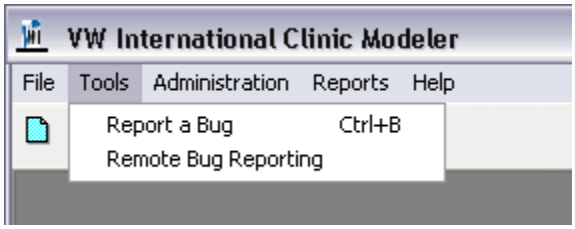

Figure 16: Tools menu on main window

Administration Menu

The **"Administration"** menu provides access to specific functions intended to support the basic use of the application. This includes reindexing the data files, switching from local files use to network file usage (and back), editing the paths to the data files, and editing the data files that are used primarily for drop-down pick lists within the Clinic Modeler.

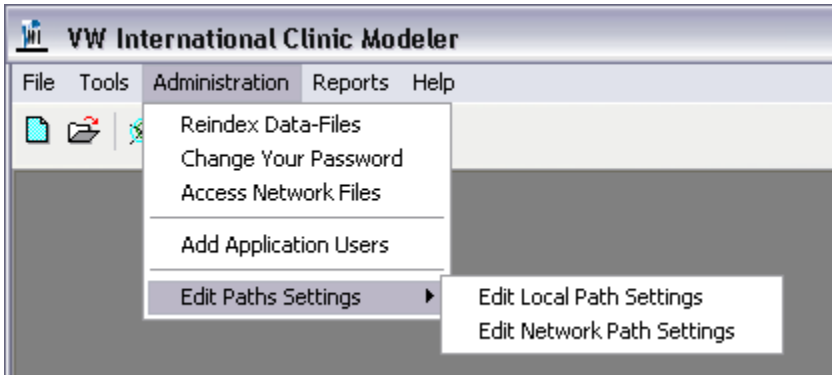

Figure 17: Administration menu on main window

Reindex the Data Files

The first menu option **"Reindex Data-Files"** may be required if the index files become damaged, deleted, or due to external operations on the databases themselves they become out of sync with the data file. The indexes are used internal to the application to relate the various items of information to each other, or to present the records in an orderly fashion, i.e. alphabetical.

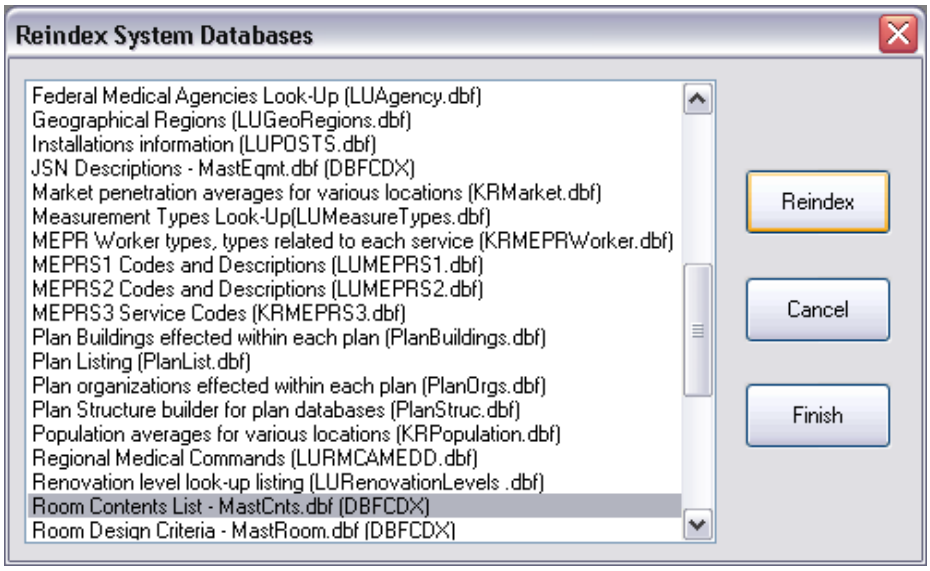

Figure 18: Reindex system databases administration window

After selecting this reindex menu option, the window shown in **Figure 18** will present the list of application data files to be selected for reindexing. Simply click on each file to pick it. To select multiple files, hold down the ***Ctrl*** key while clicking. You can select a range of files, by clicking on an item and then clicking on the last item you want while holding down the ***Shift*** key. After selecting the files you want, click on the **"Reindex"** button. A progress status window (see **Figure 19**) will then appear for each file that was selected for reindexing. When all the selected files have been reindexed, the **"Finish"** button will become available. Clicking on the **"Finish"** button or the **"Cancel"** button will return the user to the main application window. Only the reindexing button will perform any action.

Note: *When the application is first started after the initial installation, all required indexes would be created automatically.*

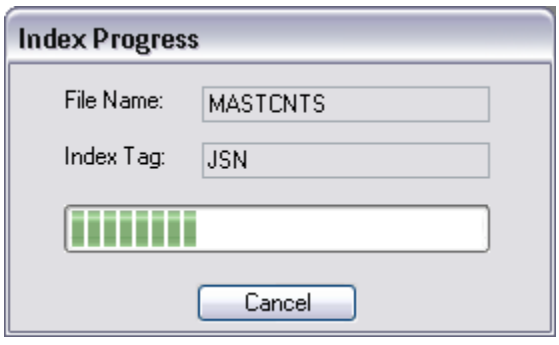

Figure 19: Reindex in progress window

To properly perform the reindexing operation, the database files must be exclusively controlled by the application. If you or someone else on the network is attempting to edit one of the files the index operation will be interrupted. In the event that the reindexing operation cannot acquire exclusive control of the data file, an information window will appear informing you that the database index was skipped. Other files will continue to be reindexed. In the event the index was skipped, it is recommended to try again when other users are not logged onto the system.

Access Network Files

This is a simple toggle menu, that will allow the user to switch between accessing plan data files on his or her own computer or accessing data files located on a shared network drive. Clicking on this menu option will display a window informing the user that they are about to switch to either network or local files and that all currently open windows will be closed.

Tip: *It is not possible to open both local and network plans at the same time. If the user wants to reference a plan stored either locally or on the network while working on another file. They should first export the desired reference file and then import the plan into the new environment. Refer to:* ***"Importing and Exporting"****. It is possible to open two or more plans at the same time.*

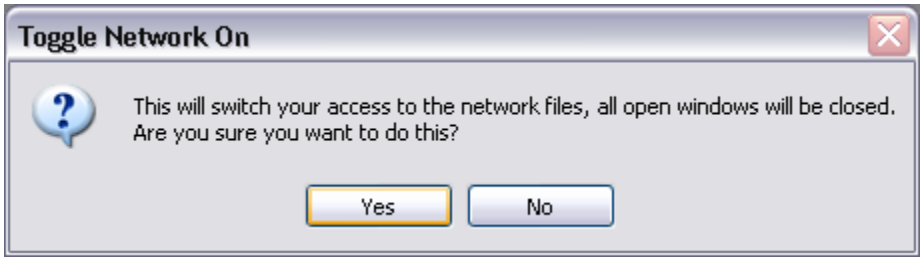

Figure 20: Confirm turning on Network access

Edit Paths Settings

For a variety of reasons, it may become necessary to direct the application to another directory where the data files are to be stored. The Clinic Modeler application supports the ability to have two path settings on the same computer. One path setting is used for "Network" file access, and the other is used for "local" files. The option to edit each of these path groupings is located on the "**Administration"** menu, see **Figure 21**.

The directory information for both the application and the database files is stored in a text file named *"VWICM.ini"*. Two copies of this file exist for each machine:

- One copy of this file is created in the root directory of the local client machine (this is the file used to represent the “local” file access),
- The second copy is stored in the same folder as the application (this is the file used to represent the “network” file access).

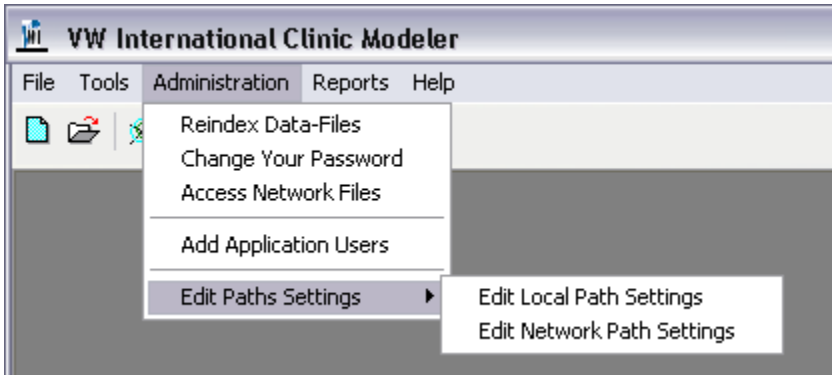

Figure 21: Edit Paths setting from Administration menu

When the path is reset from this menu option, the local root directory file *"VWICM.ini"* is opened. If that file is not found, then the copy residing in the application directory is copied and opened. This may occur if the application was installed on a network machine, but is being run for the first time on a client machine. Once the changes to the directory path for the databases are made and saved, the revised path is written to the *LOCAL* copy *"VWICM.ini"* in the root directory of the C: drive.

This sequencing and storing of the paths to the local C: drive enables different network users to have different drive paths to the application and to the databases.

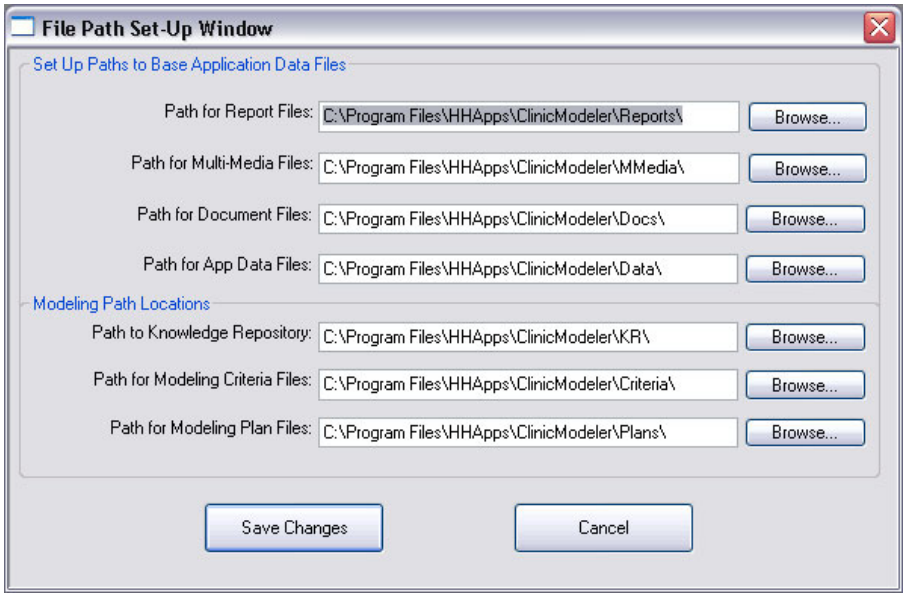

Figure 22: Data path set-up window (the same window is used for both local and network paths)

The window for resetting the path is shown at **Figure 22**. By clicking on the **"Browse …"** buttons, a Windows standard directory browser window will permit navigating to the directory where the database files are located. The paths cannot be saved as a blank entry. The application will also check that all the application databases are located at the path entered and if they are not, a warning window will inform you that the path is incorrect (**Figure 23**).

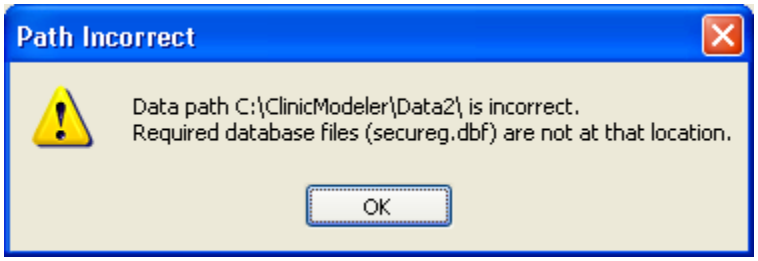

Figure 23: Path Incorrect warning window

Reports Menu

The reports option of the main menu provides three sub-options. They are:

- Open existing reports for printing or previewing,
- Open an existing report in designer mode,
- Utilize designer wizards to create a new report.

Figure 24: Reports menu on main window

The three available designer wizards assist in the creation of a standard report in column or page format, a label type of report such as addresses, or a cross-tab report similar to a spreadsheet type of layout. Report Wizards allow you to quickly generate reports. This is the recommended approach for creating a report since it allows you to create the basic elements of a report quickly. They guide you through a series of dialogs in which you specify reporting options. After you specify the desired options, the wizard generates the report for you in a work window. Once the report is created, you can customize it as desired.

More about available reports are discussed in the section: ***"Reports"***.

Help Menu

Finally, the last main menu option is the help menu. This option provides access to the help file (this manual), information about using help in general, and also the help file for use when designing reports. Access to the clinic modeler support web site is also available from the help menu. This option will open your web browser directing it to the Clinic Modeler Support Web Page. From this website new updates, patches, and tutorials may be found. Background information about the Clinic Modeler application is also available from this menu (the last option). This about screen will provide the version number and resources available for technical assistance.

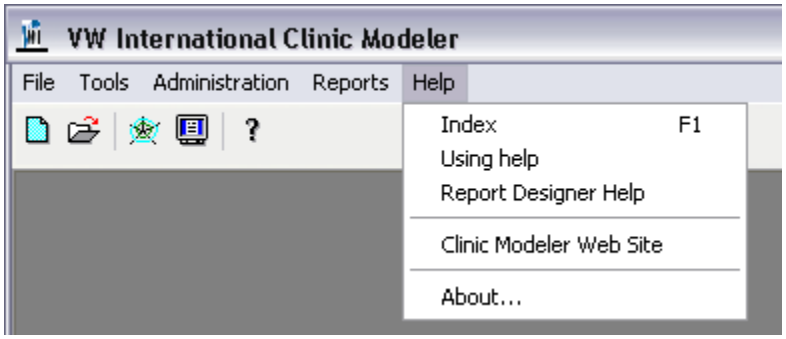

Figure 25: Help menu on main window

Navigation Button Bar

The navigation button bar appears on each of the data windows once they are opened. When a data window is opened the menu on the main window will change to reflect the data windows needs. The navigation button bar and associated menu are only available when a data edit window is opened.

Navigation Button Bar Purpose

The navigation button bar provides single-click access to the main menu options that would typically be used when a data window is open. Each open data window has a navigation button bar attached to it, while the navigation menu on the main application window will apply to whatever data window is currently on top (in focus).

Tip: *During navigation through a data file, any changes will automatically be saved when you skip forward, backwards, create a new record or close the window. There is no need to specifically "save" a record.*

Navigation Button Bar Description

The navigation button bar is shown in **Figure 27**. The bar makes it easier to skip forward and backward through the database while providing quick access to editing features.

Figure 26: Main Tool Bar (always available on the shell window)

Following are brief descriptions of the toolbar for main shell window.


Create a new Plan using the wizard (from the main tool bar).


Open the Plan list window (from the main tool bar).


Open the bug report window (from the main tool bar).


Open the reports window (from the main tool bar)


Help about window (from the main tool bar)

Figure 27: Navigation button bar

Following are the descriptions of the plan listing toolbar buttons from left to right; some buttons are also on the various plan explorer view windows:


Close this data window and database.


Undo any changes made to this record since you began editing.


Delete the current record. This will irrevocably remove the information from the database. **There is no "undo" for deletion.**


Cut. Any highlighted text in a field will be deleted from that field and stored into the Windows' clipboard for future pasting into another field.


Copy. Any highlighted text in a field will be stored into the Windows' clipboard for future pasting into another field. The highlighted text will not be deleted.


Paste. Any text previously stored in the Windows' clipboard will be pasted into the field where the cursor is currently placed.


Go to first record. This will move to the first record in the current order, automatically saving any changes made to the currently displayed record.

This first record may not be the first record put into the database, since various indexes or filters may be in effect. If the window is already positioned at the top of the file (first record), then no action will take place.

Go to the previous record. This will move to the previous record in the current order, automatically saving any changes made to the currently displayed record. This previous record will be in accordance with any indexes or filters that may be in effect. If the window is already positioned at the top of the file (first record), then no action will take place.

Go to the next record. This will move to the next record in the current order, automatically saving any changes made to the currently displayed record. This next record will be in accordance with any indexes or filters that may be in effect. If the window is already positioned at the bottom of the file (last record), then no action will take place.

Go to last record. This will move to the last record in the current order, automatically saving any changes made to the currently displayed record. This last record may not be the last record added to the database, since various indexes or filters that may be in effect. If the window is already positioned at the bottom of the file (last record), then no action will take place.

Go to a specific record number or Key ID. This will pop-up a window allowing the user to enter a record number, or the Key ID that the user wishes to move to. If the user presses **"OK"** to perform the go to action, any changes to the currently displayed record will be saved.

Find a specific record or records matching the requested word or phrase. This will pop-up a window allowing the user to enter a word or phrase that will be used to search all records. If found, a window will be displayed listing all records matching the request. Double-clicking on one of these listed records will automatically move the record pointer to that record, while saving any edits made to the previously displayed record.

Find the next record from the previous find operation. Clicking on this button will pop-up the window listing any records that met the previous find request. This enables the user to quickly move to the next record that met the previous match by double clicking on the listed record.

Form View. Clicking on this button displays the window in a form-like view. This is the default display of the database information. Edits and appends may only be performed in the form view mode.

Table View. Clicking on this button will display the database records in a table or spreadsheet-like mode. Record information may be viewed in this mode but cannot be edited. Double clicking on any record shown in the table view will switch the window into form view for editing.

Create a filter. Clicking on this button will open a filter creation dialogue window, allowing the user to construct a complex filter query or to open a previously saved filter. Once a filter has been created and executed, the database window will display the first record that meets the filter requirements. This will automatically save any edits made to the previous record. If no records are found that meet your filter request, an information window will notify you and then return you to the filter creation dialogue window. Once a filter is created, the caption of the window will show the current filter that is in effect.

View all records. This button will remove any filter that is in effect, allowing all records to be displayed and navigated. The default is no filter to be in effect and for all records to be available.

Open the currently selected plan in the Plan Explorer window.

Recalculate the plan. This button, which is only on the plan views' toolbars, enables the user to recalculate the plan results based on changes to the current view without having to leave the view. This button will only work if the user has a lock on the plan, if the explorer is opened in read-only mode, then pressing the recalculate button will have no effect.

Tip: *Short descriptions for each button icon are available in the application by placing the mouse cursor over the button and holding it there for a few seconds. These tool tips provide a quick reminder of the function of each button.*

Data Window Navigation Menu

In addition to the navigation button bar, there is the navigation menu that is displayed on the application's main shell window, see **Figure 28**. Many of these menus are similar to those described previously.

Figure 28: Navigation menu

File

The **"File"** menu option of the navigation menu is similar to the file menu when no data windows are open. The exceptions are: a **"Close"** option is added allowing the user to close the current data window from this menu, and the ability to export the table or plan is enabled as well as to print the active window.

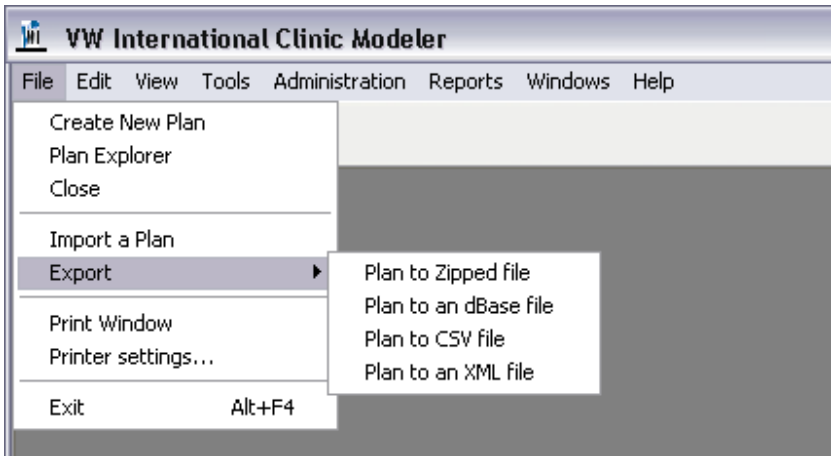

Figure 29: Navigation file menu

Edit

The **"Edit"** menu option provides access to most of the navigation and edit capabilities available from the data window's navigation button bar. This menu also shows that several of the navigation and edit actions are also implemented through the keyboard. For example, you can skip forward through the database by using the ***Page Down*** key, or backwards by pressing the ***Page Up*** key, see **Figure 30**.

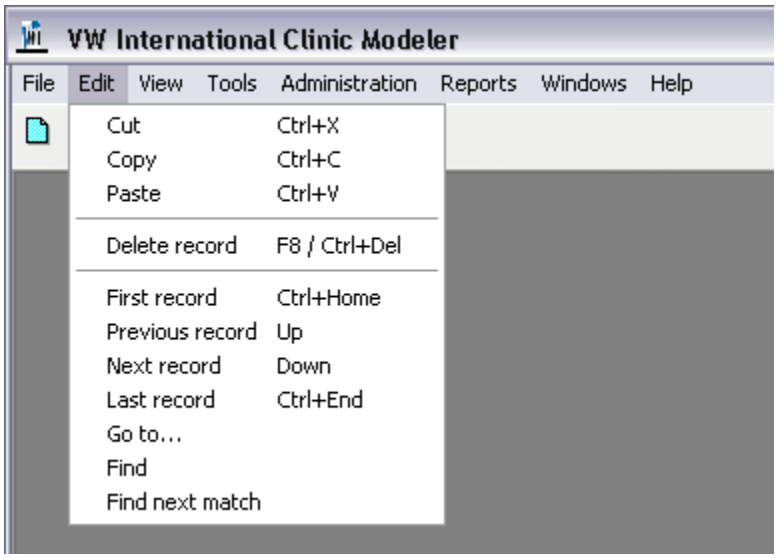

Figure 30: Navigation edit menu

Search Options

When a window is open, you have the ability to perform searches through the open database. These options include: going to a specific record or Key ID, finding all occurrences of a phrase, word or character string (to include numbers and symbols), and setting up complex queries or filters. Each provides increasing control over the search you create.

Go To

The **"Go To"** option is available from the "**Edit"** menu or by pressing the go to button  on the navigation button bar. A window will pop-up that asks for you to enter the record number or Key ID of the record that you want to go to. The top field in the window displays the data file that you are working in. After entering the record number or Key ID you must then identify which one is applicable for your search entry. If the Key ID or record is not found, another pop-up will tell you and leave the Go To window open for another try. If the Go To is successful, the data file window will be positioned at the requested record.

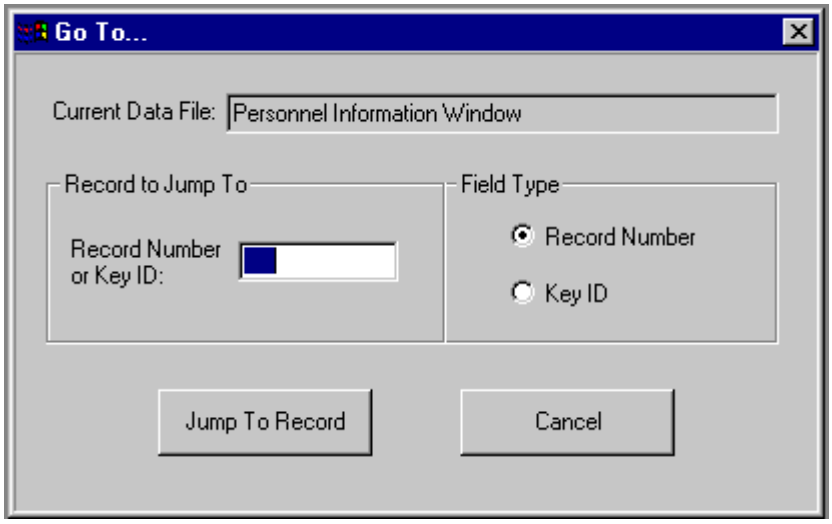

Figure 31: Go to a specific record number or Key ID

Find

The "Find" window, see Figure 32, is a single entry field, accessible from the  icon on the navigation button bar or the **"Edit-Find"** option on the menu. Enter whatever word or phrase you want to find. This quickly searches all fields in the open database and then opens a window listing all the records that matched, see Figure 33. The memo fields such as Issue, Recommendation and Action are not searched.

Tip: *To search the memo fields, use the Filter option.*

The find window provides a few simple ways to search. Using special characters you can search for wild cards or word combinations. E.g. Use an asterisk to mask the beginning or end of a word. By using the | character you can search for one or the other words, such as "x-ray |

radiology" will find all occurrences of records having one or the other entries. You may also insert the “&” character to find all occurrences with both words. If the above special search characters are not entered, then the exact word phrase entered will be searched for. The find operation is case insensitive so there is no need to use capitalization.

Figure 32: Performing a Wildcard-seek search operation

Once the search operation has been performed, the results are available from the **"Edit-Find Next"** menu option or by clicking on the find next icon:  on the button bar. Double clicking on the records shown in the find results will position the database to that record and open the window for editing or viewing. The previous find results will be cleared when a new find operation is performed.

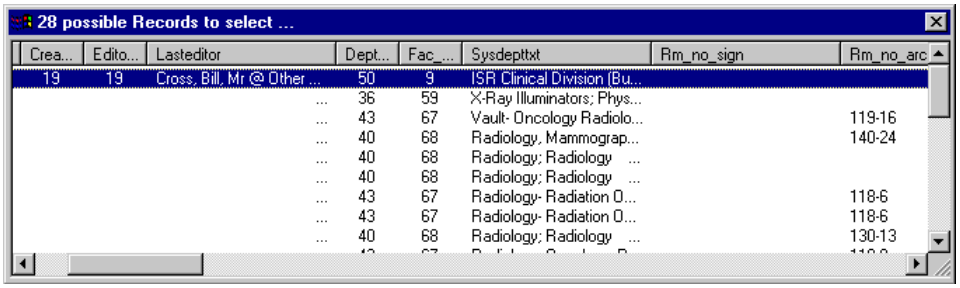

Figure 33: Wildcard-seek search results window

View

The **"View"** menu option, see Figure 34, provides the ability to display the window as a form that permits editing, or as a table that displays multiple records at a single time (but typically does not allow editing). This menu also provides access to creating a filter from the **"Select Records"** option, or to remove a filter by selecting the **"All Records"** option.

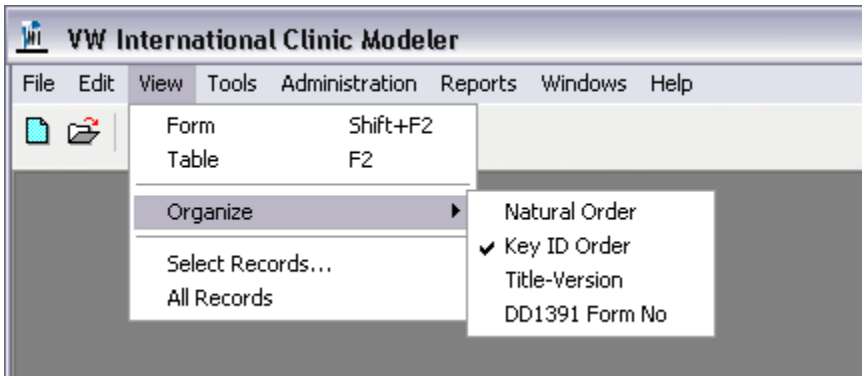

Figure 34: Navigation view menu

Organizing (controlling the order)

Typical windows also have the menu option to control the order of the list of data records. Depending upon the particular window there will be several options for the dataset's order. The default setting for display is the unique Key Identifier order, as indicated with a checkmark. In addition to this typical default order, there is the common 'Natural Order'. This natural order presents the records in the order that they were created with the first created record at the top of the list, and the record created most recently at the bottom of the list. To select any of the organizational orders, click on the menu. The order currently in effect for the active window will have a checkmark beside the order's name.

Filter (Select Records)

This last search option is the most flexible and also the slowest. It enables you to create and save complex queries. These queries are applied to the entire database, allowing only those records that meet the query requirements to be displayed. When a query is in effect, the caption of the window will indicate the filter string being used.

You can create a query by selecting **"View-Select Records"** from the menu. Filters are available from the button bar by clicking on the  icon.

The "Filter Builder" window will appear as shown in **Figure 35**. This window presents the necessary tools to construct a complex query. The upper left corner displays the fields within the database. This may be presented in **"Alphabetical Order"** or in **"Normal Order"** by clicking on the applicable button. The default is normal order. When the field name is selected, the type of field is indicated with the radio buttons to the right of the field list. Depending on the type of field selected, the various operator buttons will be enabled. The **"True"** and **"False"** buttons are only enabled if a logical field is selected. The upper right corner of the window has a pick list of various conversion

processes that you may perform. For example, you may convert the field to all upper case letters if you cannot remember the exact case of a particular word or phrase. Below the conversion pick list are the various operator buttons. They are from left to right: less than, less than or equal, equal, exactly equal, greater than or equal, greater than, not equal, true, false and contains ($). There are two text fields, one small and one large. The small text field **"Prototype"** is where the query phrase is constructed. Selecting the field will place it into the prototype area; similarly, pressing the operator buttons will place their operators into the construction area. You are able to edit this area directly. The larger **"Query to be Executed"** text area shows the query that is about to be executed.

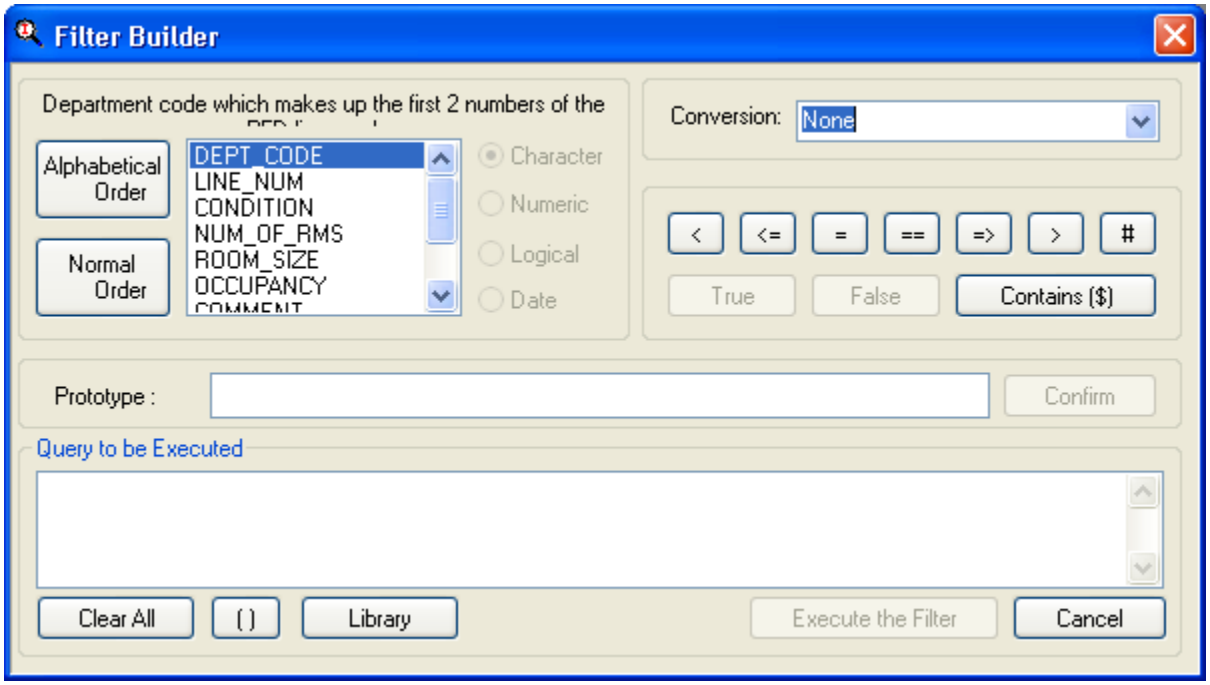

Figure 35: Filter Builder construction window

The process for creating a query is:

- Select the applicable field that you are interested in
- Select any conversion necessary, such as all upper case or lower case
- Click on the applicable operator button, such as "equal to"
- Perform any manual edits as necessary to the prototype line
- Click on the **"Confirm"** button when the prototype is okay
- Repeat the above if needed using the **"and"** or the **"or"** buttons to append the additional prototypes
- Click on the **"Execute the Filter"** button, and
- When back in the data window, navigate through the results.

Filter Building Example

An example follows. Say you want to select all records edited after May 4,1998 that pertain to the disciplines of architecture or electrical:

Select the field discipline.

Click on the operator button **"Contains ($)"**.

The phrase *"..."$DISCIPLINE* will be displayed in the construction area. The three dots between the quotation marks indicate that you may enter up to three characters. We will enter "AR" in those quotes. The phrase is now *"AR"$DISCIPLN* which states records that contain "AR" in the field discipline.

We now press the button **"Confirm"** which transfers the phrase from the prototype area into the query execution text area.

We next want to take care of the electrical discipline so we again select the DISCIPLINE field, the **Contains ($)** operator and then enter the abbreviation for electrical "EL" between the quotes. Our second filter portion is now *"EL"$DISCIPLINE*. The button that we now want to click is the **"or"** button. After clicking the **"or"** button the new phrase is appended to the *"AR"$DISCIPLINE* query. It now shows *"AR"$DISCIPLINE .OR. "EL"$DISCIPLINE*. We then highlight the entire phrase and click on the parenthesis button **"()"** to group this phrase.

The next part of the query is to filter out records older than May 4, 1998.

We select the field AS_OF which is shown as being a date field.

We then press the "Greater Than or Equal" operator button **">="**. Since we cannot enter date types directly an automatic conversion function that will change our date string into a date is entered. We then enter the string "05/04/1998" in the space provided (month/day/year). The prototype phrase is thus: *AS_OF >= CTOD("05/04/1998")*. We then press the **"and"** button to add this phrase.

Our filter is now '("AR"$DISCIPLINE .OR. "EL"$DISCIPLINE) .AND. AS_OF >= CTOD("05/04/1998")'

We have the option of saving this filter to a library of filters by clicking on the **"Library"** button. Click on the button **"Execute the Filter"** (which is now enabled) to filter the database. If any records match the query, the data window will be positioned to the first record found. If no records are found, a window will pop-up telling you that none were found and allows you to try again.

When a filter is in effect, the caption of the database window will show the filter string.

To clear the filter from a data window select **"View-All Records"** from the menu. Every time a data window is closed and reopened any filters are automatically cleared.

Tip: *The above filtering process works best if your intent is to perform editing or to check for some ideas. However, if you want to print out the results of the filter, you must reconstruct the filter within a report by designing your own report and building a filter.*

Tools

The "Tools" menu option provides the ability to record a software bug or problem to either the local copy of the database (located on the user's personal computer or the local area network) or to the central database located on the VW International, Inc. (VWI) website www.VWI.com.

Note: *The local copy location will depend upon the settings of the application to access files either on the user's PC or on the LAN.*

To set the reporting mechanism to work on the central database at www.VWI.com, click on "Remote Bug Access" if there is no check mark besides the menu option. Once checked, the menu option to "Report a Bug" will open a data window on the remote VWI.com server. The window will show "*Remote*" in the title bar of the window indicating that the bug is being reported to the central server, the title bar will indicate "*Local*" if the bug is being recorded to the local database. Obviously, to access the remote server, the user's personal computer must have Internet access.

The setting for remote bug access will be remembered when the user turns off the "Clinic Modeler" application. However, if the next time that the user starts the application, they currently do not have Internet access the remote bug access will automatically toggle to the local setting.

Administration

The **"Administration"** menu provides the same options as previously discussed, see **"Administration Menu"**. The exception is that specific options limited to users with administrative privileges are not available when an edit window is open. This includes: Adding Application Users, and Editing Paths.

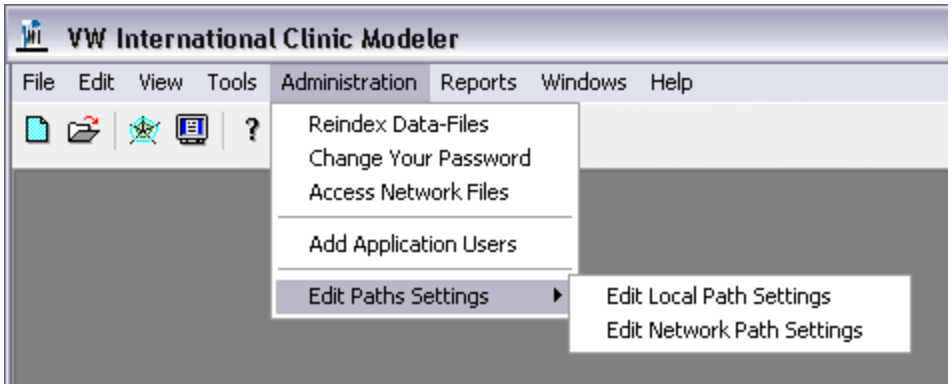

Figure 36: Navigation administration menu

Reports

Another menu option that is the same as previously discussed, is the **"Reports"** menu option. You may print and preview existing reports, open and redesign existing reports, or open the three design wizards to create new standard, label or cross-tab reports.

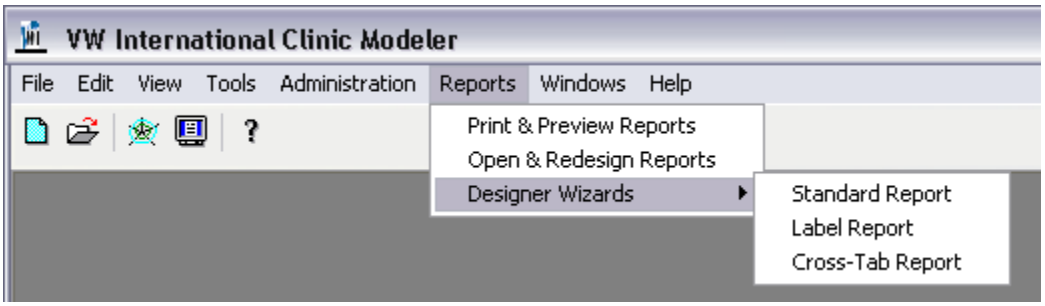

Figure 37: Navigation reports menu

Window

The **"Window"** menu option is added when any data window is open. It enables the user to manage the arrangement of various open data windows within the application shell. Options include the ability to cascade the windows. This puts one window overlaid on top of another with the captions of each window being displayed. You may also arrange the open windows horizontally with one window on top of the other, or vertically with one window beside the other. Additionally, the option to close all the open windows is provided along with a listing of the windows currently open. Clicking on the name of one of the windows listed will bring that window to the front of the screen.

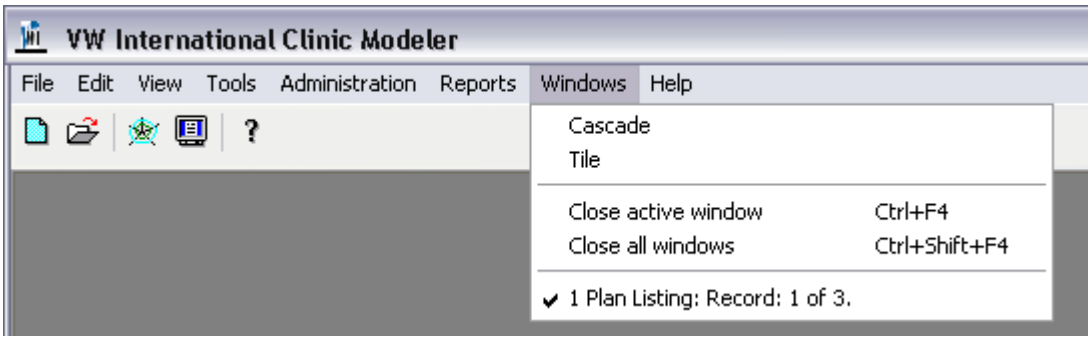

Figure 38: Navigation window menu

Help

The **"Help"** menu is exactly as discussed earlier under **"Help Menu"**.

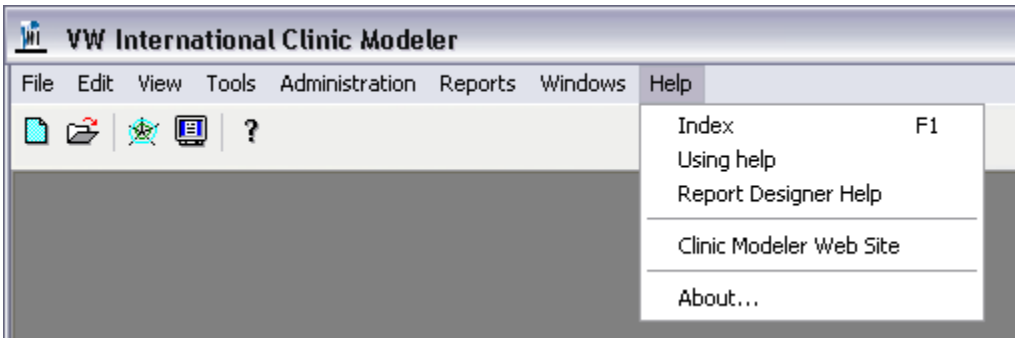

Figure 39: Navigation help menu

Creating a Plan

Overview

The main purpose of the VWI Clinic Modeler software is to create "plans". Each plan consists of a set of related information leading to the estimated size and cost of the construction to meet the facility requirement of the plan. This set of information consists of population supported (which is the critical user input into the plan modeler), the expected workload generated by that population supported, the likely staffing required to support that workload, the space (in the form of a SEPS compatible PFD) required to support the staff and workload, and then the estimation of the cost to construct the facility requirement. After the plan has been created the user may make edits to each of the stages of output.

Because of the strong interrelationships among the elements of the plan's data, the software uses a wizard to assist the user in properly identifying the necessary items of information to create the plan.

The option to "Create a Plan" is available from the "File" menu.

Wizard Interface

The wizard interface consists of a single window, with several displays accessed in specific sequence. The wizard allows the user to move forward (by clicking on the Next button), backward (by clicking on the Back button); to exit the wizard at any time by clicking on "Cancel" or once the wizard has been completed, to "Create Plan". This latter button will only be displayed at the end of the wizard. The wizard will consistently check the status of each display's required data entries and will only enable the "next" button when all required data has been provided. Fields requiring entry will be indicated with a red asterisk. Once the field has been properly completed, the asterisk will disappear.

The wizard contains a total of eight screens (maximum), with the first screen being an introduction and the last a summary of the user entries. The remaining six screens request information for creating the necessary files, background information about existing buildings and organizations, population data, and project specific information.

The first screen of the wizard presents an introduction to the wizard and does not require any data entry by the user.

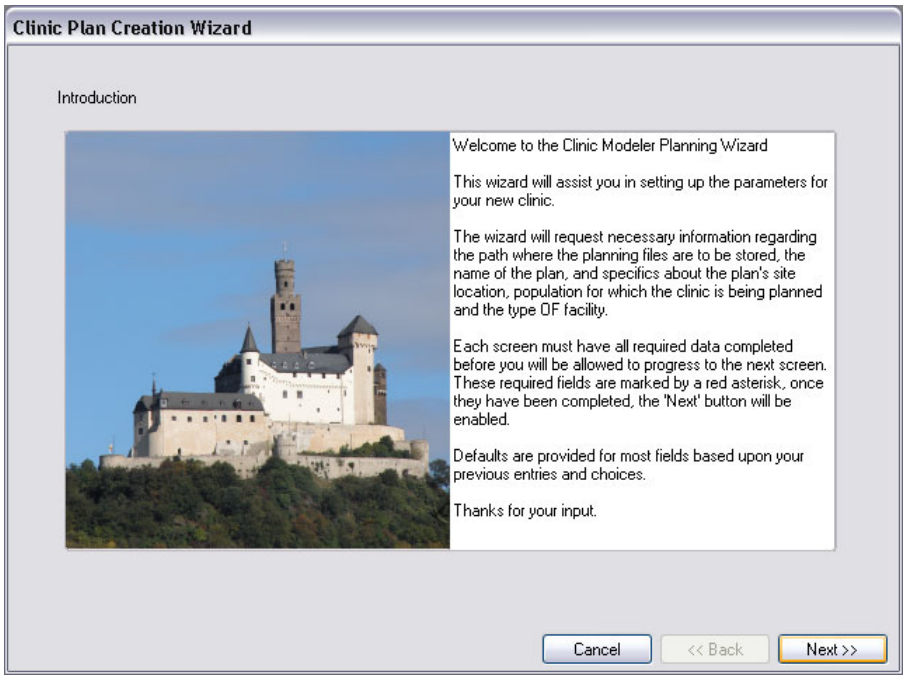

Figure 40: Create Plan Wizard Introduction Screen

The next (second) screen (Figure 41) captures information that the application requires to properly create the file directories for storing the modeler's plan outputs and files. It also captures information about the creator of the plan; this information is gathered from the user's logon information to the application.

The first required entry is the title of the plan. This title will be used in subsequent reports and to identify the plan, e.g. "Bosnia Site A123 Medical Clinic Study". Any combination of alphanumeric characters up to 50 in length is permitted. The plan's title may be edited after the plan has been created.

The second required entry is the name of the file folder where the plan will be stored. Once the user enters the title of the plan, the software will take the first eight non-space characters of the plan's title to auto-construct the folder's name. The folder name when created as a file directory must be unique in the file path. The user does not need to add numbers to the folder name to attempt to make it unique; the software will do this automatically. This field may be any alphanumeric characters up to 10 characters; the actual file folder's name will be subsequently appended with the version number to ensure that the folder name is unique. The folder name may not be changed once the plan has been created.

The next required entry is a unique 5 alphanumeric character identifying the plan. This entry is subsequently used when the plan is exported to the SEPS space planning system. This entry will automatically be coordinated with the existing listing of plan's to ensure that this entry in combination with the next version entry is unique. The plan code may be edited after the plan has been created.

The next required entry is the version of the plan. This version number is auto-incremented based upon the plan code entry. The version number may be edited after the plan has been created.

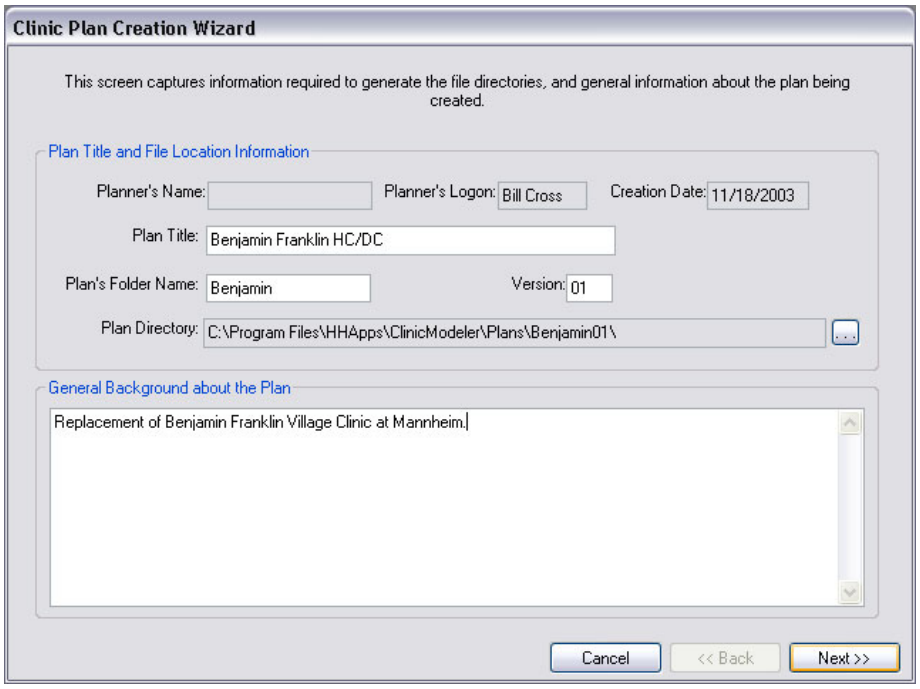

Figure 41: Create Plan Wizard Plan Title Screen

The next required entry is the complete path where the plan folder will be created. This path is auto created based upon the user's current settings for where datasets reside. This entry typically does not require entry by the user, however, a button is available that will open a folder select dialogue allowing the user to navigate to the path where he or she would like the plan's output to be stored. This entry may not be changed after the plan has been created.

The last data entry on this screen is a text entry that allows the user to record any background information regarding the plan and its origin. This information is not used directly by the software, but this provides a place for the user to store key information about why the plan was created, the initial assumptions, or the agency/person initiating the plan's creation. This field may be edited after the plan has been created.

Once the required fields (indicated by an red asterisk) have been completed, the "Next" button will be enabled and the user may progress to the next screen.

The next screen (number three, Figure 42) requests information regarding where the plan is to be located, the type of facility anticipated, and the additional information about the construction project that would result from the plan requirements.

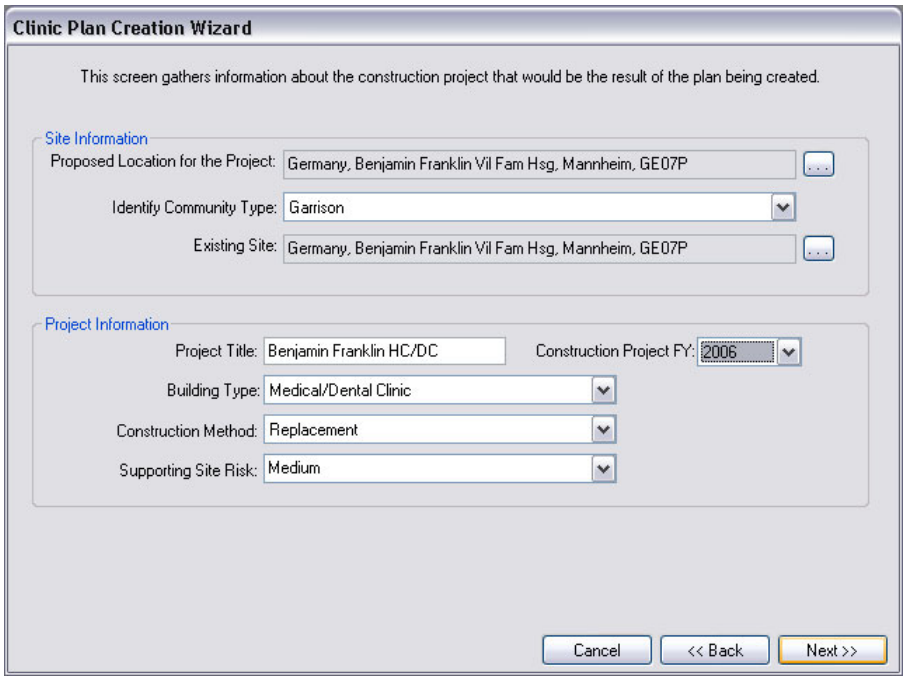

Figure 42: Create Plan Wizard Site Information Screen

The first required entry is the proposed location for the resultant project (a freestanding medical, dental or combined medical and dental clinic). To complete this entry the user must click on the button to the right of the entry. This will display a site selection window of all sites

(known by the software application), see “Figure 43: Site location pop-up selection window”. This site selection interface allows the user to rapidly narrow the selection to the desired one. The first criteria is to identify whether the site is considered to be within "USA", "Europe" or "Elsewhere", Europe is the default. Clicking on any of these items will narrow the list of locations to the applicable settings.

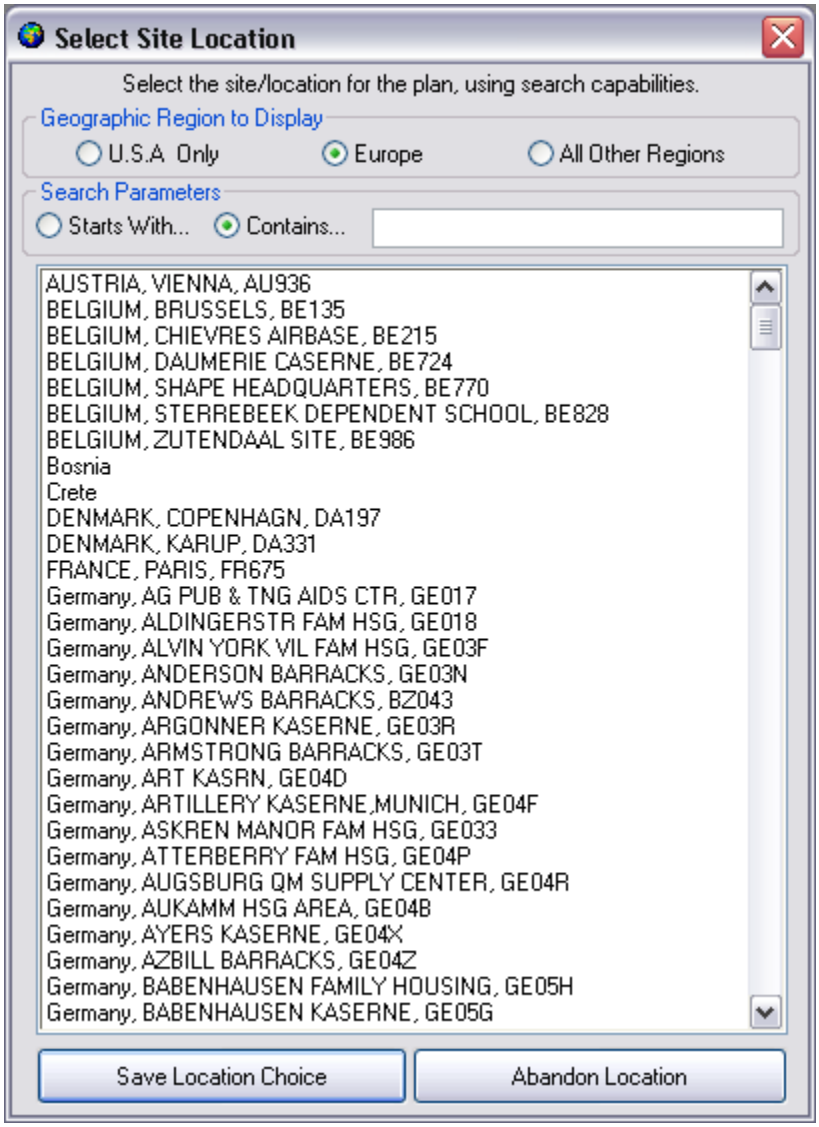

Figure 43: Site location pop-up selection window

The next search criteria setting allow the user to either search from the beginning of the location display name, or to search anywhere within the display name, the latter is the default. With this "contains" setting, every character grouping entered by the user will narrow the list of sites displayed until the proposed site is found. Selecting the desired site is accomplished by clicking on the displayed site and then selecting **“Save Location Choice”**. Clicking on the **“Abandon Location”** button or the close dialogue button (the “x” in the upper

right corner) will return the user to the wizard with no site selected. Any existing site previously selected will not be erased.

When the user selects a site for the proposed location, the existing site will automatically be filled in with the same entry as the proposed site. The user may override this selection by clicking on the button to the right of the existing site field to choose a different existing site using the previously described site selection window.

The plan's site plays an important role in estimating the cost of the clinic's construction, since the site affects the allowances for area cost factors.

The second required field entry is to identify the type of military community that the proposed clinic is to support. This may be one of three choices, "Garrison", "Field" or "Training". This choice impacts the estimation of enrollment numbers and resultant estimates of workload. Selection of some sites may automatically select the corresponding "Community Type".

The user should also indicate if the planned clinic is going to be located over 20 miles away from any other US Medical Facility, checking this item will impact the estimated enrollment rates and the resultant clinic workload (typically increasing them).

The second section of this page of the wizard requests information about the proposed project that will result from the plan. This includes:

- A free text entry of the project's title. This will default to the same plan name entered by the user on the previous screen of the wizard. This entry may not be left blank.
- The proposed fiscal year of the project's construction start. This is typically the fiscal year that the project is being requested for funding. This entry defaults to the current fiscal year, and plays a critical role in estimating the likely cost of construction. The list of fiscal years permits entries ranging from ten years before and after today's fiscal year.
- The next entry identifies the type of clinic that is being planned. This entry may be one of three clinic types: "Medical Clinic", "Dental Clinic" or "Combined Medical/Dental Clinic". The default selection is "Medical Clinic".
- The user must also indicate the type of construction that will likely be required. There are three types of construction project available for selection: "New", "Replacement", and "Addition/Alteration". "New" indicates that the proposed clinic is a brand new facility where no clinic had previously existed. In contrast, "Replacement" is a new building, but a replacement for an existing facility. This replacement may be on the same installation as the existing or on a separate

installation. Finally, an "Addition/Alteration" project entails new square footage being added onto an existing building, with the existing space requiring renovation or alteration work. Depending upon the selection the user makes, the wizard will request additional information, or eliminate the need for items of information. Specifically, by selecting "New", the existing installation site will be blanked our, since by definition, there is no existing facility. Selecting an "Addition/Alteration" type of project will result in the requiring the user to identify the building and its gross square footage (GSF) that will be used in the alteration portion of the project. This data entry is on the screen six (see Figure 48).

The next screen after identifying the basics about the project location is to identify the existing clinic organizations (Figure 44). The wizard allows up to four organizations to be identified. This allows the clinic modeler to record the DMIS identifiers of each organization for future planning reference. Identifying the existing clinics that are involved in the project plan, also permits the clinic modeling application to reference any known information about those organizations when it attempts to estimate population market penetration rates, workloads, and staffing. These organization entries may be left blank.

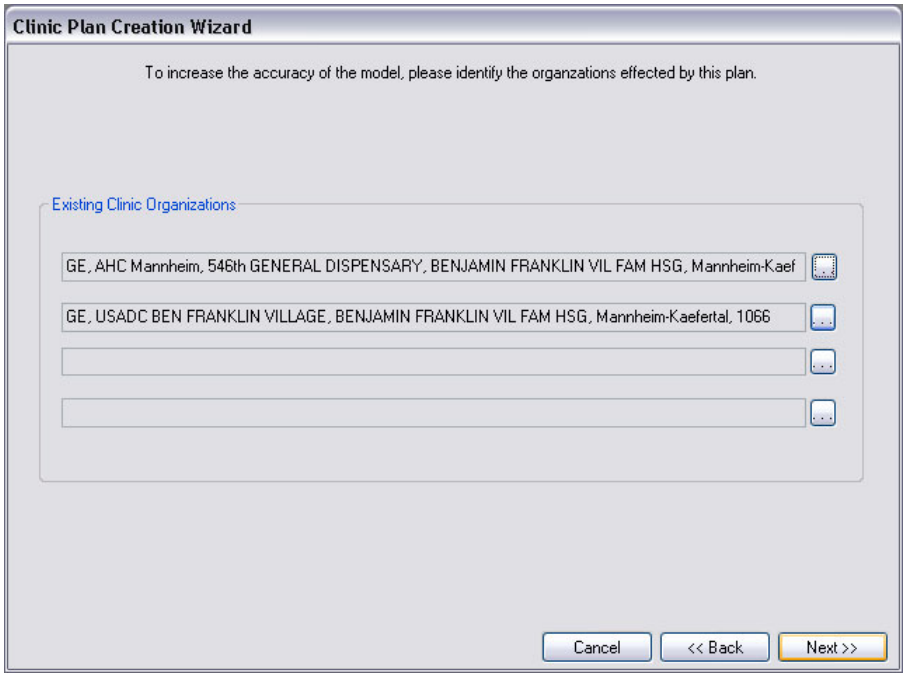

Figure 44: Create Plan Wizard Existing Organizations Screen

To assist in the selection of the clinic organizations (there are several hundred); there is a popup window allowing the easy search of the DMIS organizations (Figure 45). This selection window is very similar to the site selection window. The user may narrow the

organization search by geographic region (within Europe, the USA or all others). After narrowing the search, the user may then search that list quickly by either searching from the beginning of the installation's name or by searching anywhere within the name of the installation (a typically more flexible search pattern). The organizations are presented in order first by the country where they are located (by state if the USA region is selected), and then by the organization's name. The DMIS identifier is at the end of the display name. The user can save their choice by clicking the button titled "Save DMIS Choice" or abandon their selection by clicking the "Abandon Choice" button, or the close dialogue button (the "x" in the upper right corner of the window).

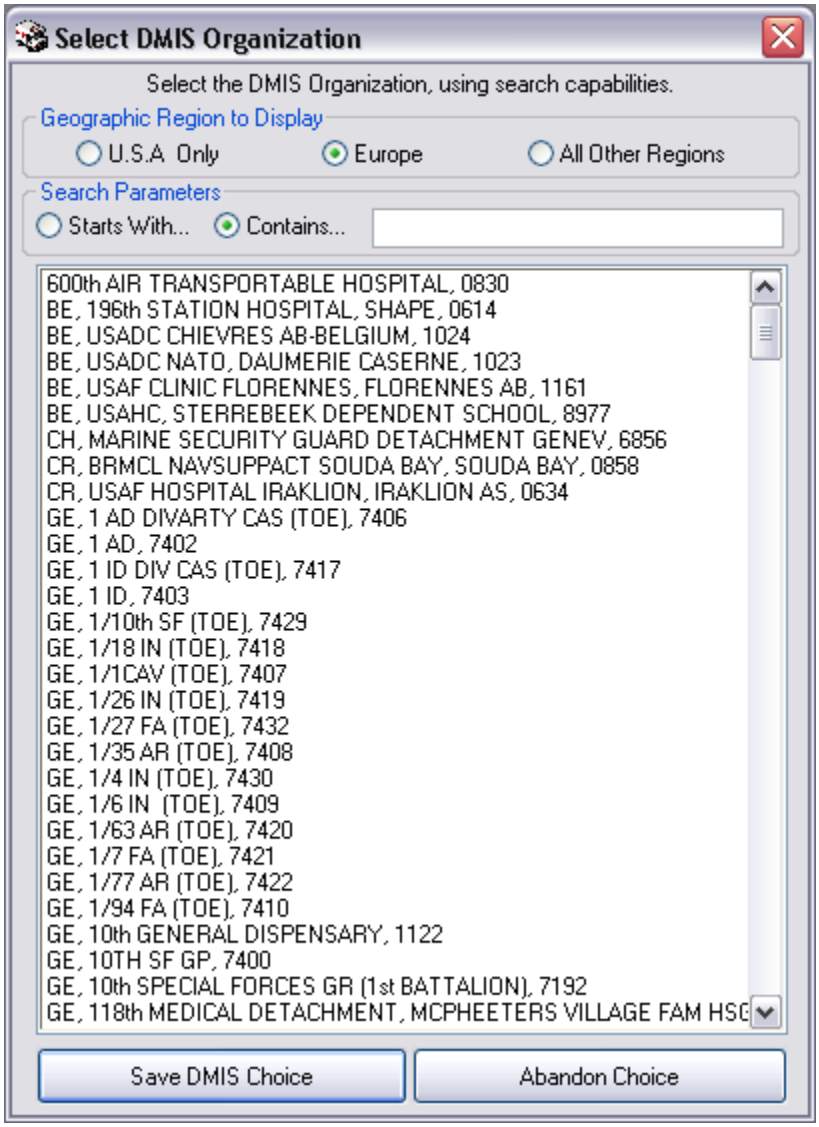

Figure 45: Select DMIS Organization pop-up

The user is not required to identify the existing organizations, if any, to move forward in the wizard. The next button is always enabled on this organization screen.

Clicking next will bring the user to the fifth screen (Figure 46) dealing with population and the anticipated mix of beneficiary categories within that population.

Note: *To the extent possible, the software will use the identified clinic organizations, the existing site, and the proposed site, to determine the likely population and its relative mix of beneficiary categories.*

The clinic modeler considers up to five categories of beneficiary:

- Active Duty (all services, to include active reserve, guard and foreign military) in non-trainee status.
- Active Duty in Trainee status (this refers to a typically transient training population that will surge the population supported numbers, but over a relatively short period of time).
- Family Members of non-trainee Active Duty.
- Retirees and their authorized family members (this category only applies to USA sites, since retirees are cared for on a space available status in non-USA locations). This category entry will not display when a site that is non-USA is selected.
- Other authorized beneficiaries (this may include federal civilian employees, foreign nationals, and government contractors, depending upon the particulars of the site situation).

If the plan site is within the USA, the field entry for retirees is displayed, as well as a checkbox to indicate if the retiree population should be considered for this planning effort. In European and other non-USA locations these two entries will not be displayed.

The display of the other category entries is also dependent upon the type of community that was selected in the earlier screen of the wizard. If the community type selected was “Training” then all beneficiary categories will be displayed. If “Garrison” was selected, then the trainee population group will not be displayed or considered in the planning process. Finally, if “Field” was selected then only Active Duty and Others will be displayed.

Although the application attempts to estimate the population and its mix, the user may make any changes desired. A pie chart showing the relative mix of the beneficiary categories is displayed to assist in assigning beneficiary category mix and is dynamically linked to the entries.

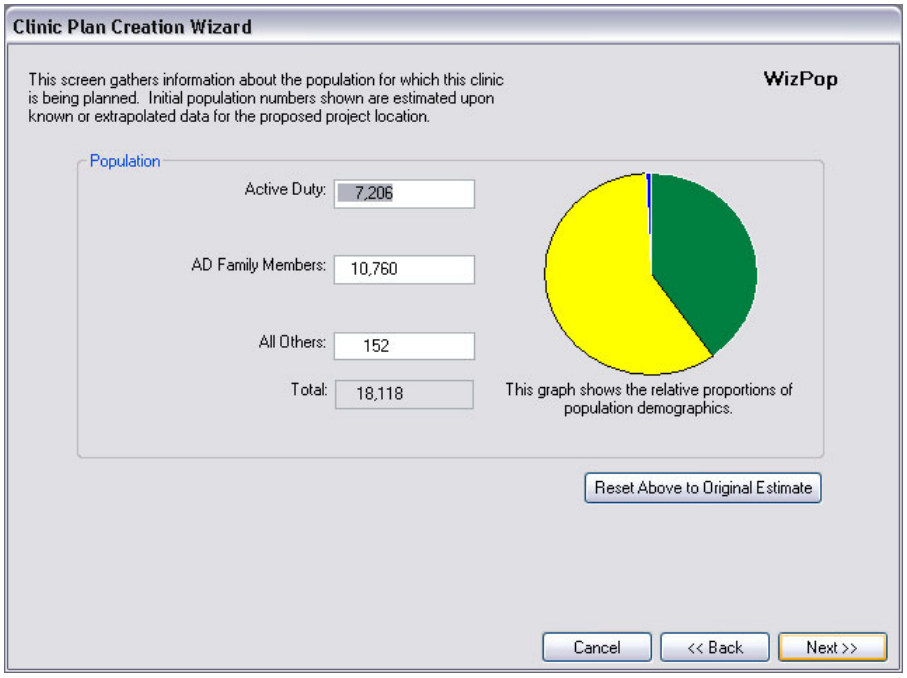

Figure 46: Create Plan Wizard Population Data Screen

A button is also provided allowing the user to reset the population numbers to the original application estimates. This permits the user to "play" with the population entries and to quickly undo their changes.

The next screen requests information about the existing buildings currently in use. Similar to the screen requesting information about the existing organizations, this screen will not be displayed if the "new" construction method was selected. If the construction method was identified as "replacement" then any building information entered is used solely for background purposes (Figure 47). For a replacement project this screen may be left blank.

If the project construction method was identified as "addition/alteration" then information about one building must be provided, see Figure 48. Only one building may be identified as used in the addition/alteration project. The building that will be used in the addition alteration project must have three items of information provided:

- The GSF of the building.
- The category code of the existing building.
- The anticipated level of renovation for the building.

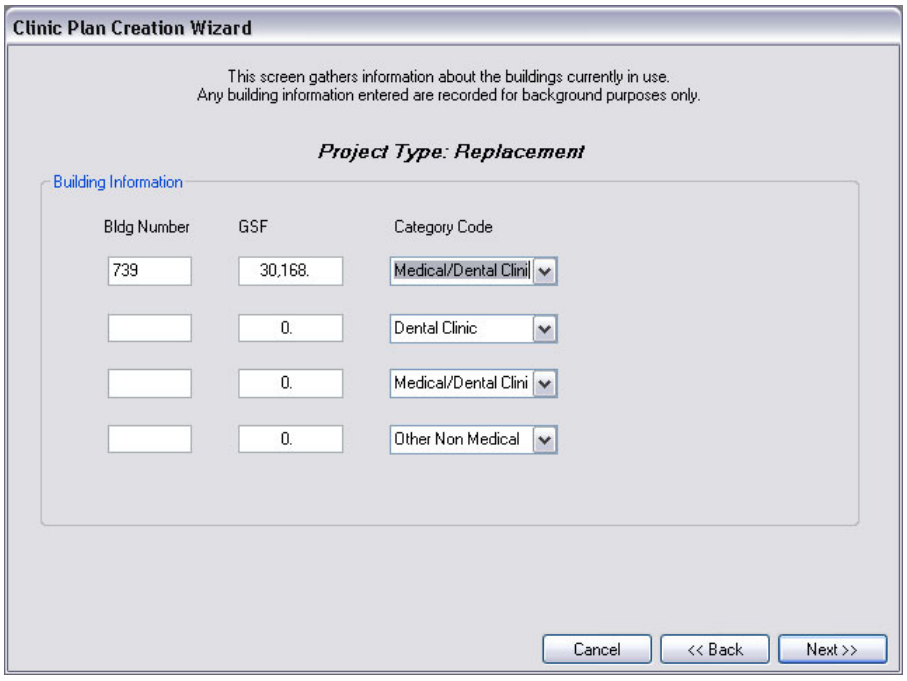

Figure 47: Create Plan Wizard Existing Buildings Screen (new or replacement project type)

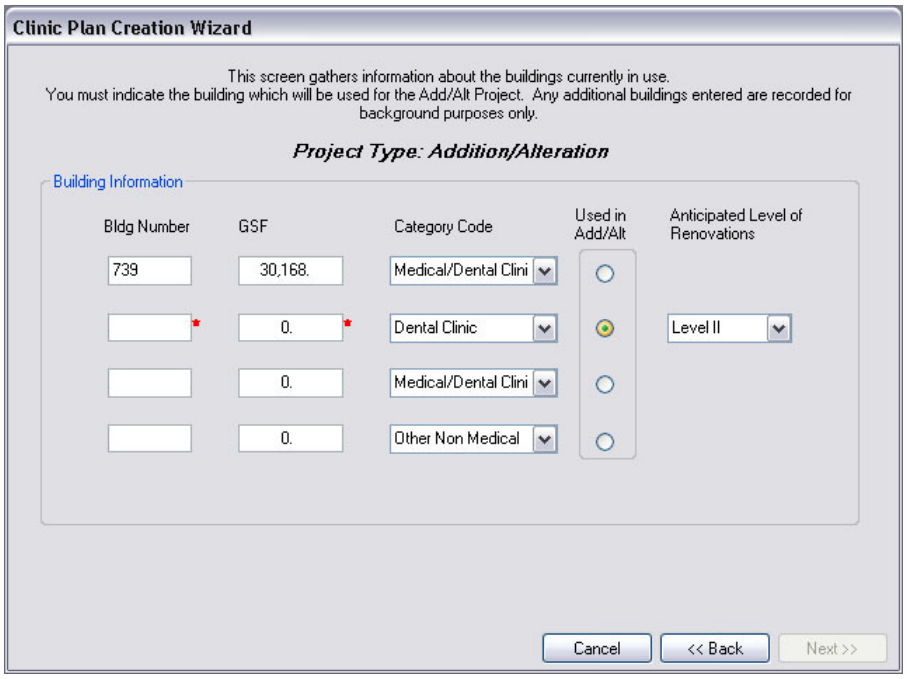

Figure 48: Create Plan Wizard Existing Buildings Screen (addition/alteration project type)

These GSF of the existing building is used to estimate the amount of scope to be allocated to "alteration" with the remaining scope allocated to "addition". While the level of renovation is used to estimate the unit costs to be applied to the alteration work performed. The levels of renovation indicate the proportion of replacement unit cost to be applied to the alteration work, with 25% of replacement used for level one (I) renovation, 50% for level two (II) and level three (III)

renovation estimated at 75% of the replacement cost. Finally, the category code of the existing building is compared to the anticipated category code of the proposed project to initiate the level of renovation. If the category code of the existing building different than that of the project then the level of renovation is estimated to be level III. The user may change this estimate at any time. The GSF of the building, its category code and the level of renovation may be changed later after the project plan has been created.

The wizard will not allow the user to move to the next screen unless the GSF, category code, and level of renovation have been entered for the building identified as being used in the addition/alteration project. The other three building entries are used as general background information. Once the entries have been made for the building identified as being used in the renovation project, then the user may move to the second to last screen which collects information about the DD1391 project title and description (Figure 49).

This screen presents the user with a template description of the likely proposed project based upon the answers to the previous screens' queries. The entries on this screen will be used to construct the front page report output; it therefore requests the three following items of information (all of which are optional, but desired, entries):

- **DD1391 Form Number.** This provides a handy reference to the official DD1391 form number if it is known. This is subsequently used as the project code if the PFD file is ever exported to SEPS.
- **DD1391 Project Title.**
- **DD1391 project description.**

The Clinic Modeler generated template utilizes a scripting language to put placeholders for items of information that will be generated as the result of running the modeler and creating the project plan. The scripted entries are enclosed by {} brackets. These placeholders include, determination of the number of exam rooms, treatment rooms, existing building inventory, and the amount of air conditioning. They also include specific terminology that is peculiar to the European theater. When editing these titles, and descriptions the user should be careful to not change or delete the scripted entries.

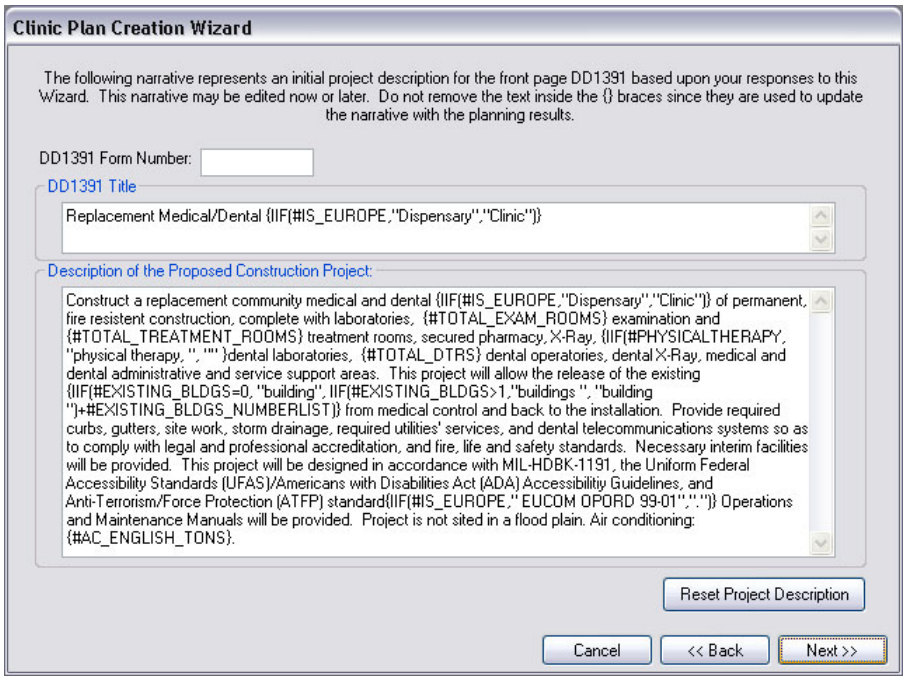

Figure 49: Create Plan Wizard DD1391 Description Screen

The final screen (number eight, see Figure 50) presents the user with a summary of key information that he or she entered during the wizard process. This is intended to allow the user one last check before the wizard begins to create the Clinic plan output. The user may press the **"Back"** button to make any changes as appropriate.

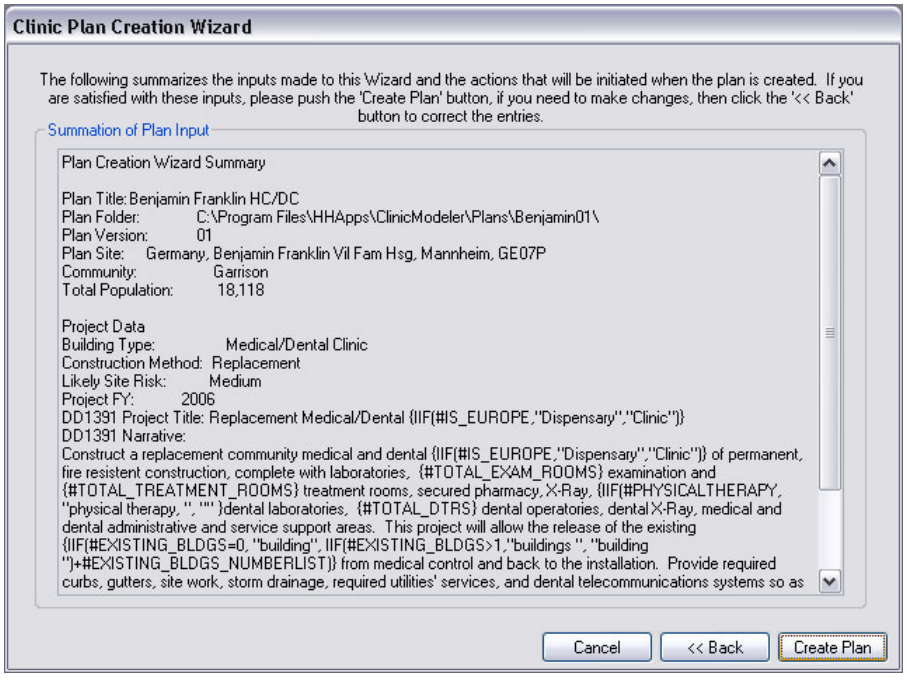

Figure 50: Create Plan Wizard Action Summary Screen

If the user is satisfied with the details shown in the summary, then pressing the button titled **"Create Plan"** will initiate the modeling process and create the plan in the directory indicated.

Pressing the **"Cancel"** button will abort the creation process before any data directories or files are created and lose any entries made in the wizard.

After the user presses the "Create Plan" button, the wizard will disappear and a series of progress windows will appear informing the user of the various stages of the process. During this phase the plan's necessary files are being created and placed in the directory where the user indicated.

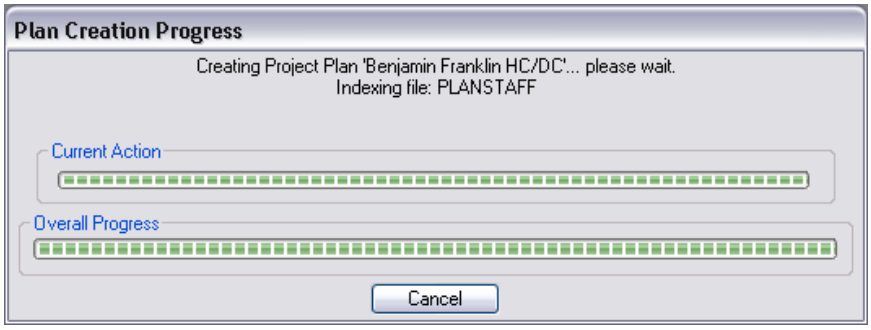

Figure 51: Plan creation progress window

When this stage is complete a plan explorer window will open and a second set of progress windows will be displayed. These windows will provide status as each phase of the plan is calculated.

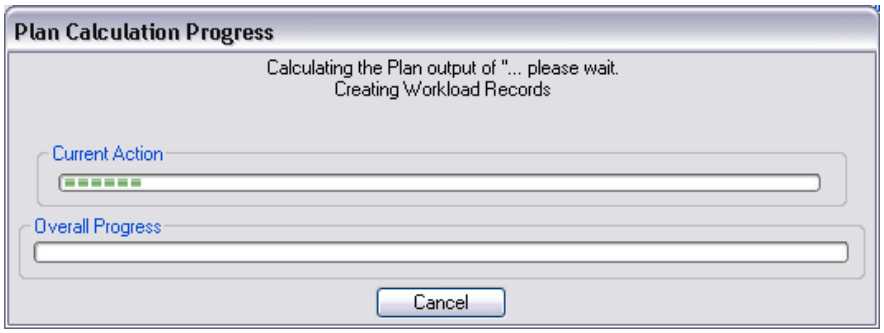

Figure 52: Plan recalculation progress window

Finally, the progress windows will close presenting the user with the open plan in a Plan Explorer window for continued editing.

If the creation process should fail, a window will popup informing the user of the failure.

Importing and Exporting

Overview

The Clinic Modeler application supports the ability to import and export complete clinic plans as a compressed zip file, or sections of the plan in various data formats.

The ability to export and import from zip files is provided as a means to save and transport completed plans or plans in progress. The process to import and export is enabled from the "File" menu on the application main shell window. By default, exported and imported files are managed from the "\Transfer" directory under the "ClinicModeler" directory where the main application was stored.

Export a Plan

To export an entire plan's set of data files either for record or for transport to another machine or user, the planner must first open the "Plan-Listing Window" and navigate to the desired plan that is to be exported. The ability to export a plan is also available when the plan is open in the "Plan Explorer" window. Exporting is available from the "File-Export-Plan to Zipped file" menu on the main shell window.

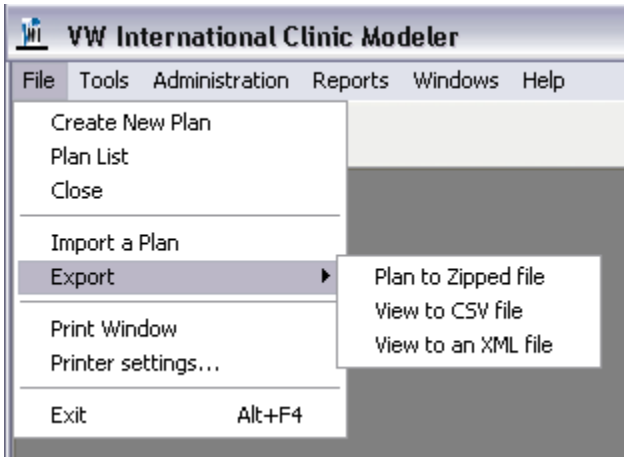

Figure 53: Exporting a plan menu option (once plan window is opened)

After selecting the export to zipped menu option, the user will be prompted to confirm that they want to perform an export of the current plan.

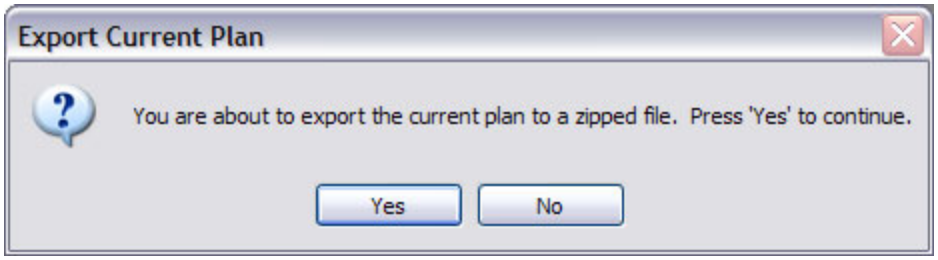

Figure 54: After selecting the menu item, you are asked to confirm that you wish to export

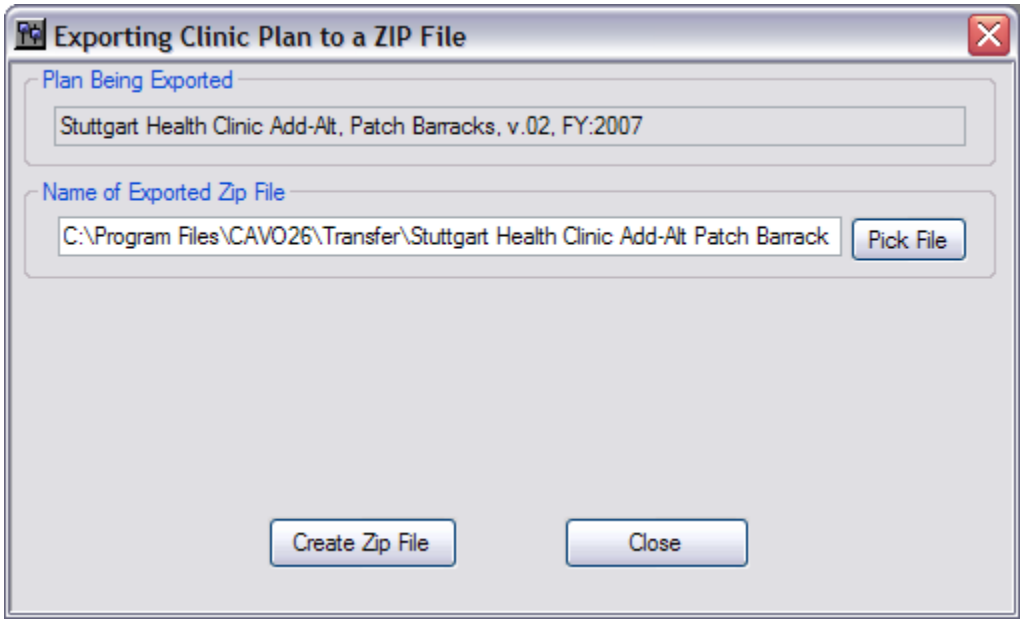

Figure 55: Name the zip file to which the plan will be exported

If the user presses "Yes" to continue in exporting a zip file, another window (see Figure 55) will appear asking the user for the directory and file name for the zipped plan. The software will default to exporting the plan to the "\Transfer" folder where the software was installed, however the user may change this folder by manually editing the path, or opening an explorer dialogue by pressing the "Pick File" button. The software will also construct a proposed file name consisting of the plan's name, installation name, the plan's version and fiscal year.

Once the user accepts the file name and directory where the zipped file will be saved by clicking on the "Create Zip File" button, the progress of the export process will be displayed. During this process, the user may interrupt and cancel the export by clicking on the "Cancel" button.

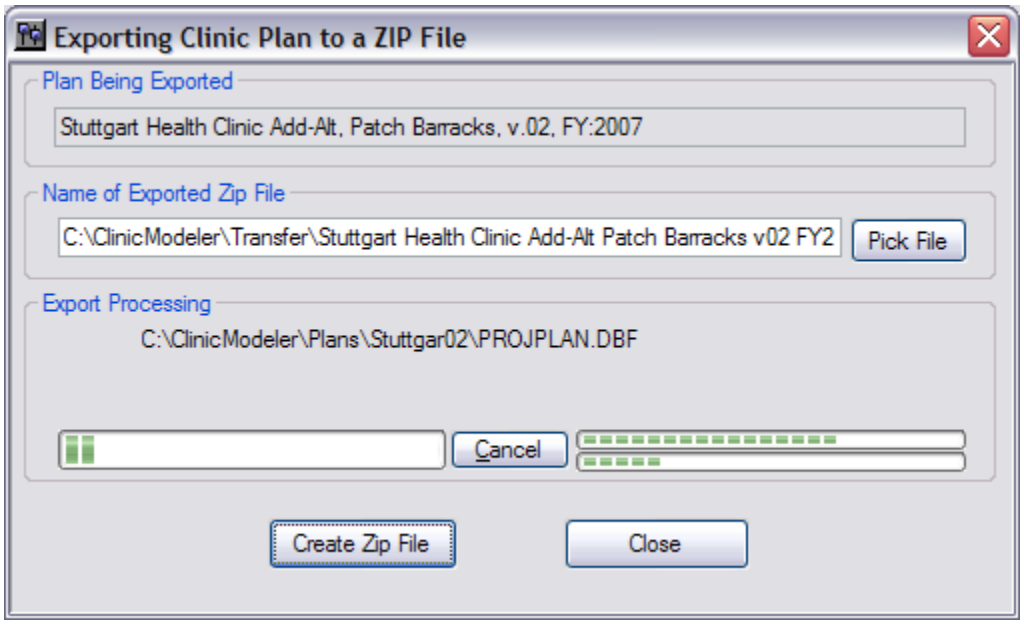

Figure 56: Export progress update

Upon successful completion of the export process, a window will pop-up informing the user that the plan has been completed.

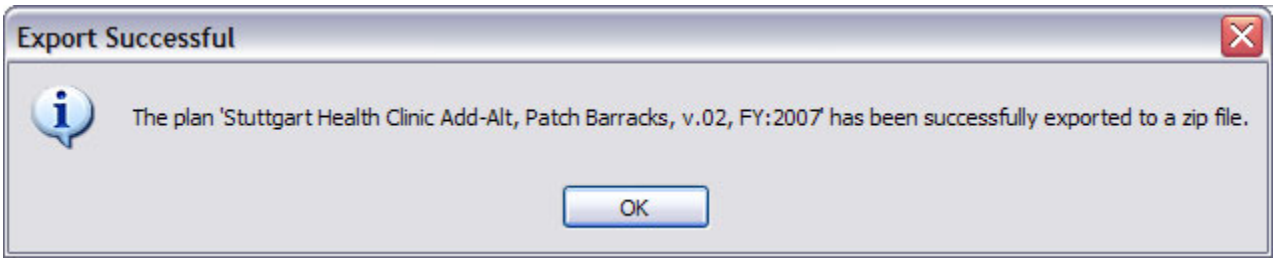

Figure 57: Export successful

Import a Plan

Once a plan has been exported to a compressed zip file, the user may import the file into their current listing of plans. This import ability enables users to exchange plans created by other planners, or on other machines. The following process may also be used to import plans, created and stored on a local client machine, into a shared network plan storage directory.

The import process is available from the main shell window's "File-Import a Plan" menu. A plan listing window or plan explorer does not need to be opened. When the user selects this menu option a window asking the user to confirm that they want to perform an import will appear.

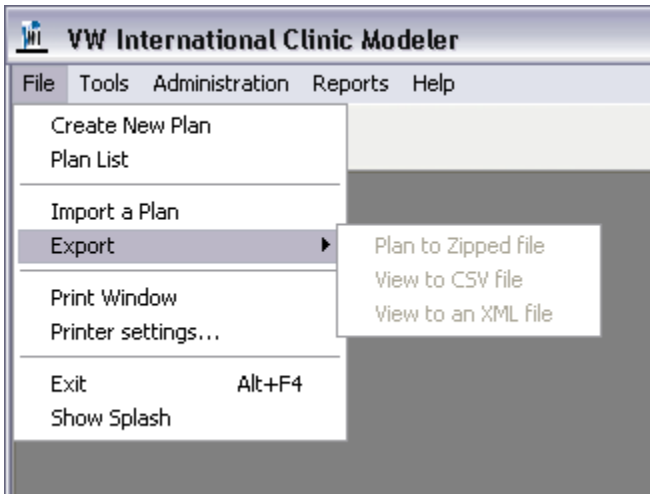

Figure 58: File menu showing that "Import a Plan" is always available

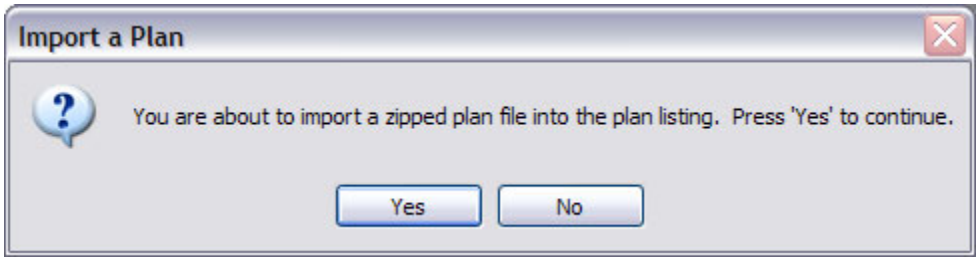

Figure 59: After selecting import menu option, you are asked to confirm.

Once the user confirms that they want to perform an import, a window asking the user to identify the zip file to import will appear. The user may either manually enter the path and file name, or press the "Select File" button to open a dialogue window for locating the file to import (see Figure 61). This dialogue window will default to the directory "\Transfer" located where the Clinic Modeler software was installed.

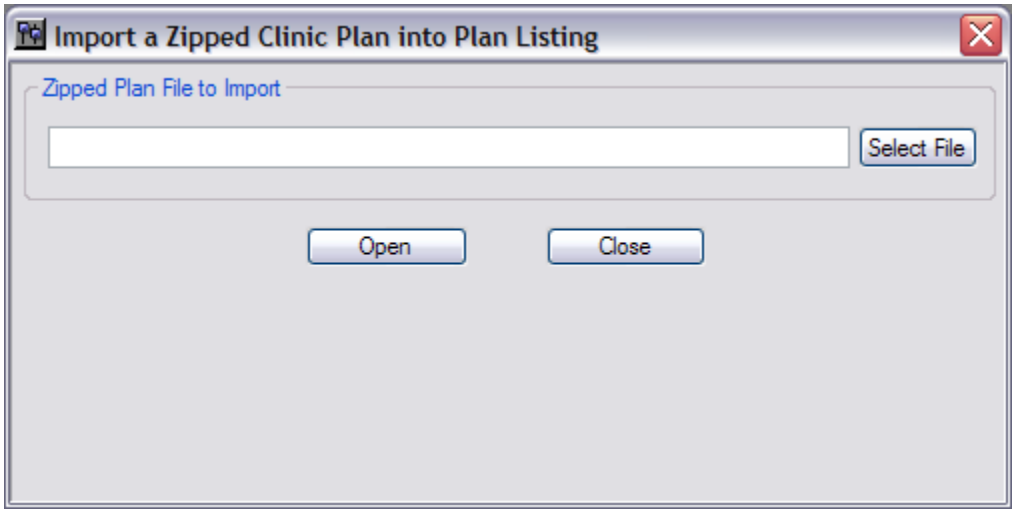

Figure 60: Select the zip file that you want to import

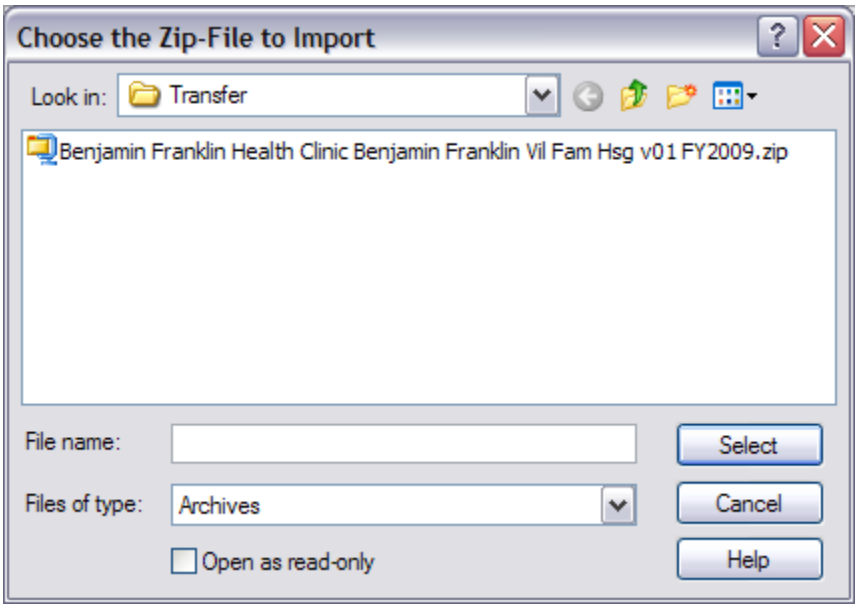

Figure 61: Defaults to the transfer folder of the Clinic Modeler

After the user selects the file, and then presses the "Open" button (see Figure 60), another window identifying the plan being imported will enable the user to change the plan's title, version and the folder to where the file will be imported (see Figure 62). After making any changes, the user should then press the "Import" button. The plan will then be imported showing a progress window that the user may cancel if necessary.

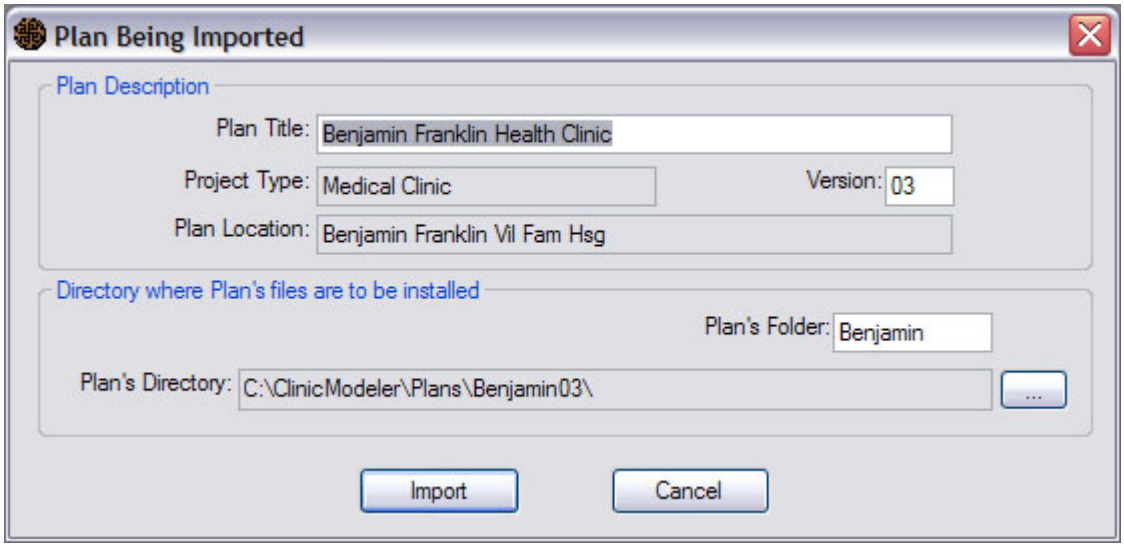

Figure 62: The user is asked to confirm the plan's title, version and folder, as well as the directory where the plan will be extracted

Upon successful completion of the import a window will inform the user that the plan was imported. The user may then open the plan-

listing window and select the newly imported plan for editing and exploring.

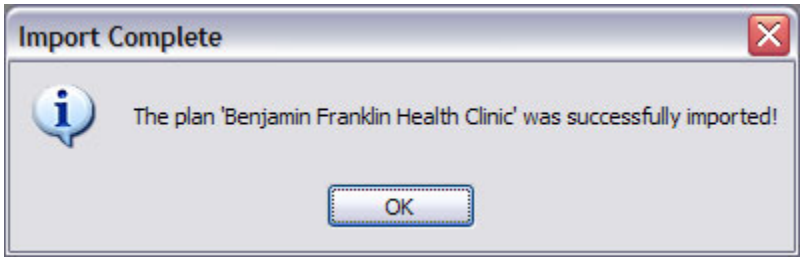

Figure 63: Successful import of the zipped plan, the user may now view it in their plan listing

Export Data Files

In addition to exporting files as a single compressed file, the application also enables exporting portions of the plan as different data formats. These formats enable the user to subsequently import the plan into other applications, e.g. Excel.

Overview

To perform an export to either XML or to CSV (comma delimited) either the plan listing or the plan explorer window must be open. When the plan explorer is exported, only the file for the currently displayed view will be exported, e.g. if the Population view is displayed then an exported file for the "Plan Population" will be created.

To CSV

The CSV file format is a comma-delimited format that is readily opened by MS Excel. This file format enables the planner to create ad-hoc charts or calculations from the displayed information.

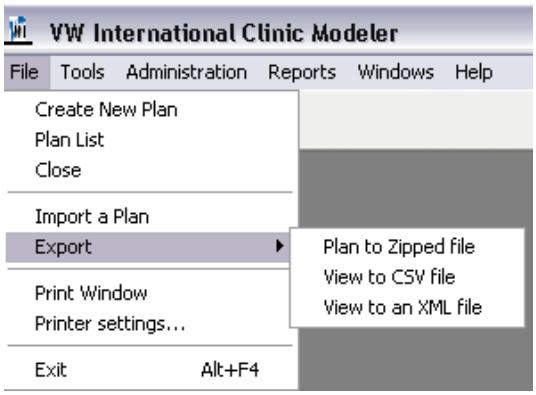

Figure 64: Exporting a plan view to another file format.

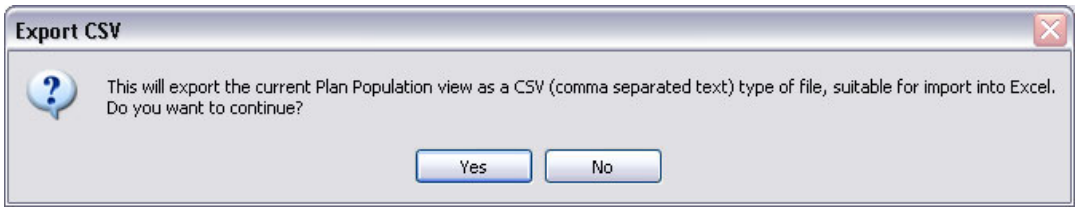

Figure 65: Confirm export of Plan View to CSV file

Exporting to CSV is a simple process available from the "File-Export" menu. Once the user selects "Export to CSV" they will be prompted to confirm that they want to export the file to CSV, see Figure 65. If they respond "Yes", then a save file dialogue will be displayed prompting the user for a file name and the directory to where the file is to be exported. By default the export directory is the "\Transfer" folder where the Clinic Modeler application was installed, see Figure 66.

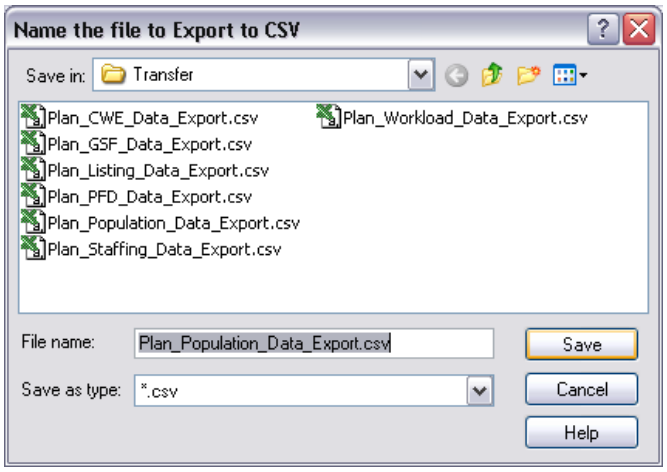

Figure 66: Name file to export to CSV dialogue

After clicking the "Save" button on the file name to export dialogue, the file will immediately be created. A progress window will be displayed showing the progress, when the export is complete the progress window will disappear.

To XML

The XML file format is a specially formatted text file that may be viewed in MS Explorer, and facilitates transfer of the plan outputs to another system.

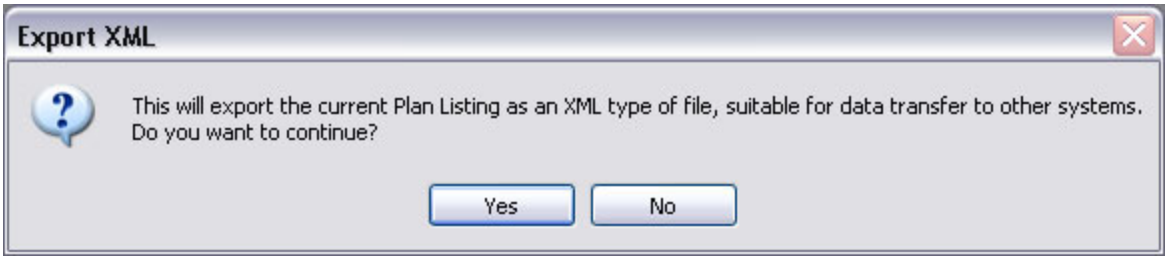

Figure 67: Confirm export of Plan Listing to XML file

Exporting to XML is a simple process available from the "File-Export" menu. Once the user selects "Export to XML" they will be prompted to confirm that they want to export the file to XML, see Figure 65. If they respond "Yes", then a save file dialogue will be displayed prompting the user for a file name and the directory to where the file is to be exported. By default the export directory is the "\Transfer" folder where the Clinic Modeler application was installed, see Figure 66.

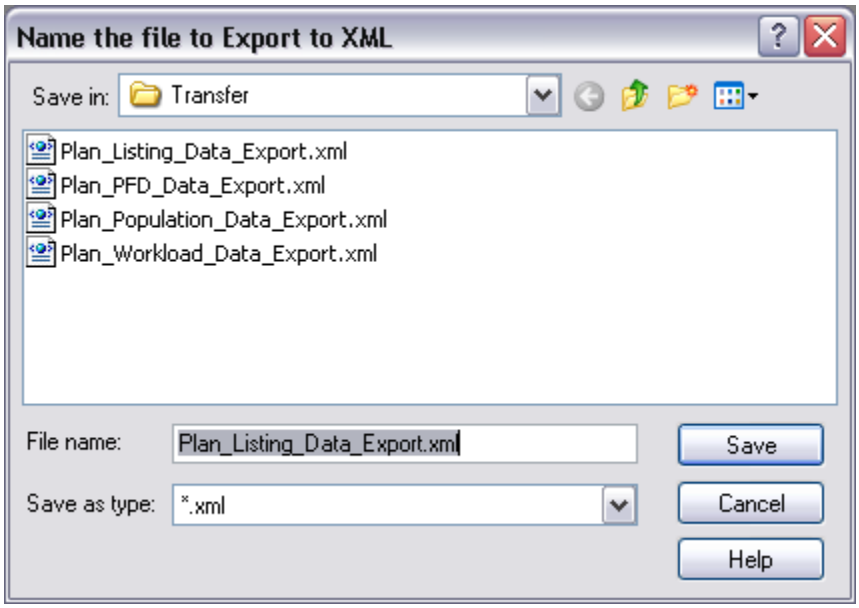

Figure 68: Name file to export to XML dialogue

After clicking the "Save" button on the file name to export dialogue, the file will immediately be created. A progress window will be displayed showing the progress, when the export is complete the progress window will disappear.

Editing a Plan

Overview

One major enhancement over the previous clinic modeling software of the 1980 version is the ability to edit the interim stage assumptions and

outputs of the modeling process, along with the ability to edit the details of the space plan. Performing the edits is done using a "Plan Explorer" window.

To access a plan for editing, you must first select the plan from the **"Plan Listing"** window, shown in Figure 69. This plan-listing window is available from the main menu **"File-Plan List"**.

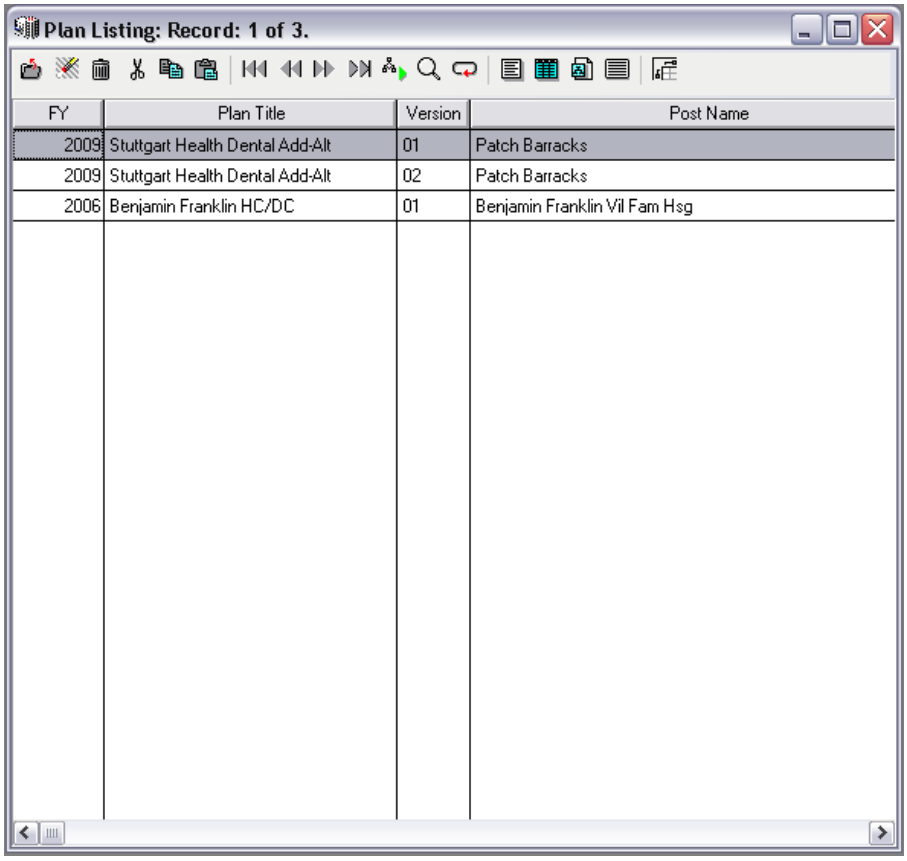

Figure 69: Plan Listing and selection Window

The Plan Listing window allows viewing the basic descriptive data provided by the user when the plan was first created in the wizard. When viewed in the "form" mode, this window contains several tabs of related data.

The top section of the window allows editing the title of the plan, the version number, the organizational name, the project description and the Agency code (typically U.S. Army). Edits to these fields will not result in any recalculations to the plan although changes will be reflected in reports. The user may also select a different directory folder for the location of the plan if the plan directory has been manually moved.

Tip: *Manually relocating existing files to a network drive will require resetting the plan directories to reflect the new plan path.*

The other fields at the top of this screen: Construction Type, Facility Type and FY Start, any changes will have an impact on the plan's output calculations. The status of the plan for editing is also displayed. This consists of two read only items: a checkbox indicating the plan is currently locked and a display of the user logon that has the plan locked.

When a plan is open for editing, the software will toggle the checkbox indicating the plan is locked. A second user (or the same user) may still open the plan to see results but will not be able to make any edits.

Tip: *In the event of an application or computer crash, the indicator for the lock status may erroneously indicate that the plan is locked. For this reason, a button is provided to "Force an Unlock" of the plan. If the status is in error, the lock indicator will be cleared. However, if the plan does indeed appear to be open by another user, the application will prompt to confirm that you want to clear this lock.* ***Two users making changes to the same plan would have unpredictable results.***

The lower portion of the plan list window shows several tabs of related information:

- Location
- Background
- Buildings
- Organizations
- DD1391
- Creation-Modification

The **"Location"** tab allows the user to make changes to the proposed location of the project and to the existing site. The community type as well as the indicator of remoteness may also be edited. Changes made on this tab will NOT result in plan recalculations with the exception of the area cost factor adjustments for the CWE. Population and market penetration rates will not be adjusted based on new site selections. To generate a new set of population projections, the wizard must be used.

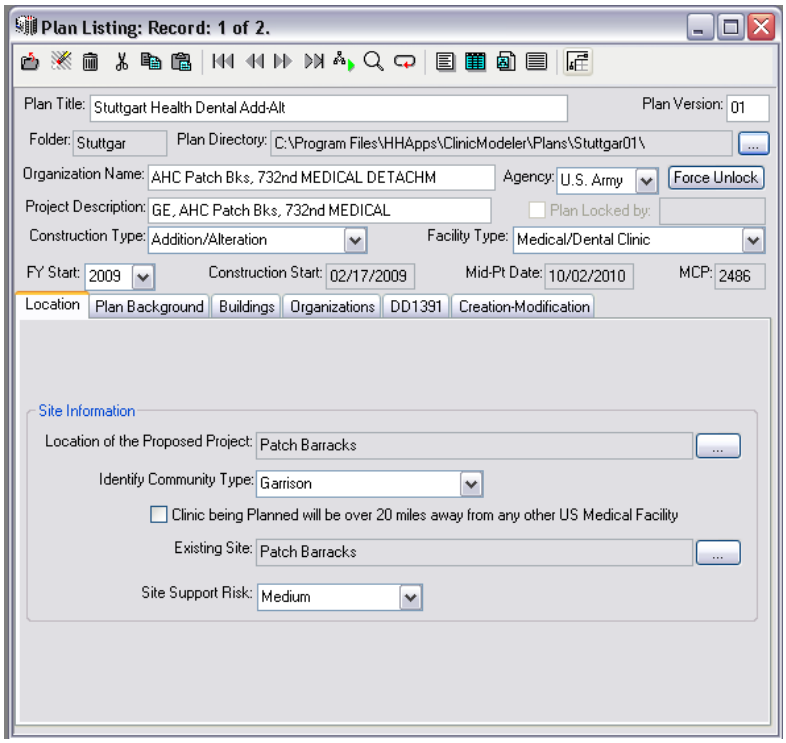

Figure 70: Plan listing window, location tab

The plan **"Background"** tab allows the user to continue to record any key items of information regarding the plan. The user may enter up to 64,000 characters of information on this tab.

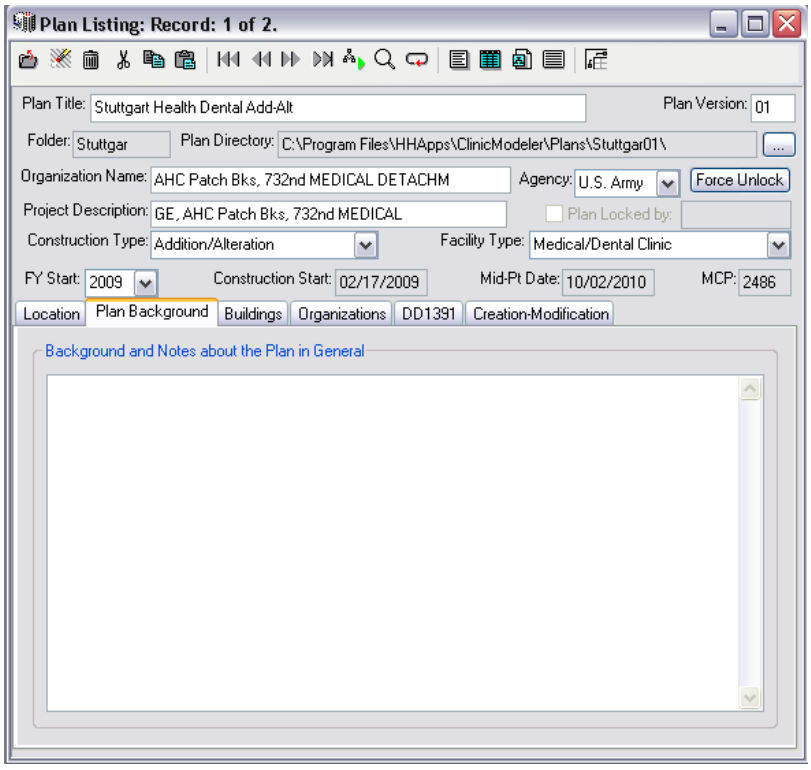

Figure 71: Plan list, background tab

The **"Buildings"** tab allows the user to record any number of buildings affiliated with this plan. However, only one building may be identified as being used in the alteration portion of an addition-alteration project. The ability to identify a building for alteration is only available if the project has been identified as an "Addition-Alteration". All buildings identified are assumed to be located at the proposed plan's installation.

Tip: *Changes to the addition-alteration building and its GSF will affect the CWE estimate. Other non-addition/alteration building information is only recorded for information purposes.*

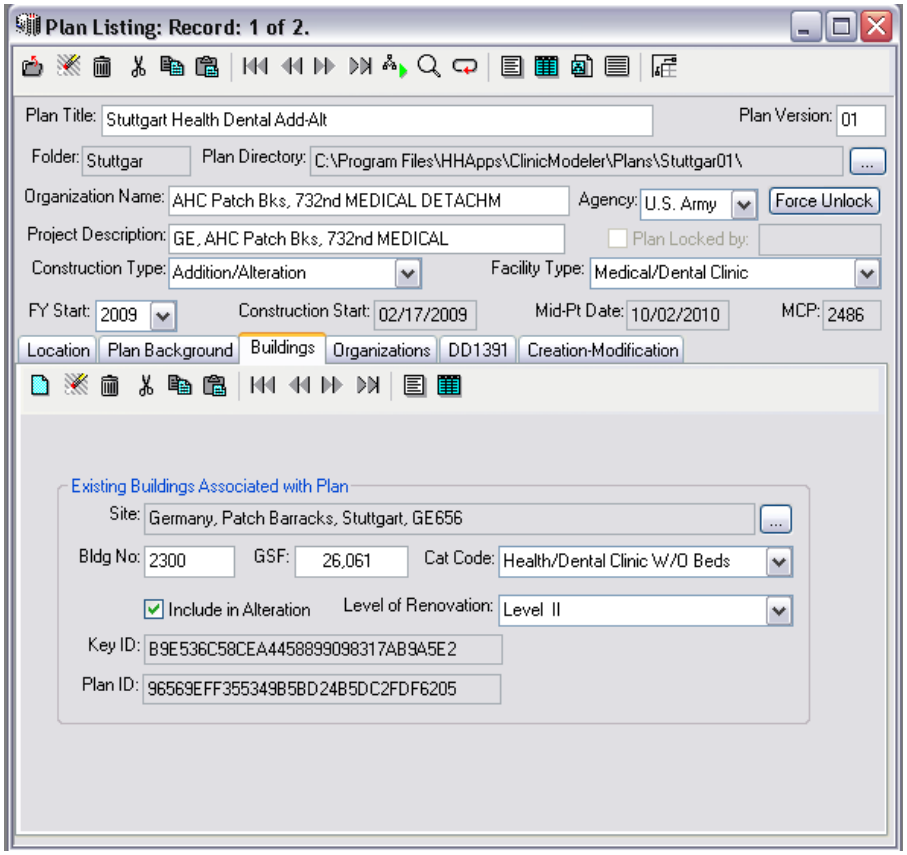

Figure 72: Plan list, buildings tab

The **"Organizations"** tab allows the user to record numerous organizational identifies affiliated with the plan. Entries made on this tab are for information purposes only and will not effect plan calculations.

The **"DD1391"** tab allows the user to edit information that is displayed in the DD1391 report. These entries do not effect plan calculations.

The final tab is read only and provided information about who created the plan and who last modified the plan along with the dates of creation and modification.

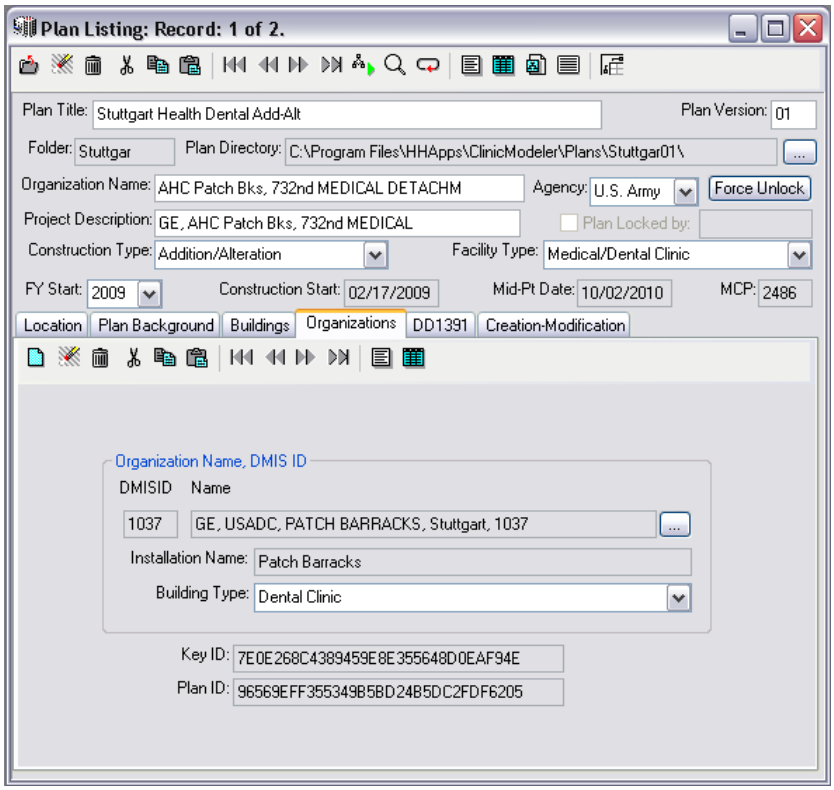

Figure 73: Plan list, organizations tab

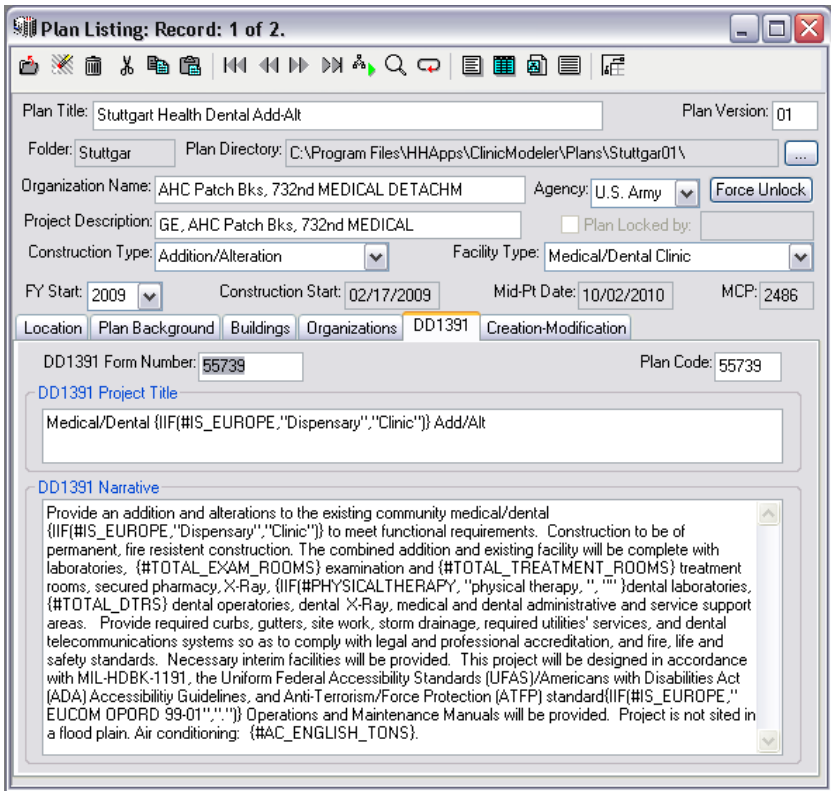

Figure 74: Plan list, DD1391 tab

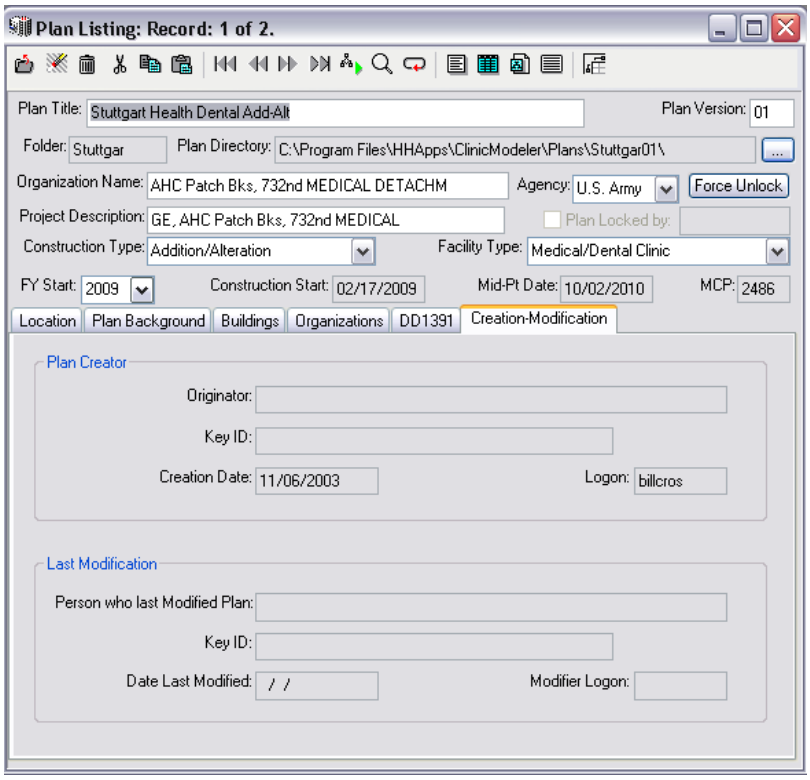

Figure 75: Plan list, Creation-Modification tab

The "Plan Listing" window provides editable access to some of the basic information items of the plan. These items include: the plan's title, the directory folder where the plan is located, plan background information, the DD1391 narrative and title, organizational identifications, and existing building information.

However, not all of the information displayed on the "Plan Listing" window may be edited through that interface. Several of the items are only editable from within the **"Plan Explorer"**. This is because these other items have a direct impact on the modeling results, and changes to them will affect the output results of the clinic modeler.

To perform edits affecting the plan's output or to just review the plan's outputs, click on the button  **"Plan Explorer"** from the **"Plan Listing"** window's toolbar, or from the menu **"File-Plan Explorer"**.

Plan Explorer

The plan explorer opens a single plan in a tree-view interface. The tree-view interface allows expansion of certain sections, displaying summary information or presenting the information in various organizational displays. The tree-view (see Figure 76), on the left, provides access to the major sections of the plan's interim assumptions and outputs. These sections are organized in order by their position in

the estimation process (to read more about the process, refer to the section titled **"Concept Model"**):

- **Population and Market Penetration.** This allows editing the population assumptions for the proposed clinic. This section is critical to the rest of the modeling outputs; changes here will essentially create an entirely new plan.
- **Workload.** This allows editing the assumed level of workload for each section of the clinic. Workload is presented by MEPRS3 Code identifying all the available services for a typical clinic. Here the user may choose which service to add to the clinic plan, and the anticipated level of workload that service will generate. Changes here will impact staffing, size and cost estimates.
- **Clinic Staffing.** This allows editing the staffing level for each departmental service within the proposed clinic. Each service is still organized by MEPRS3 code, and staffing is identified as: provider, support or administrative for each service. The user may change the number of providers, support or administration for each MEPRS service. Changes here will impact the size and cost estimates.
- **Program For Design (PFD).** This section is perhaps the most robust in that it allows full editing of the details of a complete SEPS compatible PFD. Rooms may be added, space criteria reviewed, room equipment contents reviewed (but not individually edited). Departments may be added at this level but it is not recommended. Instead the user should return to the workload section and select the respective MEPRS3 code for the department to appear in the PFD. Changes to the PFD will impact the GSF size and cost estimates.

Warning: *The equipment list presented reflects the DOD guidance but is not a plan's individual equipment requirements. Therefore changing quantities or equipment types will affect all plans' equipment lists and not just the current plan's.*

- **Gross Square Feet (GSF).** This allows editing the factors used to estimate the Gross Square Footage from the total net square feet of the clinic. For projects identified as addition/alteration, this also allows changing assumptions about the amount of GSF that will be available for the alteration portion of the clinic. Changes here will impact the cost estimates and will be reflected in the PFD reports.
- **Cost Estimate.** This is the last section, and it allows final edit of the current working estimate (CWE) for the project. The CWE follows the model of a DD1391 and allows the user to edit the line item factors and total for each item of cost.

Building, primary facility, supporting facility and contract cost sub-totals are presented. Additionally, line item factors for design, transition and initial outfitting are also included. The line items for medical category E & F equipment and the initial outfitting are factor based. However, reports for equipment will provide more details and greater accuracy in costs since they are based on specific PFD room equipment requirements.

Tree-view Behavior

The treeview allows expanding each of the main levels to see a summary of information for that particular level. This allows the user to view information about other levels while working on the edit screen. After recalculating the plan, it may be necessary to collapse then re-expand the treeview to see the new summary values.

Following are examples of the types of summary data that is available by expanding each level of the treeview.

- Population values by beneficiary category
- Workload by MEPRS for those MEPRS codes included in the plan.
- Staffing totals by MEPRS with details about providers, support and administration.

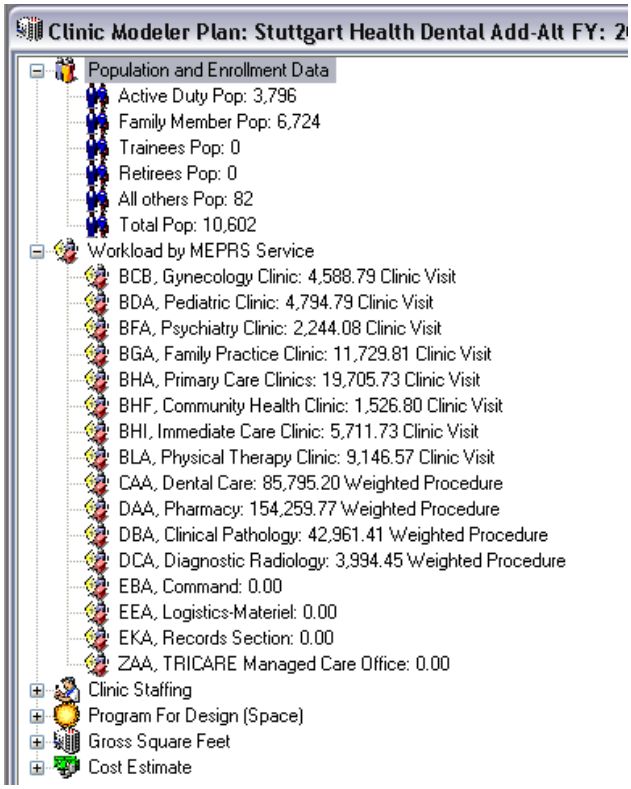

Figure 76: Treeview interface of the plan explorer window, showing population and workload

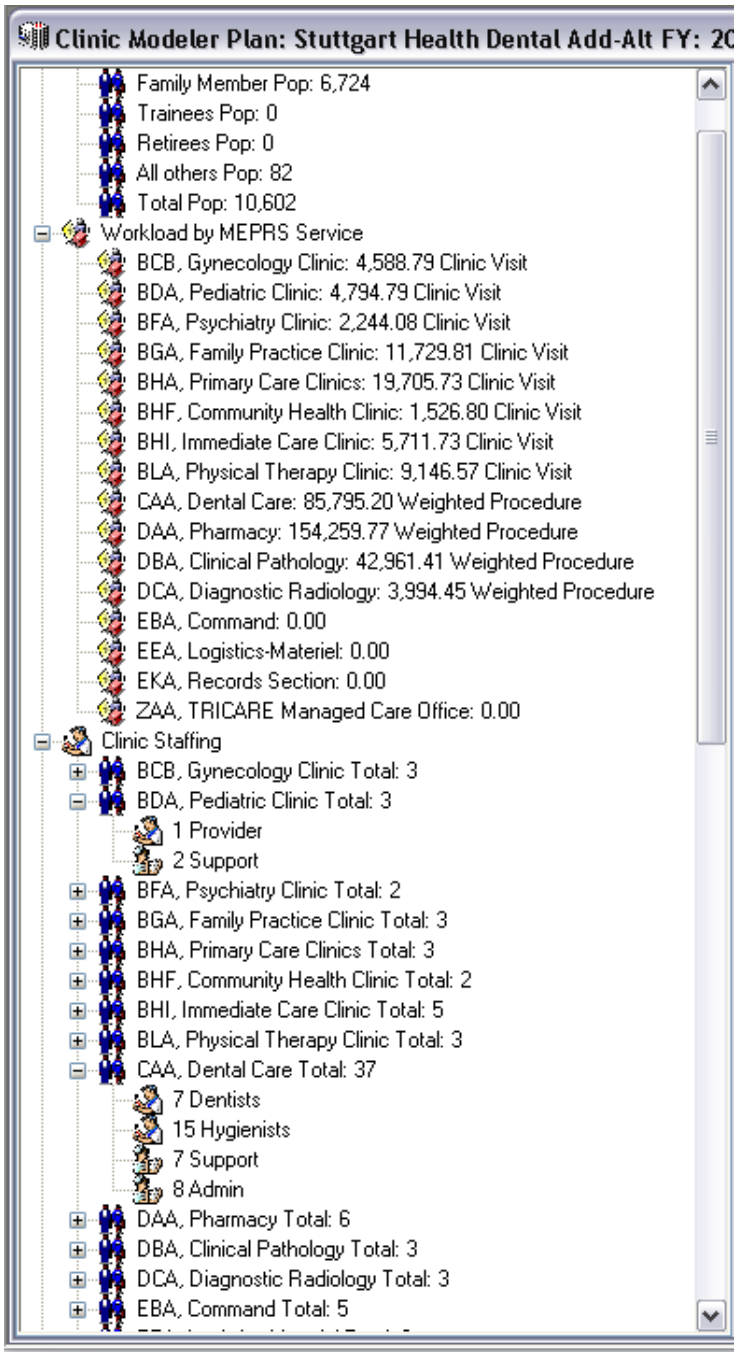

Figure 77: Treeview expansion showing details of clinic staffing

- PFD departmental Net Square Footage totals, along with total occupants.
- GSF summary by major factor allowance
- Cost estimates, showing line item totals for key portions of the DD1391.

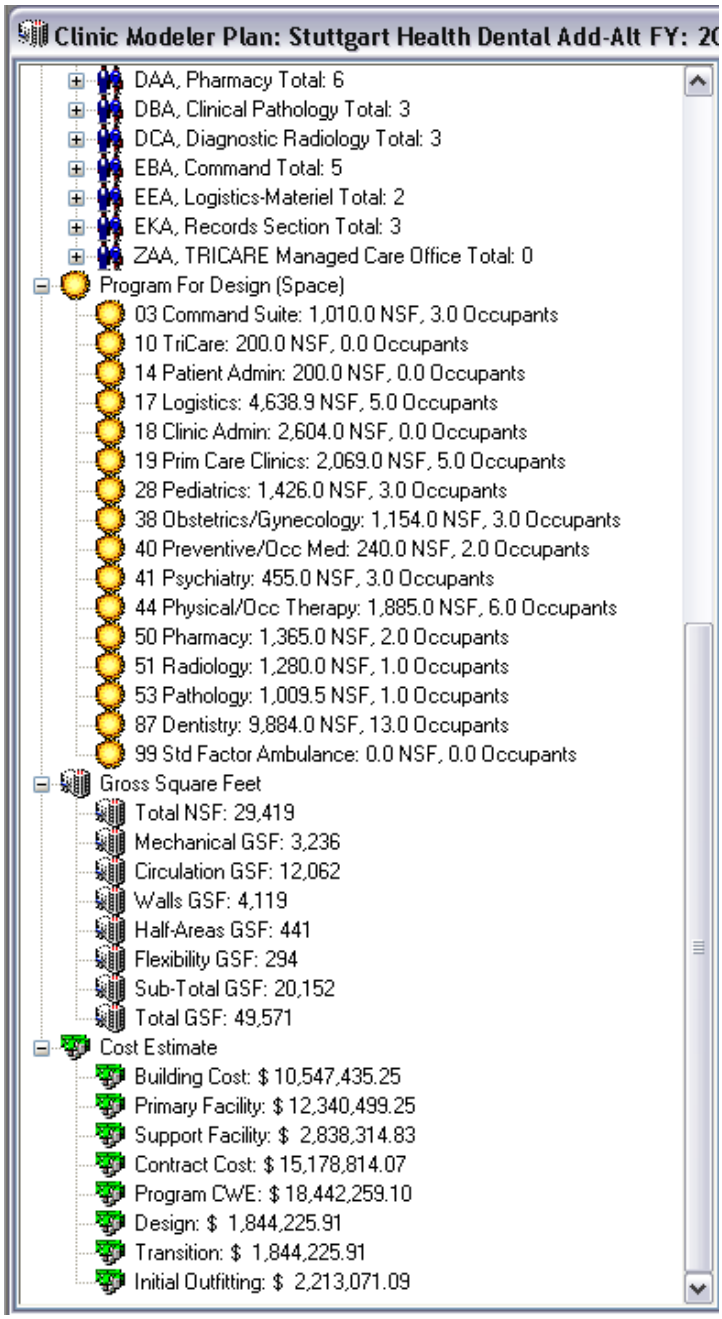

Figure 78: Treeview showing PFD, GSF and Cost summaries

Edit Behavior

Editing the respective sectional views does not immediately result in changes to the dependent sections' outputs. Rather, the modeling software does not perform recalculations until the user clicks on and highlights another section of the tree-view, or until they click on the **"Recalculate"** button of the current view window.

Note: *Closing the* ***"Plan Explorer"*** *window after making a series of changes, may result in the user being told to wait as recalculations are performed based upon their latest edits.*

Population and Market Penetration Edit View

This view displays the following population related information:

- **Population supported numbers, by beneficiary category.** This is typically the mission assigned numbers, or the DEERs population numbers assigned to the proposed clinic.
- **Level of market penetration, by beneficiary category.** This represents the respective numbers of actual users who are likely to enter the building within a one-year period. Edits made by the user, is through control of the assumed *market penetration rate*, and through the resultant user numbers.

Warning: *Making changes to the population numbers may result in a completely new clinic plan, resulting in the loss of any user changes to intermediate output assumptions. Therefore caution should be taken in making major changes to the population view prior to saving the previous version of the plan output.*

The user has several ways to change the impact of population supported. The first way is to adjust the basic input values for each beneficiary category. The population numbers are only inputs to the next step of calculating the estimate of the actual number of patients that will be seen by the facility (the number of users). This ratio of unique patients seen to the total population supported is called the "market penetration".

The market penetration is estimated as a whole for the entire population, however the user is allowed to change the market penetration for each category of beneficiary. This permits the planner to reflect the market strategy and guidance of the medical commander.

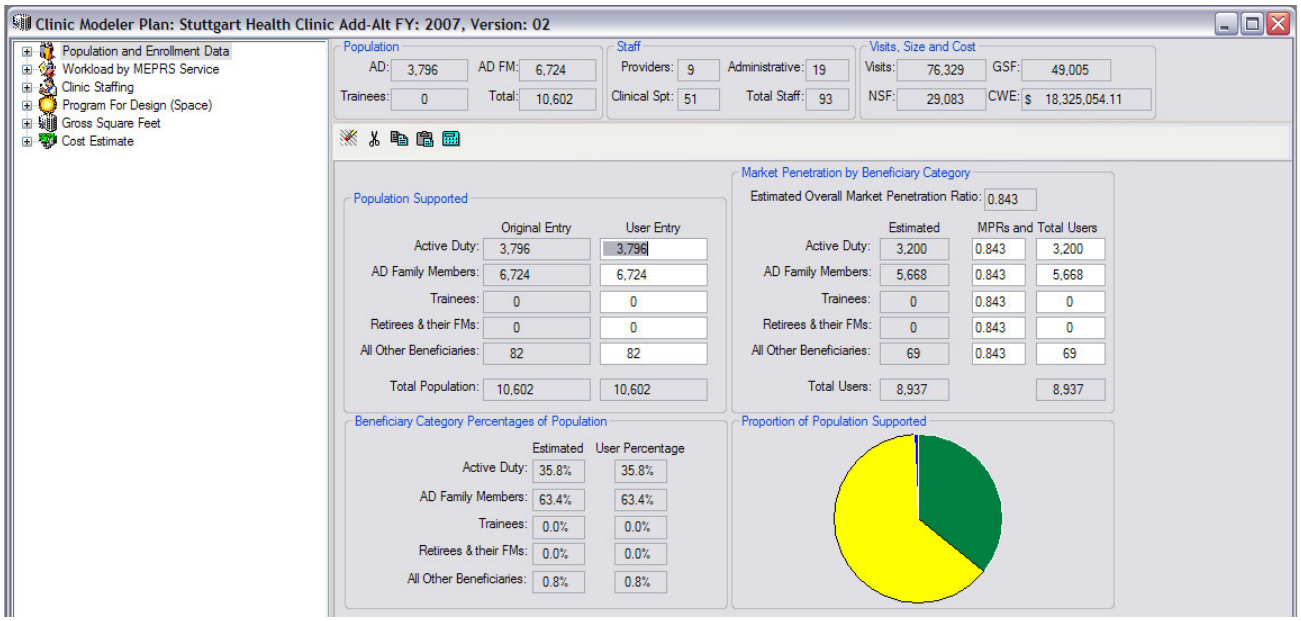

Figure 79: Plan Explorer showing Population information

Utilization and Workload Edit View

This view (Figure 80) displays the following utilization and workload related information:

- **MEPRS3 Utilization Rates.** This is the population wide utilization rate predicted for the particular MEPRS service code being displayed. These utilization rates are estimated based upon historical data available for the facility, or geographic region. The user may edit the assumed utilization rate for each MEPRS service.
- **Workload Outputs, by MEPRS3 level service codes.** This workload is presented in various workload units depending upon the MEPRS service being presented, e.g. visits for clinics, weighted procedures for radiology and laboratory, scripts for pharmacy, etc. The workload estimated is the result of the predicted market penetration numbers determined in the previous "Population" view, and the MEPRS utilization rate.

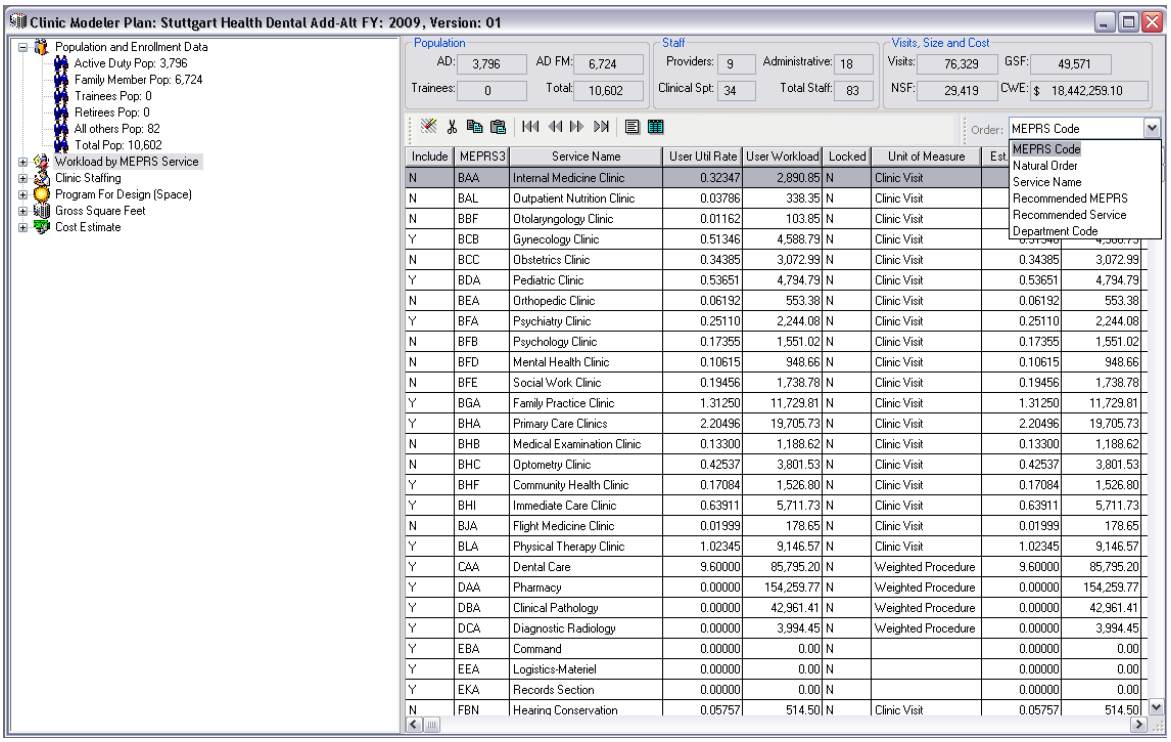

Figure 80: Plan Explorer showing Workload in table format

Also shown on this screen is the type of workload that applies to each MEPRS service, i.e. clinic visit or weighted procedures. Background information on how the estimated workload was derived is shown, this includes the latest year from which data was gathered, and whether the average was based upon three (3) years of data. Ancillary workload is estimated using a derived regression line based on past workload information.

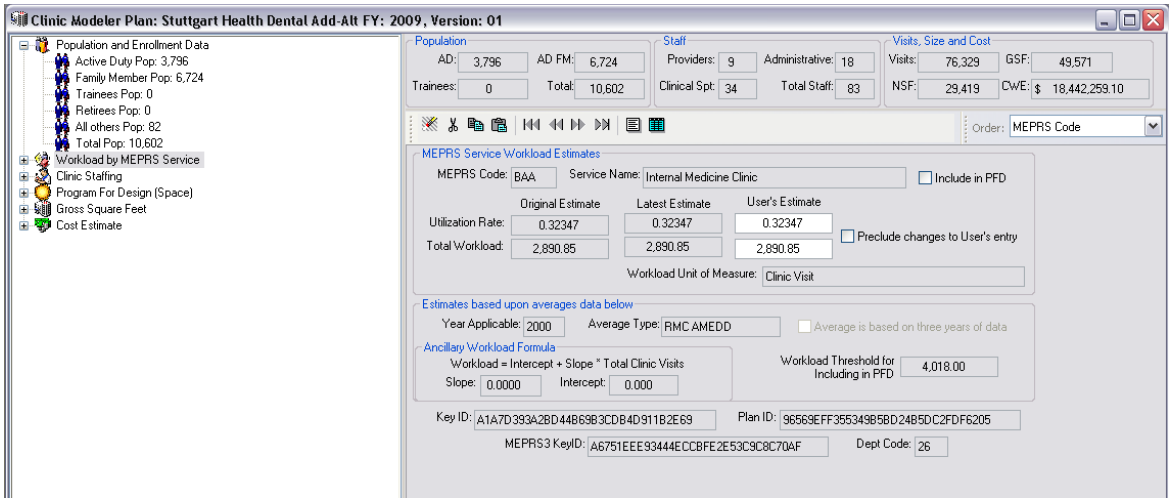

Figure 81: Workload in form view

- **Include Service flag.** This checkbox allows the user to include or exclude a particular service from the proposed clinic

plan. Excluding the MEPRS service will preclude staffing from being estimated, and remove that service from the space PFD. Similarly, the user may choose to include that service in the proposed plan causing staffing and space to subsequently be estimated for the indicated workload. Services are typically excluded from the initial plan because the indicated workload numbers do not indicate a need, however, the user may recognize that assignment of service staff may be due to situations of mission or remoteness and not entirely driven purely by population demand.

Staffing Edit View

The staffing edit view (Figure 82) permits the user to edit the assumed level of staffing for each included MEPRS service of the clinic. For each service level the user may edit the following staffing information.

- **Number of staff members.** The user may enter the total number of staff members proposed to be assigned for the service indicated. These totals must be defined as to whether or not the staff number is considered "provider", "clinical support" or "administrative".

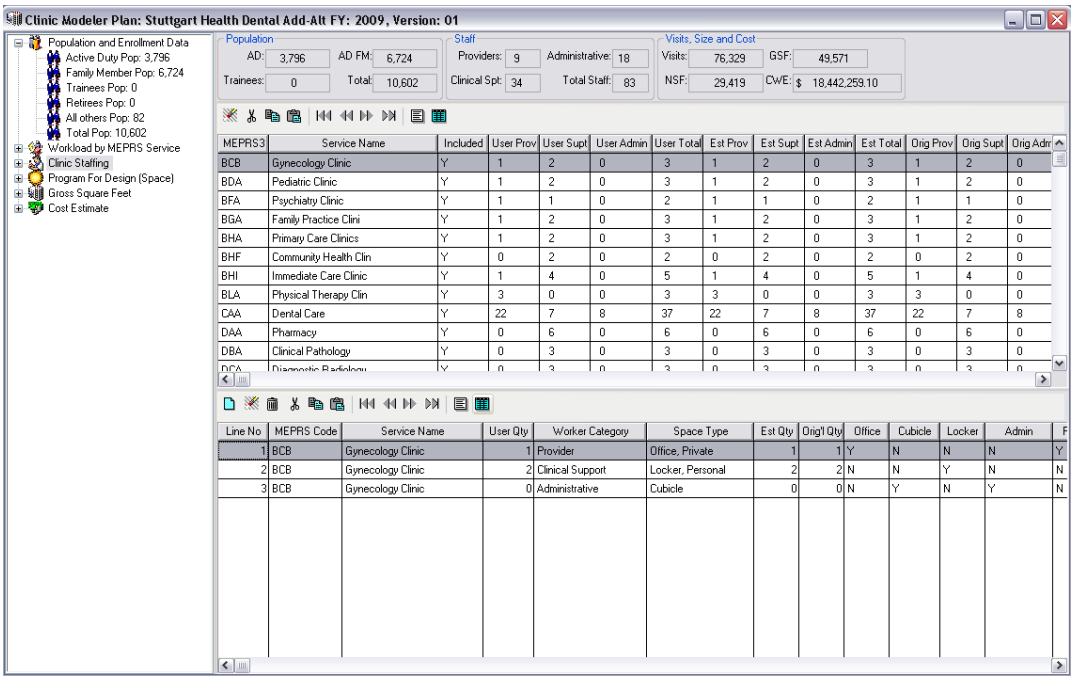

Figure 82: Plan Explorer showing Clinic Staffing

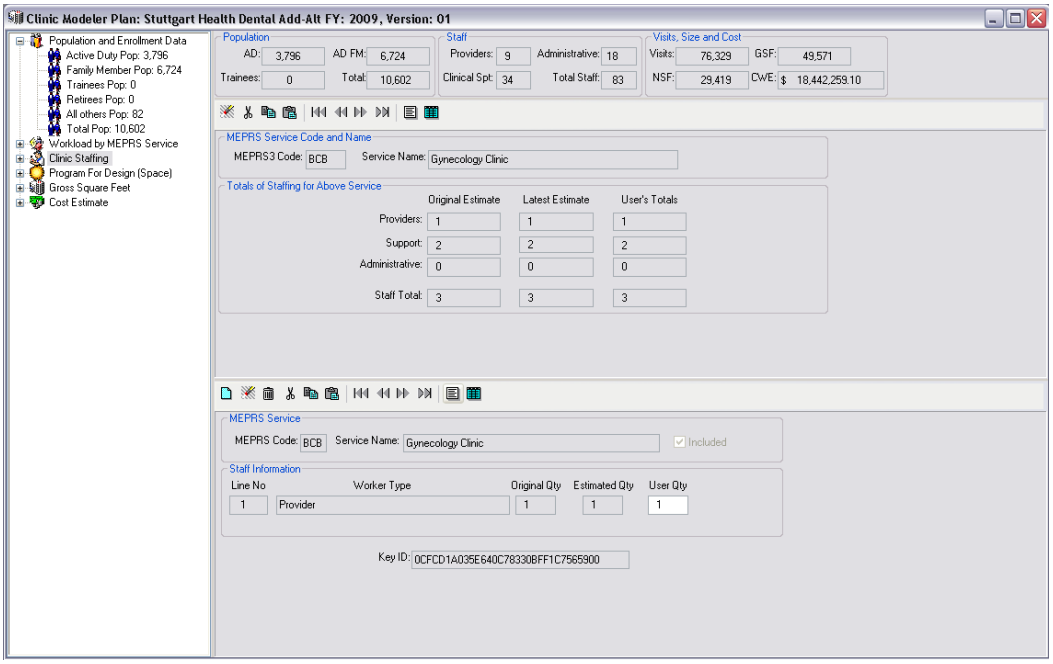

Figure 83: Staffing showing form views for both summary and details

Program For Design Edit View

The Program For Design view permits the user to completely edit and develop a SEPS compatible PFD. This view is organized by department. The planner may navigate through the departments of the generated PFD using the upper navigation tool bar. The planner can navigate through the individual rooms of each department using the toolbar located on the **"Rooms"** tab. The upper portion of the view allows the user to edit the department's name, and to also indicate if this department should be included or not in the PFD edit view and reports. This upper section also provides a NSF total of the PFD currently being worked. This NSF number is not continuously updated due to the delays this would cause while editing, so a button (indicated as a "gear") allows the user to force a NSF tally at any time in the editing process.

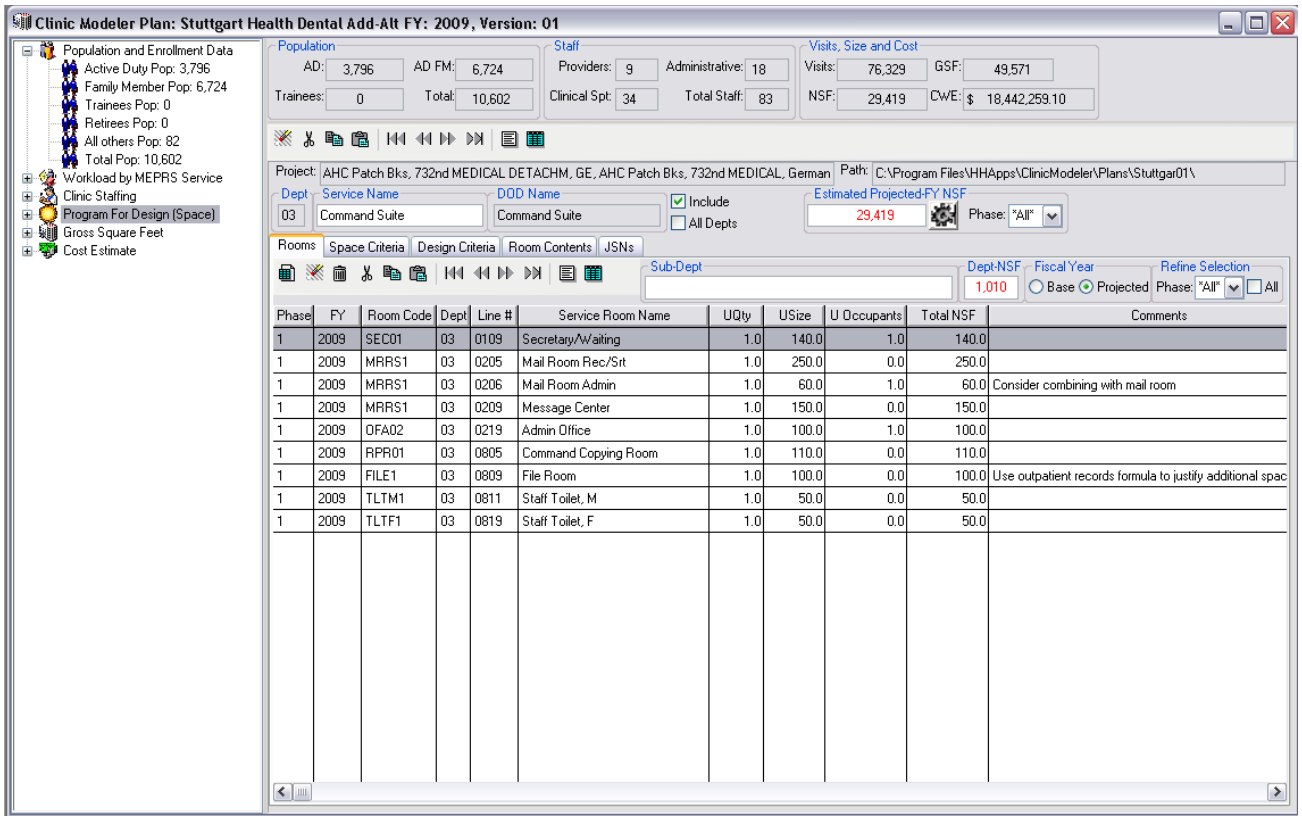

Figure 84: Plan Explorer showing Program For Design room listing edit tab

The lower portion of this view provides editable details about the department and the rooms within it. There are several tabs permitting the user to edit and view the following information:

- **Rooms within the current department.** This is the main tab for working with the PFD. It has its own navigational toolbar allowing the user to move through the room listing, and to toggle between a forms view or the default browse view. This tab also displays along the toolbar, the sub-department's name, the current total of NSF for this department (this is automatically updated as the user makes changes). This tab also permits filtering the rooms by fiscal year, phase, and user quantities (checking the "All" checkbox will display the rooms with zero quantities). The toolbar also permits the addition of new rooms and room types to the current departmental listing. Clicking on the "Add" icon of the toolbar will open a room selection popup window (Figure 85). This popup window permits selecting multiple rooms at a time, and adding them to the department in a single step. As each room is selected the original PFD line number will be shown in the grey box toward the bottom of the pop-up.

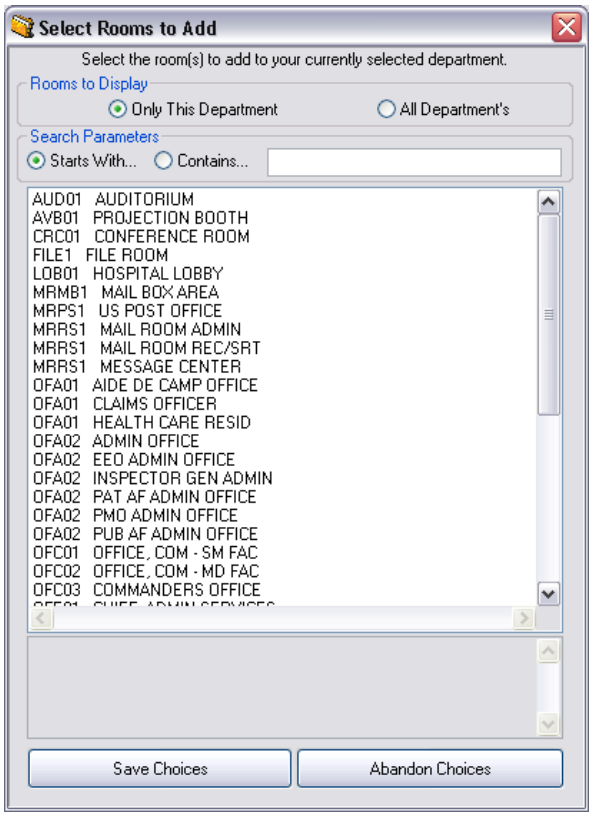

Figure 85: Select rooms to add to PFD

- **Space Criteria Tab.** This tab is synchronized to the room currently selected on the Rooms tab and displays the SEPS criteria for that room. There may be one or more records of SEPS criteria for any particular room, (see Figure 86).
- **Design Criteria Tab.** This tab is also synchronized to the currently selected room displayed on the room tab. It initially displays the design specifications for the room selected, however, it also permits the user to move off that record and to browse the design specifications for all types of rooms, (see Figure 87).
- **The Room Contents tab.** This tab displays the room contents of the currently selected room on the Rooms tab. The **"Room Contents"** tab permits viewing the proposed rooms contents of the three military services as desired. This content listing is generated based upon the SEPS criteria listing of room contents, (see Figure 88).

Warning: *This listing is not specific to the individual room of the current PFD displayed, but is rather a global criteria equipment listing. Therefore, any changes the user makes to this room contents listing such as changing quantities or JSNs, will be applied to all future PFDs and will effect all subsequently generated equipment related reports.*

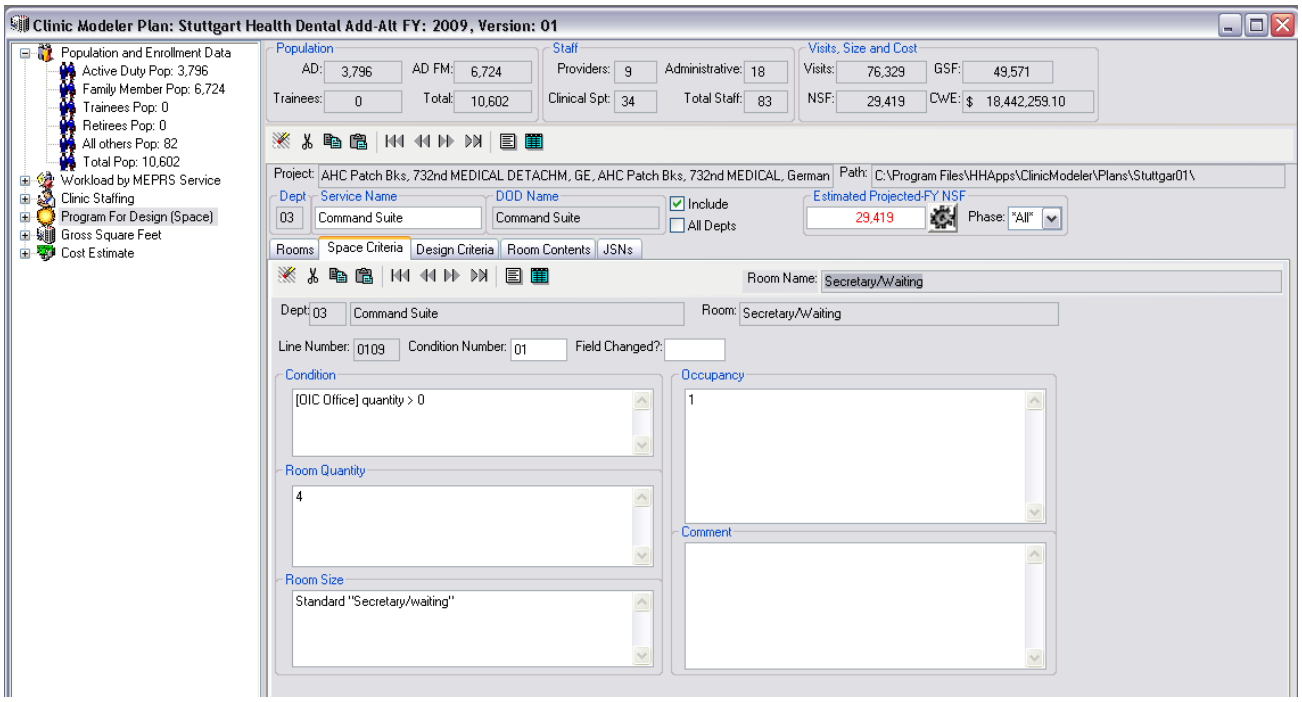

Figure 86: Plan Explorer showing Program For Design space criteria reference tab

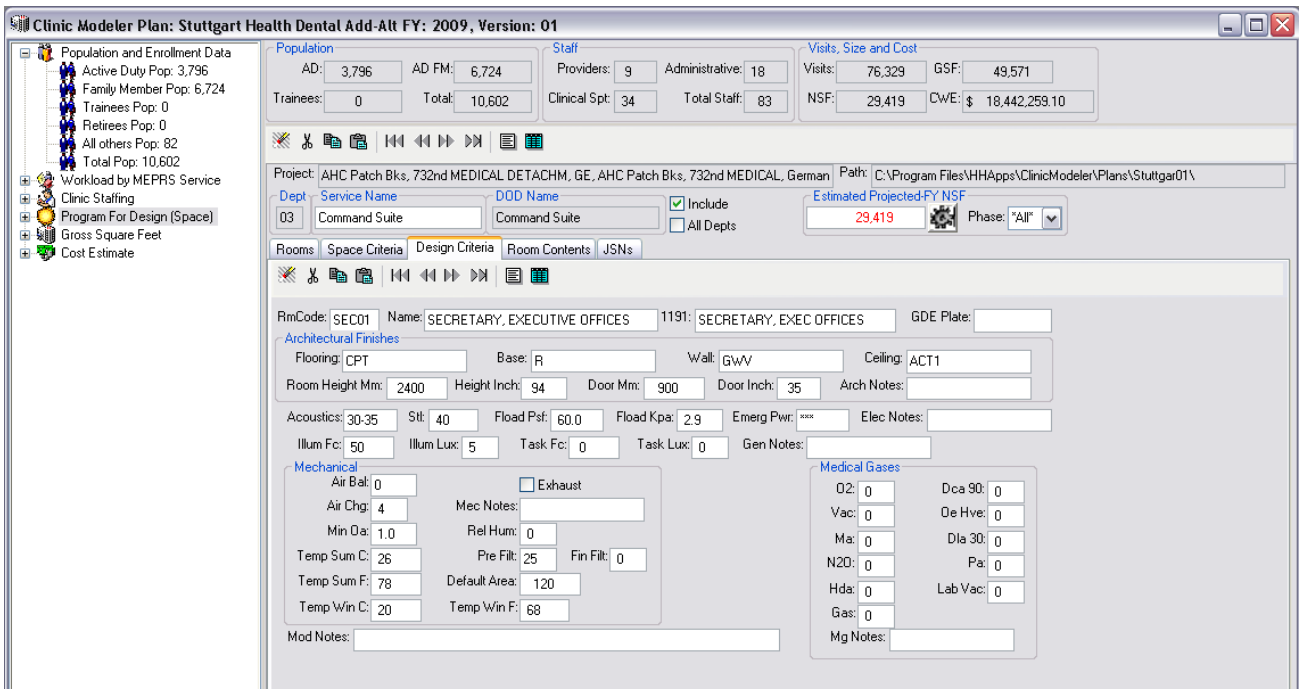

Figure 87: Plan Explorer showing Program For Design design criteria reference tab

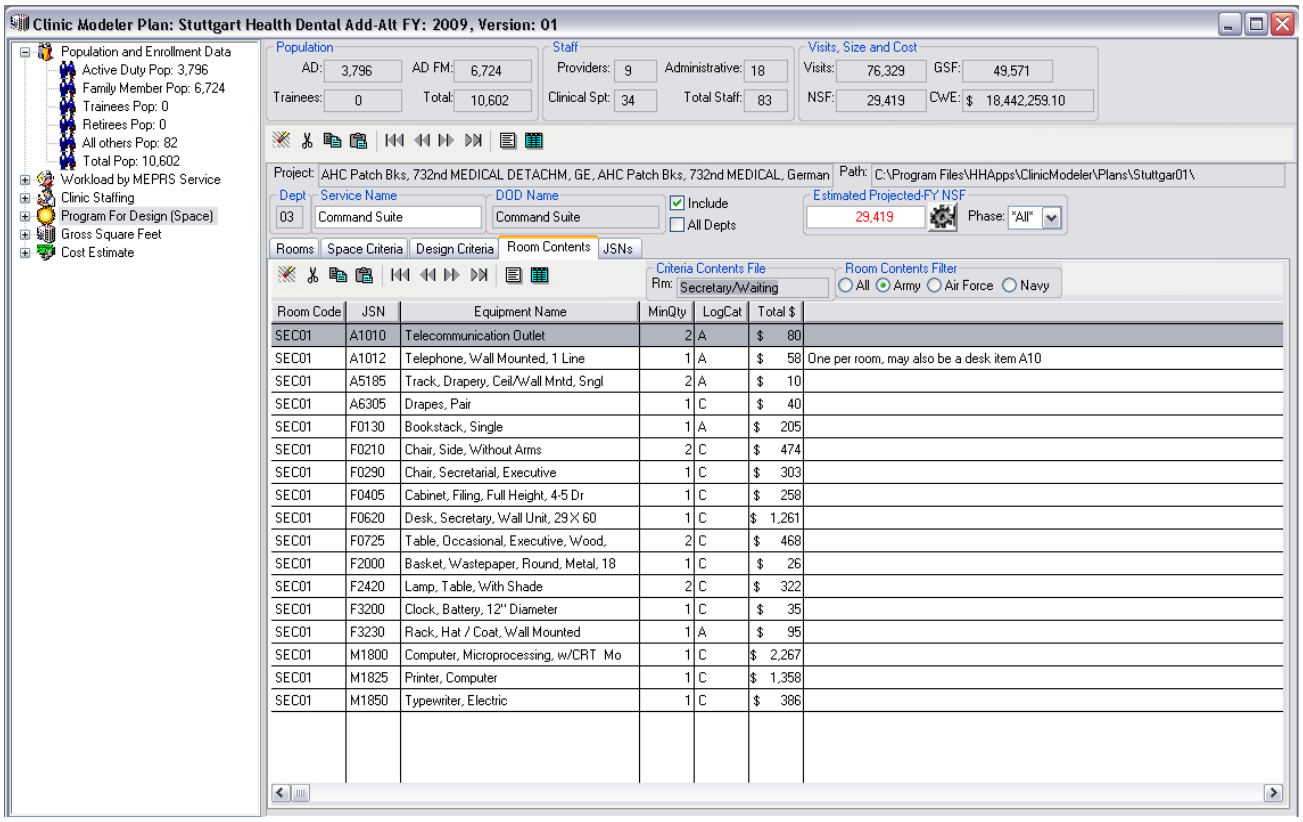

Figure 88: Plan Explorer showing Program For Design room contents reference tab

- **The JSNs tab.** This final tab, of the PFD view, is synchronized to the Room Contents tab and provides detailed information about the JSN equipment item currently highlighted in the room contents listing. However, the user may also navigate through the global listing of JSN information. Similar to the room contents listing, any edits made on this tab will be globally applied to all subsequent PFDs and reports.

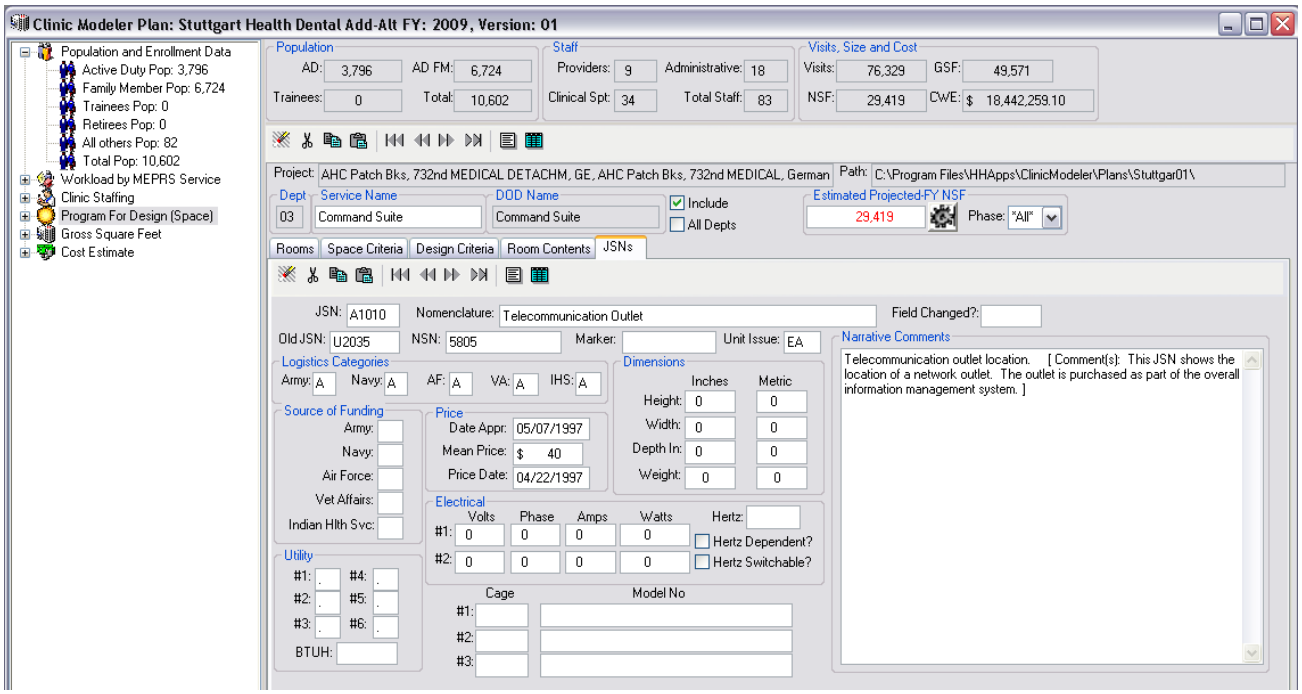

Figure 89: Plan Explorer showing Program For Design JSN equipment reference tab

Gross Square Feet Edit View

The Gross Square Feet edit view (Figure 90) permits the user to edit the factors and results for the total GSF of the project. The user may edit the following GSF information.

- **Net-to-Gross factors.** The user may edit either the percentage factors or the results for Mechanical, Circulation, Walls and Partitions, Half-Areas and Flexibility. The user may not edit the total NSF since that is calculated based upon the tally from the PFD.
- **GSF allocated for Renovation.** For projects identified as being "addition/alteration", the user may also assign the amount of space that will be allocated for the "alteration" portion of the project, with the difference being allocated to the "addition" portion. This allocation is performed by indicating the size of the existing building that will be altered, and its anticipated level of renovation. Only one building may be identified as part of the addition alteration project.

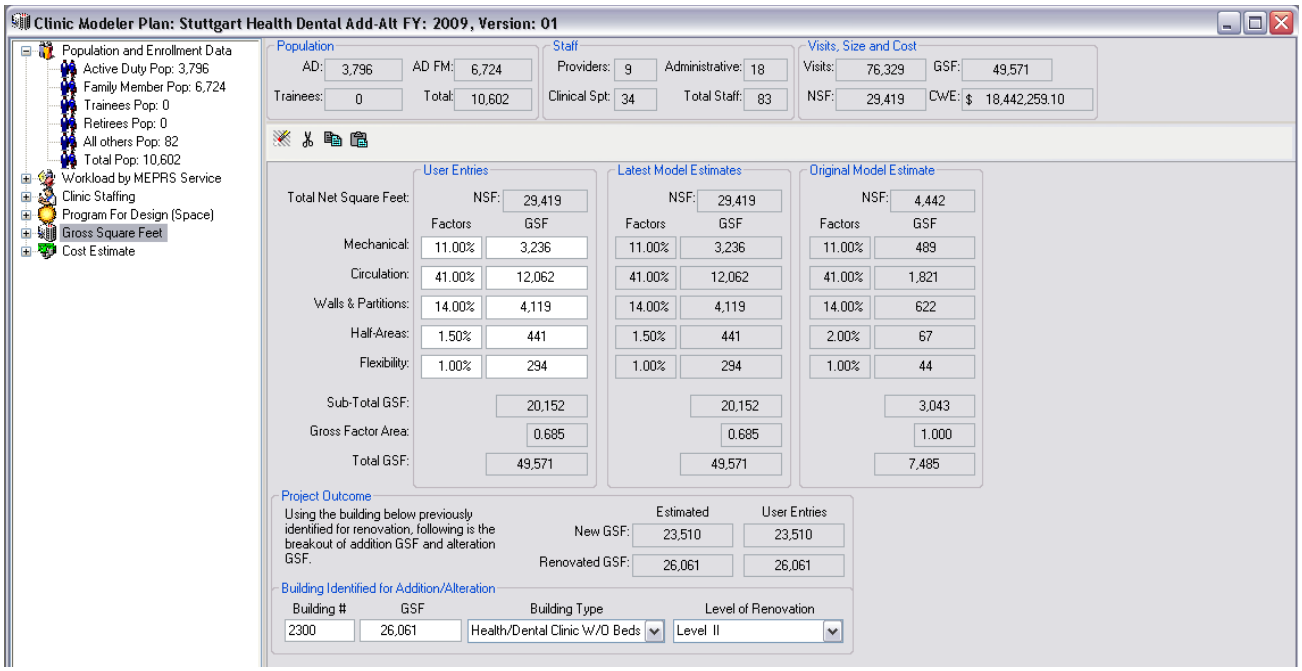

Figure 90: Plan Explorer showing Gross Square Feet

Cost Estimation Edit View

The final view is Cost Estimation (Figure 91) and it permits the user to edit the each of the line items making up the total project cost estimate.

Each line item of a typical DD1391 is presented, allowing the user to make the following edits:

- **Line item planning factor.** Each line item is typically estimated as a factor of the building cost, the primary facility cost or the supporting facility costs. The user may make edits to these typical planning factors as desired, to include reducing them to zero.

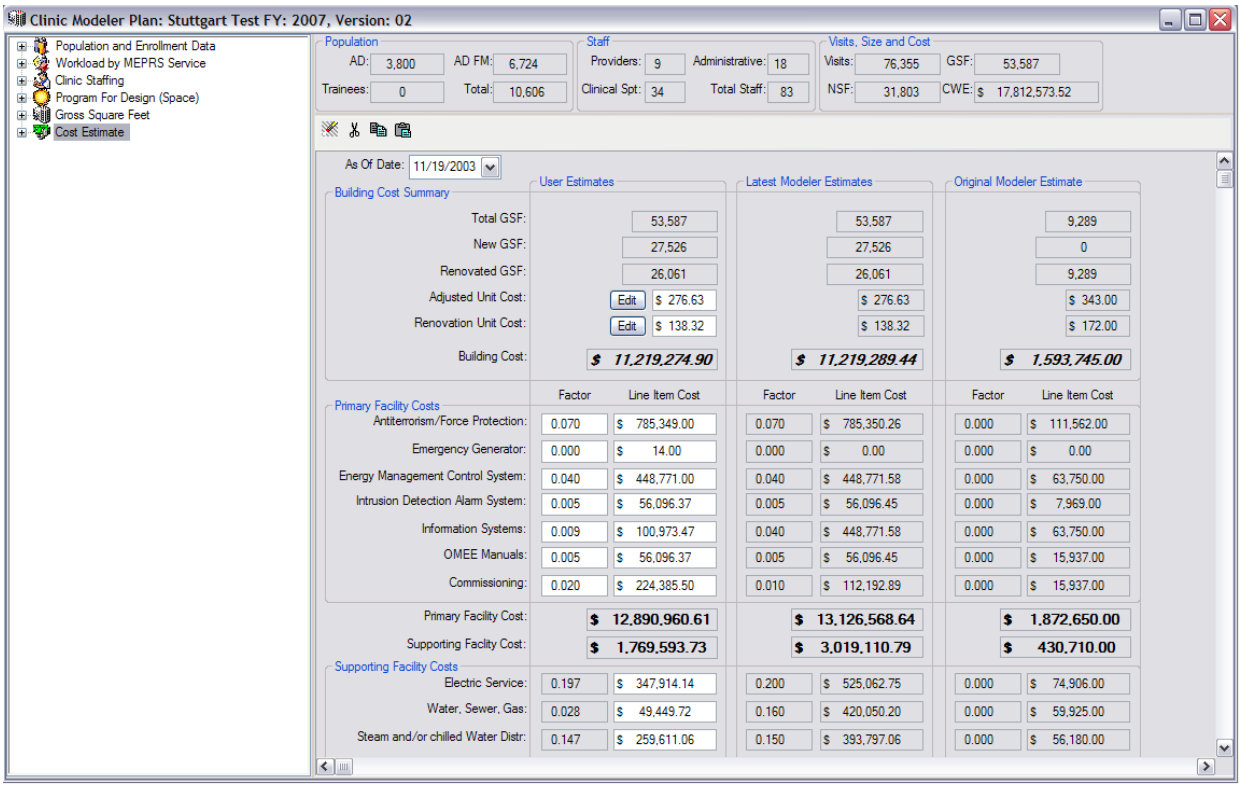

Figure 91: DD1391 cost estimation (top portion of window)

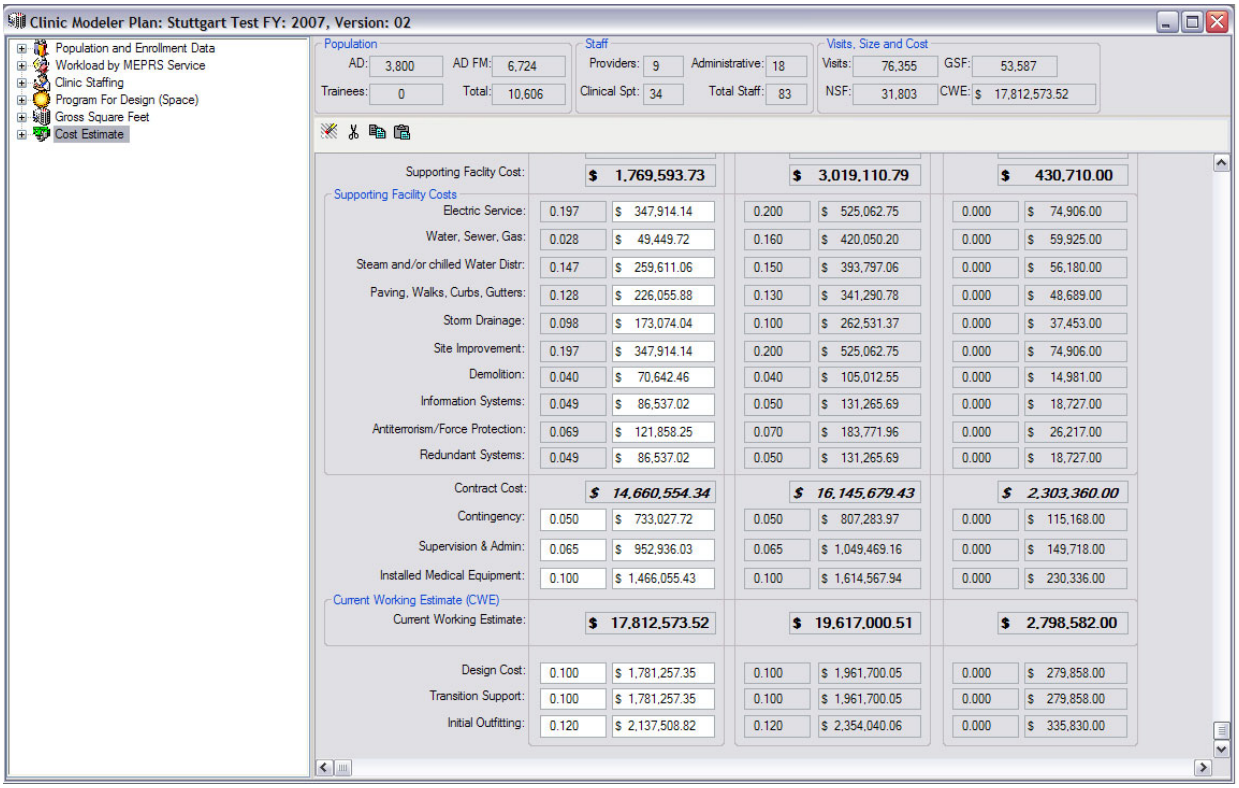

Figure 92: DD1391 cost estimation (lower portion of window)

- **Line item cost.** Each line item cost may also be edited directly. Changes directly to the cost will result in the planning factor being adjusted accordingly.

Following are planning items that directly effect the calculate Current Working Estimate (CWE): Fiscal Year, Location of the Project, GSF identified for renovation, type of construction, facility type, site support risk level, and the level of renovation work to be performed.

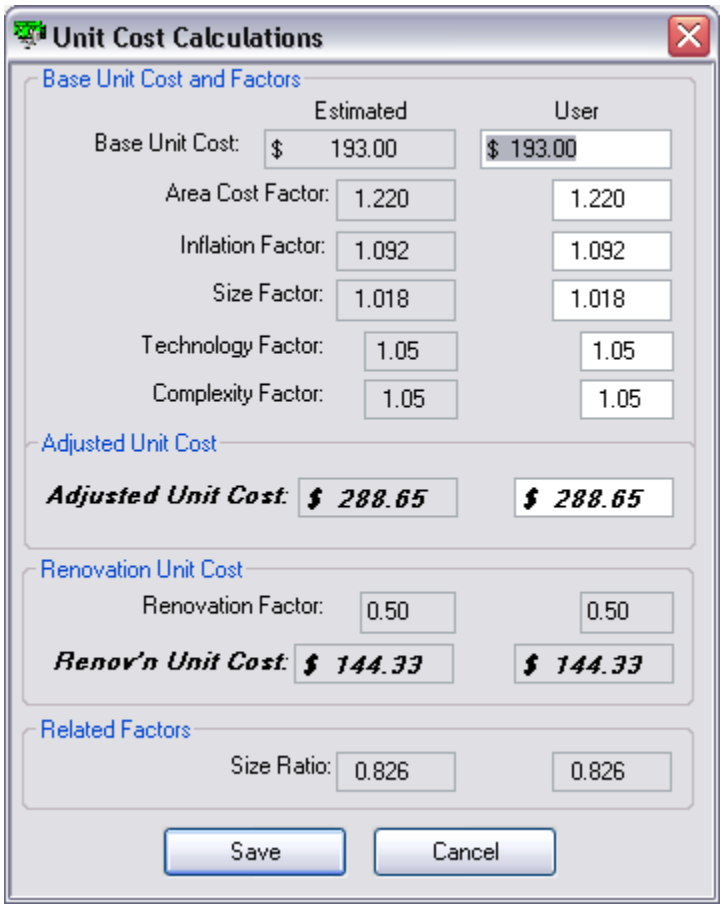

Figure 93: Unit cost factors pop-up edit window

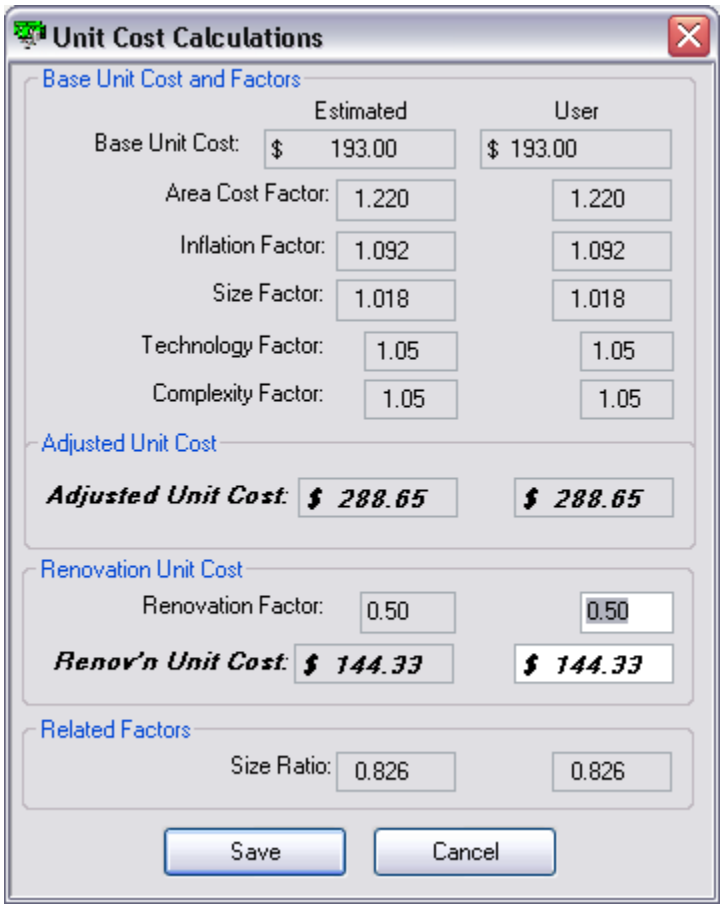

Figure 94: Renovation costs popup edit window

In addition to the line item costs, the user is also able to edit the adjusted unit cost for the project; this is accomplished by clicking on the **"Edit"** button to the left of the unit cost. Clicking on this button will open a pop-up window (Figure 93) allowing the user to change any of the various factors that effect the adjusted unit costs, as well as the base unit cost. These factors include:

The base unit cost. This base unit cost is equivalent to the published cost of a GSF of clinic built in the Washington D.C. area, in a particular fiscal year.

The inflation factor is the result of factoring the fiscal year of the proposed plan's funding start. From the user entered FY, the software determines the likely construction start date and mid-point of construction (shown on the plan-listing window). This date is then used to lookup the Corps of Engineers published inflation indices to arrive at an MCP index. The plan's MCP index is then compared to the MCP index of the base unit cost to arrive at a factor for inflation.

Summary View

In addition to the tree-view navigator and the respective views that are displayed for each section of the tree-view; a plan summary view (Figure 95) is displayed at the upper right of the "Plan Explorer" window. This summary view provides a bottom line view to the user for each interim modification they may make to the sections of the plan. It is strictly read-only and always provides the latest calculated totals for population, visits, staff, size and cost.

Tip: *An additional level of detail for each item of information may be displayed by expanding the nodes of the treeview, see* Figure 76.

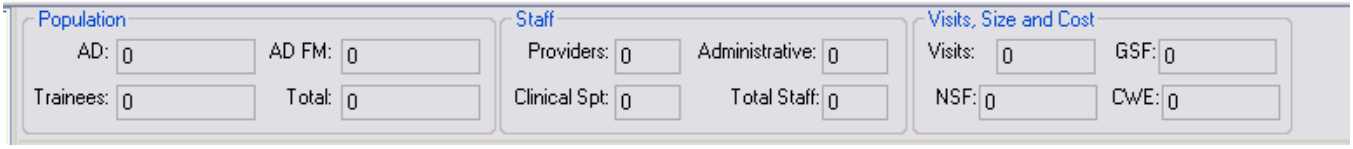

Figure 95: Summary display window of the plan explorer

Note: *The total visits displayed in the summary window are the total visits generated by the population supported. This total visits count may be greater than the number of visits that are seen within the clinic, due to certain services not being included in the plan. The difference in total visits generated by the population served and the visits actually seen can be considered to be representative of potential referrals to civilian or other U.S. facilities.*

Reports

Reports Overview

The Clinic Modeler application provides several prepared reports for printing. In addition to these prepared reports, a report designer is included that enables creating new reports utilizing any of the program's databases. The report designer can also be used to edit the existing prepared reports and saving them as new reports.

Tip: *Open the existing reports to get a jump start on creating a new custom report, but be sure to* ***"Save As"*** *from the* ***"File"*** *menu, and to give the report a new name. If you happen to overwrite the existing report, you can replace it with a copy from the original installation CD.*

A complete report designer help file is available on line, from the **"Help"** menu, that provides instructions on how to use the report designer.

Reports may be printed over the network (if the application is installed in network mode), and do not require exclusive or write access to each of the databases. Reports may also be saved as HTML supporting publishing to the World Wide Web.

Each report will extract all the applicable records, however it is possible to create a filter to be used within the report to limit the records to only those matching the created query.

Picking a Report

To select one of the following prepared reports, or reports that you have previously created click on **"Reports"** from the main menu. Then select:

"Print & Preview Reports" if you want to only print or preview.

"Open & Redesign Reports" if you want to make changes to the layout of a pre-existing report.

Once you have done one of the above, a pop-up window similar to one of the following will display the available reports for printing only (Figure 96) or provide a more flexible interface (see Figure 97) to allow you to select a report for editing or redesign. You may only open one report at a time.

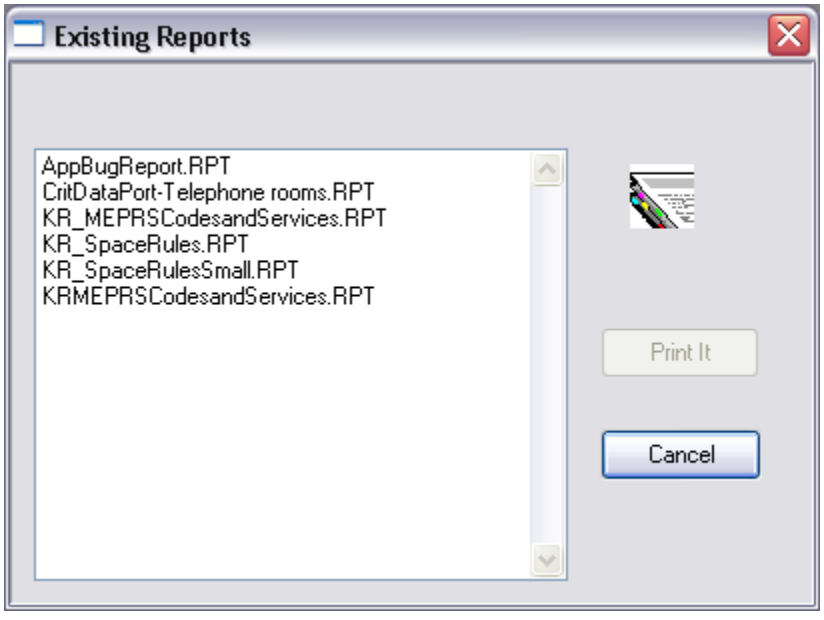

Figure 96: Selecting a pre-existing report for printing or preview

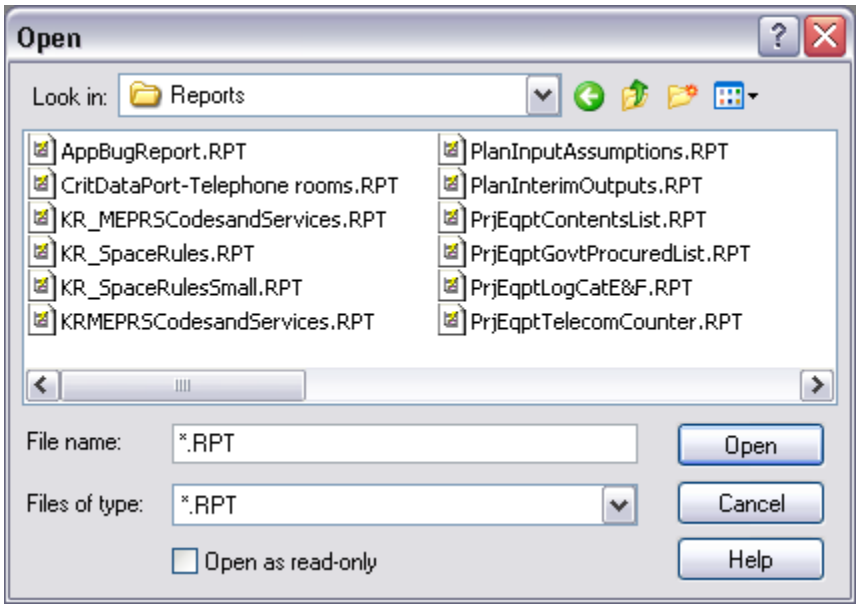

Figure 97: Selecting a report for editing

Printing Plan Reports. Selecting plan reports from the Plan Listing window may result in the application having to recalculate the plan's outputs prior to printing. The application will prompt the user if such a recalculation is required offering them the option to by pass recalculating and continue with the report. If the plan is open by another user, then recalculation is not an option. If the user continues to print the reports without recalculating, the software will pop-up a window informing them that the reports may not be accurate.

The following sections provide an overview of the three groups of reports: Program For Design reports, Plan Summary reports, and Knowledge Repository reports.

- **General Group.** This group is of miscellaneous reports involving SEPS criteria files or basic application files (typically, not files edited by the software user).
- **Program For Design Group.** This group of reports is principally based upon the program for design set of databases. These reports mimic the Space and Equipment Planning System (SEPS) PFD reports, and Equipment Room Contents List, but provide additional reports to include rooms grouped by function. These reports' file names all begin with "prj" (short for project).
- **Plan Summary Group.** This group of reports focuses more on the input assumptions, and the final project estimate in the form of a mock front page DD1391. These reports' file names all begin with "plan".

- **Knowledge Repository Group.** This group of reports provides references for criteria requirements and look up tables. These reports' file names all begin with "KR_".

Report Descriptions

Following are brief descriptions of the designed report layouts included with the Clinic Modeler application.

Front Page DD1391

This report mimics a DD Form 1391 for Military Construction providing a concise summary of the resultant project's scope. The project title, location and fiscal year values are user entries from the initial plan creation wizard, or as changed in the plan input view of the plan explorer. The project GSF, and any breakout as renovation or addition is derived from the plan's output. The values for adjusted unit cost per GSF are also derivations of the planning tool, principally based upon the project's type of construction, location and fiscal year (all which are user entries). The project estimate line items (both primary and supporting costs) are derived from the planning tool, but supporting facility costs also used the user entry of "Site Support Risk" as a factor into the calculations for the various supporting facility costs.

Finally, the report includes a project description narrative that is the result of the narrative template selected during the plan creation wizard, along with any changes made by the user from the "Plan Input" view of the plan explorer. When this DD1391 report is printed, the planning software substitutes the script entries with the output of the plan. See a sample report following this section.

Requirement Summary

The requirement summary report consists of several individual reports printed as a group. These reports are:

Statement of Inputs

This report prints out the user's responses to the "Plan Creation Wizard".

Population and Utilization

This report shows the planning tool's estimate of the likely population supported. This estimation of the population supported is the result of the user's statement of the plan's proposed location, the community type, and the organizations that make up the plan. In addition to the population supported the anticipated market penetration rate is estimated. This penetration rate is also based upon an average for the

location selected by the user in "plan creation" wizard. The output shows the population demographics by beneficiary category of the likely population to be supported. This report shows the numbers generated by the software, and also the numbers that the user changed. The report includes the market penetration rate applied to the population supported to arrive at the likely number of actual MTF users that are expected. The software generates a market penetration rate that is applied to the entire population; however, the report may also show any user changes to the penetration rates as they are applied to each of the beneficiary categories.

Workload by MEPRS

This section of the report shows groupings of MEPRS codes. The first group of codes is of those that the user or software has identified as being served within in the planned facility.

The second grouping shows the MEPRS services and the anticipated level of workload for each service that will not be served from within the facility.

Similar to the other reports this workload report shows the estimates generated by the software and the workload levels that the user accepted for final planning.

For each service, the report shows the unit of measure for the workloads, the threshold used for including in the facility, the department resulting from the workload, and finally the latest year from which the estimating model was derived and whether the modeling averages are based on three years worth of data.

Projected Staffing

The projected staffing report shows the number of providers, clinical support and administrative personnel estimated for each Clinical service identified for inclusion to the clinic plan. For the dental service the estimated number of dentists, hygienists, support and administrative are shown. The report shows the software's calculation of personnel and the user's estimates for each MEPRS service.

Space by Department

The space by department report provides a departmental summary of the clinic's net square footage. This report is similar to the last pages of the Program For Design report.

Cost Estimate (DD1391)

See earlier narrative.

Program For Design (PFD)

This report shows the complete clinic Program For Design organized by Department. Only departments included in the plan, and room quantities greater than zero will be printed. User comments and staffing notes are shown for each room line item. In addition to net square foot summaries for each department, the clinic GSF is calculated and presented at the end of the report, along with a total of the number of clinic occupants identified in the PFD. See sample report following this section.

Rooms by Function

This report presents the clinic PFD but groups the rooms by their functional room code. This report allows the planner to quickly determine the total number of types of rooms included in the PFD, e.g. shows the total number of exam rooms and where they are located.

Room Contents Listing

This report presents all the equipment room contents for each room included in the PFD. The listing is determined using the SEPS standard room contents listing. Due to all equipment line items being printed for each room, the report can be quite lengthy, e.g. hundreds of pages. See sample report following this section.

Logistic Category E & F Cost Estimate

This report is similar to the room contents listing, but shows only those items of equipment identified as Logistics Category E & F. The cost of these items are typically included the DD1391 program amount. The planner should use this report for final program submission of the plan's funding, rather than the simple planning factors used and shown in the CWE view. See sample report following this section.

Communications Requirements

This report uses special entries in the equipment data file permitting the Clinic Modeler to identify the communications requirement for each room included in the PFD. This report enables the planner to estimate the total number of telephone instruments, communication data ports and data drops for corresponding with installation communication support engineers. See sample report following this section.

Sample Reports

Sample reports follow:

1. COMPONENT	FY 2007 MILITARY CONSTRUCTION PROJECT DATA	2. DATE
ARMY		23 November 2003

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
Patch Barracks GE656 Germany	Medical/Dental Dispensary Add/Alt

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
	55030	55739	18,300

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY				**12,262**
Medical/Dental Clinic Addition	SF	26,245	$ 278.55	(7,311)
Medical/Dental Clinic Alteration	SF	22,760	$ 139.27	(3,170)
AT/FP Protection	LS			(734)
Building Information Systems	LS			(419)
Energy Management Control System (EMCS)	LS			(419)
Intrusion Detection Alarm System (JSIIDS)	LS			(52)
Emergency Generator	LS			(0)
Commissioning	LS			(105)
O & M Manuals	LS			(52)
SUPPORTING FACILITIES				**2,820**
Electric Service	LS			(490)
Water, Sewer, Gas	LS			(392)
Steam and/or Chilled Water Distribution	LS			(368)
Paving, Walks, Curbs and Gutters	LS			(319)
Storm Drainage	LS			(245)
Site Imp (490) Demo (98)	LS			(589)
Information Systems	LS			(123)
Antiterrorism/Force Protection	LS			(172)
Redundant Systems	LS			(123)
ESTIMATED CONTRACT COST				15,082
CONTINGENCY (5.00%)				754
SUBTOTAL				15,836
SUPERVISION, INSPECTION, ADMIN OVERHEAD (6.50%)				980
CATEGORY E EQUIPMENT				1,508
TOTAL REQUEST				18,325
TOTAL REQUEST (ROUNDED)				18,300
INSTALLED EQT-OTHER APPROPRIATIONS				2,199

10. Description of Proposed Construction

Provide an addition and alterations to the existing community medical/dental dispensary to meet functional requirements. Construction to be of permanent, fire resistent construction. The combined addition and existing facility will be complete with laboratories, 7 examination and 1 treatment rooms, secured pharmacy, X-Ray, physical therapy, dental laboratories, 21 dental operatories, dental X-Ray, medical and dental administrative and service support areas. Provide required curbs, gutters, site work, storm drainage, required utilities' services, and dental telecommunications systems so as to comply with legal and professional accreditation, and fire, life and safety standards. Necessary interim facilities will be provided. This project will be designed in accordance with MIL-HDBK-1191, the Uniform Federal Accessibility Standards (UFAS)/Americans with Disabilities Act (ADA) Accessibilitiy Guidelines, and Anti-Terrorism/Force Protection (ATFP) standard EUCOM OPORD 99-01. Operations and Maintenance Manuals will be provided. Project is not sited in a flood plain. Air conditioning: 163 tons.

Program For Design

AHC Patch Bks, 732nd MEDICAL DETACHM Version: 02

State: Zipcode:

Project #: 55739 DMIS Code #: 8987

GE, AHC Patch Bks, 732nd MEDICAL

Space Project Last Modified: 0, 0 by

Report Year: PROJECTED (2007)

All Phases

Baseline Year: 2003

Midpoint of Construction: 2008

November 23, 2003 at 10:36:11

Originator: William Cross

DATE: November 23, 2003

All Phases **Program For Design** Report Year: PROJECTED (2007)

55739 AHC Patch Bks, 732nd MEDICAL DETACHM, GE, AHC Patch Bks, 732nd MEDICAL, Germany, Patch Barracks,, PFD Version: 02

Department: 03 Command Suite

Ph	Line #	Rm Code	Room Name	Rm QTY	Unit Area	Net Area	# of Pers	Remarks
01 COMMAND UNIT								
1	030101	OFC03	Commanders Office	1	220	220	0	
1	030103	CRC01	Conference Room	1	220	220	1	
1	030107	OFM02	Sen Enlisted NCO	1	120	120	1	
1	030109	SEC01	Secretary/Waiting	1	140	140	1	
			01 COMMAND UNIT	4		700	3	
02 ADMINISTRATIVE SVCS								
1	030205	MRRS1	Mail Room Rec/Srt	1	250	250	0	
1	030206	MRRS1	Mail Room Admin	1	60	60	1	Consider combining with mail room
1	030209	MRRS1	Message Center	1	150	150	0	
1	030219	OFA02	Admin Office	1	120	120	1	
			02 ADMINISTRATIVE SVCS	4		580	2	
08 PUBLIC AFFAIRS								
1	030805	RPR01	Command Copying Room	1	110	110	0	
1	030809	FILE1	File Room	1	100	100	0	Use outpatient records formula to justify additional space
1	030811	TLTM1	Staff Toilet, M	1	50	50	0	
1	030819	TLTF1	Staff Toilet, F	1	50	50	0	
			08 PUBLIC AFFAIRS	4		310	0	
03 Command Suite				**12**		**1,590**	**5**	**Gross Area 2,258 sq ft**

All Phases **Program For Design Department Summary** Report Year: PROJECTED (2007)

55739 AHC Patch Bks, 732nd MEDICAL DETACHM, GE, AHC Patch Bks, 732nd MEDICAL, Germany, Patch Barracks,, PFD Version: 02

Dept	Department Name	Total Rooms	Net Area	# of Pers
03	Command Suite	12	1,590	5
10	TriCare	3	200	0
14	Patient Admin	8	722	3
17	Logistics	19	4,639	5
18	Clinic Admin	20	2,599	0
19	Prim Care Clinics	19	2,049	5
28	Pediatrics	12	1,426	3
38	Obstetrics/Gynecology	9	1,154	3
40	Community Health	2	240	2
41	Psychiatry	4	455	3
44	Physical/Occ Therapy	23	1,885	6
50	Pharmacy	9	1,365	2
51	Radiology	13	1,280	1
53	Pathology	17	1,010	1
87	Dentistry	64	8,473	14
		Total Net Area:	**29,086 NSF**	**53 Total Occupants**

All Phases **Program For Design Department Summary** Report Year: PROJECTED (2007)

55739 AHC Patch Bks, 732nd MEDICAL DETACHM, GE, AHC Patch Bks, 732nd MEDICAL, Germany, Patch Barracks,, PFD Version: 02

Regular Departments

Room Quantity:	234	**Net Area:**	29,086 **sq ft**	**Gross Area:**	49,009 **sq ft**	**Number of Personnel:**	53

Gross Factor Departments

Room Quantity:	0			**Gross Area:**	0 **sq ft**	**Number of Personnel:**	0

Total Net Square Area	**29,086**
Mechanical (11.0%)	**3,199**
Circulation (41.0%)	**11,925**
Walls and Partitions (14.0%)	**4,072**
Half Areas (1.5%)	**436**
Flexibility (1.0%)	**291**
Sub-Total	**49,009**
Gross Factor Area	**0**
Total Area	**49,009**

(End of Report)

55739 AHC Patch Bks, 732nd MEDICAL DETACHM, GE, AHC Patch Bks, 732nd MEDICAL, Germany, Patch Barracks,, PFD Version: 02

Phase: 1 **Fiscal Year: 2007**

Complete Equipment Listing

Department: 03 Command Suite

Room Line#: 0219 **Admin Office** **Room Size: 120.0** **Qty of Rooms: 1.0**

Room Code	OFA02	Svcs	JSN		Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	OFA02	AFN	A6046	A6046	Artwork, Decorative, With Frame	C	1	$ 102	$ 102
	OFA02	AFN	E0063	E0063	Workstation, L-Shaped w/Peninsula, Wall Mtd, 72x72	C	1	$ 5,881	$ 5,881
	OFA02	A	F0210	F0210	Chair, Side, Without Arms	C	1	$ 237	$ 237
	OFA02	AFN	F0280	F0280	Chair, Swivel, Low Back	C	1	$ 577	$ 577
	OFA02	A	F0405	F0405	Cabinet, Filing, Full Height, 4-5 Drawer	C	1	$ 258	$ 258
	OFA02	AN	F0855	F0855	Table, Typing, Mobile	C	1	$ 80	$ 80
	OFA02	AFN	F2000	F2000	Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	C	1	$ 26	$ 26
	OFA02	AN	F3050	F3050	Whiteboard, Dry Erase, 36 x 48	A	1	$ 136	$ 136
	OFA02	AFN	F3200	F3200	Clock, Battery, 12" Diameter	C	1	$ 35	$ 35
	OFA02	AN	F3230	F3230	Rack, Hat / Coat, Wall Mounted	A	1	$ 95	$ 95
	OFA02	AN	M1800	M1800	Computer, Microprocessing, w/CRT Monitor	C	1	$ 2,267	$ 2,267
	OFA02	AFN	M1825	M1825	Printer, Computer	C	1	$ 1,358	$ 1,358
	OFA02	AN	M1850	M1850	Typewriter, Electric	C	1	$ 386	$ 386
					Total quantity and cost for 1 room:		13		$ 11,438

Room Line#: 0811 **Staff Toilet, M** **Room Size: 50.0** **Qty of Rooms: 1.0**

Room Code	TLTM1	Svcs	JSN		Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	TLTM1	AN	A1066	A1066	Mirror, Float Glass, With SS Frame, 36X18	A	1	$ 137	$ 137
	TLTM1	AFN	A5075	A5075	Dispenser, Soap, Disposable	C	1	$ 12	$ 12
	TLTM1	AFN	A5080	A5080	Dispenser, Paper Towel, SS, Surface Mounted	A	1	$ 92	$ 92
	TLTM1	AN	A5109	A5109	Grab Bar, 1-1/4" Dia., SS, 2 Wall, W/C Accessible	A	3	$ 124	$ 372
	TLTM1	AN	A5109	A5109	Grab Bar, 1-1/4" Dia., SS, 2 Wall, W/C Accessible	A	3	$ 124	$ 372
	TLTM1	AFN	A5195	A5195	Dispenser, Toilet Tissue, SS, 1-Roll, Surface Mntd	A	1	$ 24	$ 24

55739 AHC Patch Bks, 732nd MEDICAL DETACHM, GE, AHC Patch Bks, 732nd MEDICAL, Germany, Patch Barracks,, PFD Version: 02

Phase: 1 **Fiscal Year: 2007**

Logistic Category E & F Equipment Listing

Department: 51 Radiology

Room Line#: 1301 **Radiographic** **Room Size: 300.0** **Qty of Rooms: 1.0**

Room Code	XDR01	Svcs		JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	XDR01	A	X1400	X1400	Holder, Cassette, Vertical, With Bucky	F	1	$ 12,971	$ 12,971
	XDR01	AFN	X5900	X5900	Radiographic Unit, 80 kW, 90/45 or 90/90 Table	F	1	$ 170,000	$ 170,000
							2		$ 182,971

Room Line#: 1701 **Darkroom** **Room Size: 90.0** **Qty of Rooms: 1.0**

Room Code	XFP02	Svcs		JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	XFP02	AFN	X5320	X5320	Processor, Film, 90 Seconds	F	2	$ 32,867	$ 65,734
							2		$ 65,734

Department: 53 Pathology

Room Line#: 1103 **Urinalysis** **Room Size: 50.0** **Qty of Rooms: 1.0**

Room Code	LMU03	Svcs		JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	LMU03	AFN	E0590	E0590	Workstation, Urinalysis Lab, Medium	F	1	$ 26,791	$ 26,791
							1		$ 26,791

Room Line#: 1105 **Hematology** **Room Size: 60.0** **Qty of Rooms: 1.0**

Room Code	LMHI1	Svcs		JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	LMHI1	AFN	E0515	E0515	Module, Lab, Work Surface, O/H Cab, 72" W	F	1	$ 6,130	$ 6,130
	LMHI1	AFN	E0524	E0524	Module, Lab, Work Surface, O/H Cab, Drwrs, 48" W	F	1	$ 4,810	$ 4,810
	LMHI1	AFN	E0772	E0772	Sink, w/Cabinet, Free Standing, 48"W x 24"D	F	1	$ 1,664	$ 1,664
							3		$ 12,604

Room Line#: 1111 **Microbiology** **Room Size: 60.0** **Qty of Rooms: 1.0**

Room Code	LMM03	Svcs		JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	LMM03	AFN	E0594	E0594	Workstation, Microbiology Lab, Medium	F	1	$ 73,097	$ 73,097

55739 AHC Patch Bks, 732nd MEDICAL DETACHM, GE, AHC Patch Bks, 732nd MEDICAL, Germany, Patch Barracks,, PFD Version: 02

Phase: 1 **Fiscal Year: 2007**

Logistic Category E & F Equipment Listing

Department: 53 Radiology

Room Line#: 1111 Microbiology **Room Size: 60.0** **Qty of Rooms: 1.0**

Room Code	LMM03	Svcs	JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
						1		$ 73,097

Department: 87 Dentistry

Room Line#: 0267 Cephalometrics **Room Size: 150.0** **Qty of Rooms: 1.0**

Room Code	DNXC1	Svcs	JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	DNXC1	AFN	X5500 X5500	Radiographic Unit, Cephalometric	F	1	$ 36,672	$ 36,672
						1		$ 36,672

Room Line#: 0268 Recovery Room **Room Size: 110.0** **Qty of Rooms: 1.0**

Room Code	RROP1	Svcs	JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	RROP1	AFN	E0406 E0406	Nurse Station, Angle, Free Standing, 96" W	F	1	$ 5,556	$ 5,556
						1		$ 5,556

Room Line#: 0269 X-Ray Exposure Room **Room Size: 146.0** **Qty of Rooms: 1.0**

Room Code	DNXD1	Svcs	JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	DNXD1	AFN	X6450 X6450	Radiographic Unit, Dental, Wall Mounted, 15 mA	F	1	$ 4,467	$ 4,467
	DNXD1	AN	X6500 X6500	Radiographic Unit, Dental, Panographic	F	1	$ 14,510	$ 14,510
						2		$ 18,977

Room Line#: 0270 X-Ray Developing **Room Size: 85.0** **Qty of Rooms: 1.0**

Room Code	DNXF2	Svcs	JSN	Nomenclature	Log Cat	RmQty	Average Price	LineItemRm Total Cost
	DNXF2	AFN	X5350 X5350	Processor, Film, Dental, Automatic, Table Mounted	E	2	$ 4,500	$ 9,000
						2		$ 9,000

Total Count of Equipment Items: 15 **Total Project Equipment Cost: $ 431,402**

55739 AHC Patch Bks, 732nd MEDICAL DETACHM, GE, AHC Patch Bks, 732nd MEDICAL, Germany, Patch Barracks,, PFD

11/23/2003 11:07:04 *Version: 02* All Phases

Telecom Port and Telephone Totals

Fiscal Year: 2007 *Each dataport count represents a quad-receptacle with 2 voice, and 2 data outlets.*

Department: 87

Phase	Room Line#	Room Code	Room Name	Room Size	# of Rms	Telephones per LineItem	Dataports per LineItem
1	0260	DNPF1	Cast/Grinding Room	320	1	1	2
1	0267	DNXC1	Cephalometrics	150	1	1	2
1	0268	RROP1	Recovery Room	110	1	1	2
1	0269	DNXD1	X-Ray Exposure Room	146	1	1	2
1	0270	DNXF2	X-Ray Developing	85	1	1	2
1	0273	LR002	Staff Locker, M	153	1	1	1
1	0275	LR002	Staff Locker, F	153	1	1	1
1	0301	SL001	Dental Lounge	200	1	1	2
1	0305	PARS1	HouseKp Sply/Eqpt	50	1	1	2
1	0307	OFA01	Admin Support	150	1	1	2
1	0366	DNSA1	Utility Workspace	80	1	1	2
1	0374	CLR03	Library/Conf Room	380	1	1	2
1	0390	DNSA1	DTR Support Area	90	5	5	10
1	0393	CLR01	Preventive Dentistry	150	1	1	2
1	0397	DNPL1	Lmt Dental Prosth Lab	220	1	1	2
1	0399	DNSC1	Central Sterile Room	140	1	1	2
					Department Total:	**54**	**212**

Summary of Equipment Item Counts

 # Phones: ***173*** **# DataPorts:** ***672***

Total Count of Equipment Items: ***845***

Total Project Equipment Cost: ***$ 23,514***

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Administrator's Guide

This section discusses topics that may be of interest to the person assigned responsibility for the administration of the Clinic Modeler application.

Start-Up Sequence

An automated setup program performs installation of the Clinic Modeler. To install the application run the Setup.exe located on the installation CD. This setup program will install the application into the default directory of "C:\Program Files\HHApps\ClinicModeler". This installation directory and drive may be changed during the installation process.

After successful installation, the following is the normal sequence for the program's initial start-up:

- Check the file path and set it to the directory where the data and report files are located. This defaults to the installation directory of the application.
- Create an initialization file named "VWICM.ini" located in the application directory and also in the root directory of the "C:" drive of the machine running the application. This initialization file is set to contain the data paths set in the previous step.
- Build the index files for each of the database files.

After the initial start-up and shut down the behavior for the start-up from a client machine is as follows:

- Check for the "VWICM.ini" file located in the "C:\" directory of the client machine. If it is not found, then open the "VWICM.ini" file in the application directory, and open a data path window, using the paths from the application directory's "VWICM.ini" file.
- Pop up a data-file path window using the paths from application directory's "VWICM.ini" file, and request

confirmation that this is the correct path. (This supports the customization of directory and drive mappings on different client machines).

- If data files are all found to be in the client machine's set path, then create a “VWICM.ini” in the client's "C:\" drive.
- If correct paths to the data have been entered, the application will start.
- Request user to enter their name and initials if it is the first time that they have used the application.

Clinic Modeler’s Directories

Following is a complete listing of the directories normally created during a full installation of the application onto a client machine.

- **\ClinicModeler.** This is the main application directory where all of the application’s folders can be found. The following directories are located under this “ClinicModeler” folder.
- **\Sys.** This folder contains all the application binary files (executables and DLLs). No data files are located in this directory.
- **\Doc.** This folder contains the Acrobat file of this manual. This folder may also function as the storage folder of any reports printed as files.
- **\MMedia.** This directory is empty but is provided for future use in storing multimedia file.
- **\Temp.** This folder is used by the application for temporary work files during the exporting and importing process. Any files within this folder may be deleted, but the folder should not be removed.
- **\Transfer.** This directory is the default directory used for importing and exporting data files and zipped plans. This folder cannot be moved to another location, since its path is hard coded into the application.
- **\Criteria.** This directory contains copies of the DOD SEPS criteria and equipment files. These files are not used actively for estimating, but are required for printing equipment reports and viewing the PFD criteria, equipment listing, design (DD1191) criteria and JSN equipment descriptions. This folder may be shared on a network server.

- **\Data.** This folder contains essential data files used for recording user names; bugs identified; and the data structures used in creating plan files. This folder may be shared on a network server.
- **\KR.** This directory holds the data files used by the application for generating all the estimates and lookup values for the application screens. No user editable data files are stored in this directory. This folder may be shared on a network server.
- **\KR\ClinicSpace.** This is a subdirectory under the KR folder. Within this folder are the files that make up the base line program for design and the related files. These data files are essentially the same as those data files used in SEPS, although they have slightly different data structures are a different version of the FoxPro files. The files within this folder are copied into a new plan folder upon creation of a plan, they should not be moved from out of this folder. This folder may be shared on a network server. If these are placed in a shared environment, they need to reside within a similar folder structure.
- **\Plans.** This folder contains the main output data files of the application. Within the folder is the database used to identify the listing of plans, and sets of folders: one for each plan created by the application. All user editable files are stored in the plans directory.

File Paths

The Clinic Modeler application supports network installation and operation. To facilitate the installation where the application is located in a different directory then the data files, specific file paths must be set prior to operating the application. There are three types of situations for application and file paths:

1. Application and data files are both located in the same root directory, either on the network or on a single isolated machine. If operating on a network, the application is run off the server by the client machines. This may result in slower running of the application based on the speed of the server and traffic on the network.
2. The application and data files are both on the network server, but they are located in different directories and/or on different drives.
3. The data files are installed on the network server, but the application files are installed on each client machine. This

provides for quicker loading and operation of the application itself, but makes administration more difficult.

After installation the first major event to occur upon start up of the application is to check the data file paths. The initial start up is the most important since the data file paths for #2, and #3 above must be set manually. Item #1 above assumes the data files have the same path as the application and will proceed automatically with minimal intervention. In the situations #2 and #3 above, the following data file path window must be correctly modified to point the application to the correct drive and directory.

Tip: *If the data paths must be reset after the initial start-up, this may be accomplished from the* ***"Administration-Edit Path Settings"*** *menu option.*

The data path set-up window is shown in Figure 98. The window will pop-up with the path representing the current application's installation directory, or the previously set data file directory and drive. If the path shown is not accurate, you can manually enter the correct path, or click on the browse button to bring up an explorer window to navigate to the correct drive and path, see Figure 99.

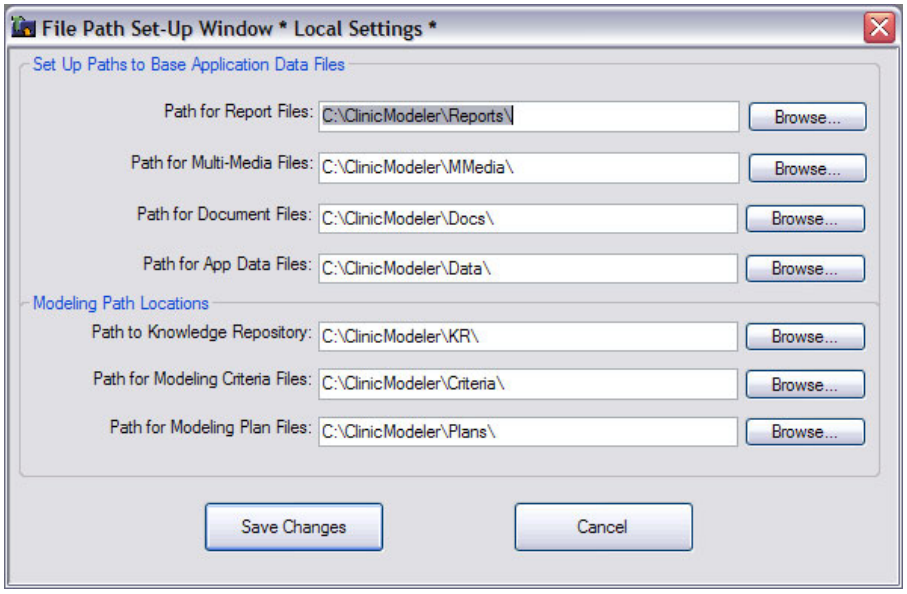

Figure 98: Data Path Set-Up Window

When selecting the directory path using the explorer window shown in Figure 99 you must highlight one of the database files and then click on the **"Open"** button. If no such database file is selected, or you click **"Cancel"** an empty file path will result. The data path set-up window will not save an empty file path.

After the correct drive and directory have been entered or selected. Press the **"Save Changes"** button to save the new data path. This new data-path will be saved to the "VWICM.ini" file located in the root directory of the client machine's "C" drive. If this operation is performed standing at the network server, then the "VWICM.ini" file will be written to the server's "C" drive, and the procedure will have to be repeated at each of the client machines.

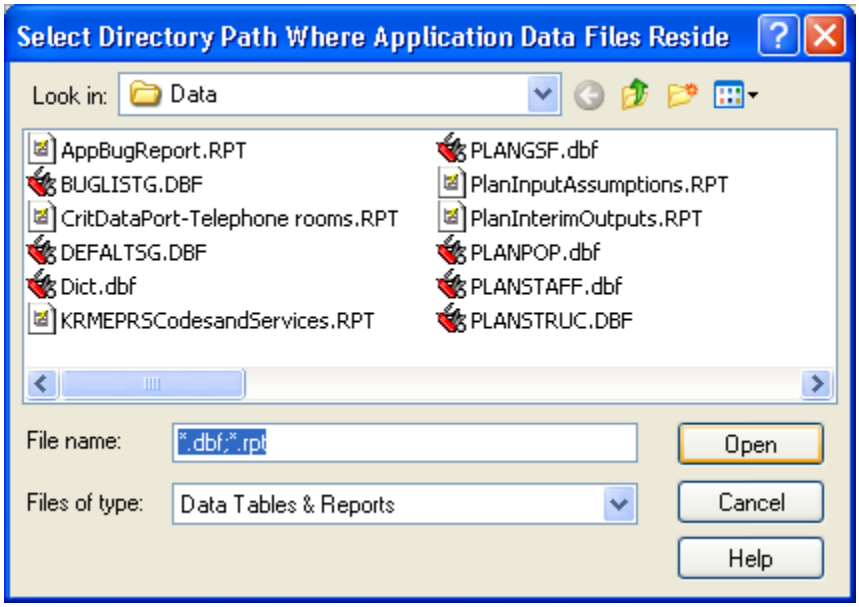

Figure 99: Data file directory path selection window

Installing for Network Use

The recommended method for using the application over a network is the following:

- Install the complete application with data files on the local client machine (see Figure 98). Install the paths as you would for single-use operation.
- Install the "Complete Network Data Install" from the installation setup on to the network server (see Figure 102: Complete Network Data Install).
- Open the client machine's software and set the network data paths to point to the path on the network server (see Figure 103).

Shared Users, Bug listing, Reports and Plan Storage Directories

The network administrator should run the Clinic Modeler Setup program on the network machine where the clinic modeler output

plans will be stored in a shared environment. Once the installation wizard is running enter the path to the folder where the shared clinic modeler data will be located on the network server (see Figure 100). A recommended folder path would be “D:\ClinicModeler”, assuming “D” is the data drive on the network server. With the above folder the plans would then be located in the “D:\ClinicModeler\Plans” directory. The bug listing and user information would be located in the “D:\ClinicModeler\Data” directory, and reports would be located in the “D:\ClinicModeler\Reports” directory.

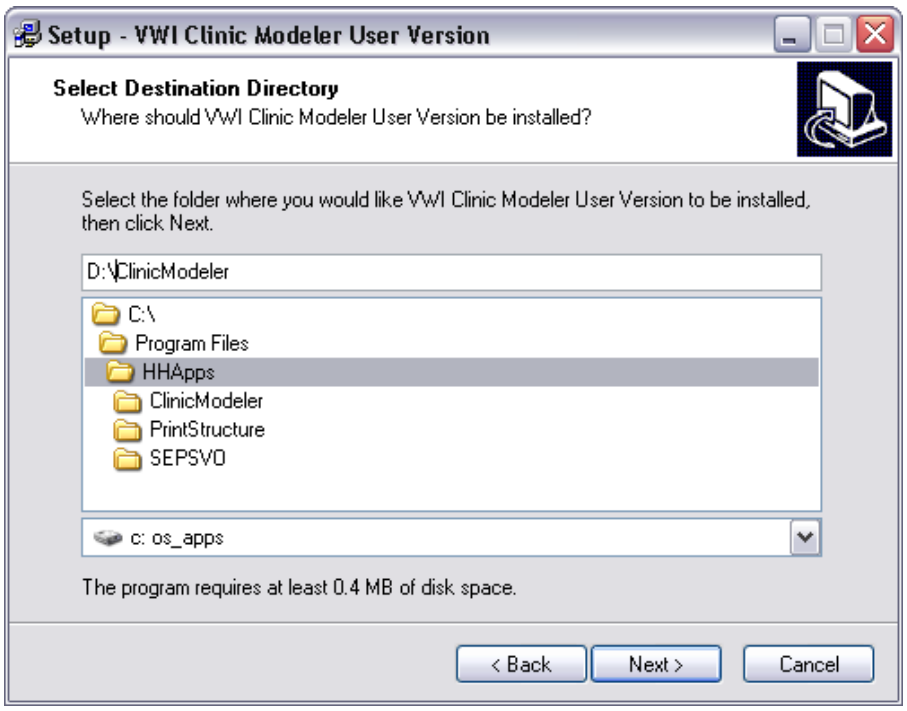

Figure 100: Setting the path for shared plan's on the server

After changing the install directory as above, select “Complete Network Data Install” from the list of available components on the “Select Components” screen of the setup wizard. Then continue through the wizard. This will create the “Plans”, “Data” and “Reports” directories and also place a single sample plan folder with data onto the network server. The network administrator should then ensure that the folder is properly shared on the network and that all users have read/write access to the created plans folder and all subfolders. Inherit permissions should be turned on for the “ClinicModeler” folder on the network server.

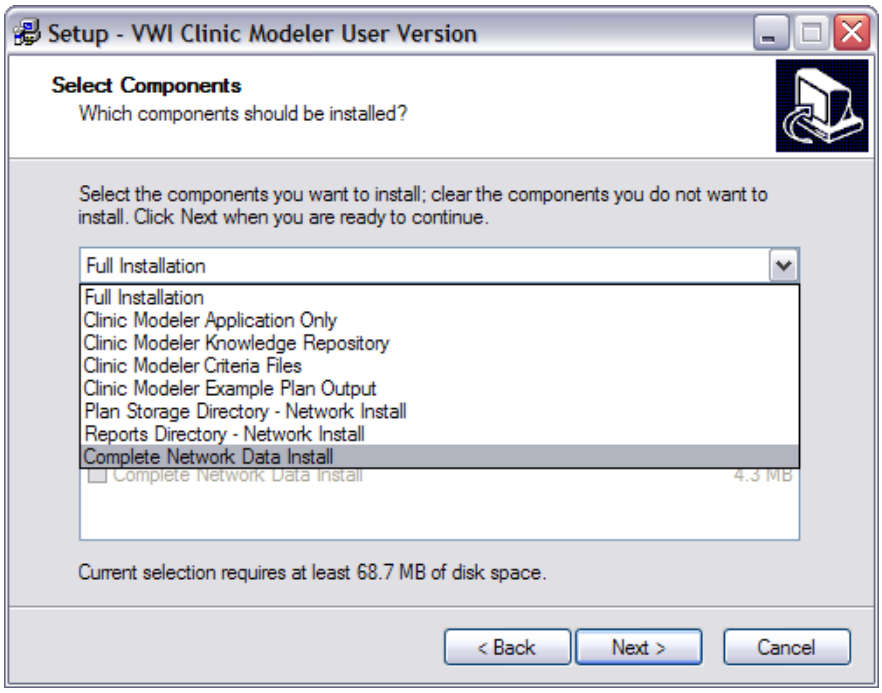

Figure 101: Components available for installation

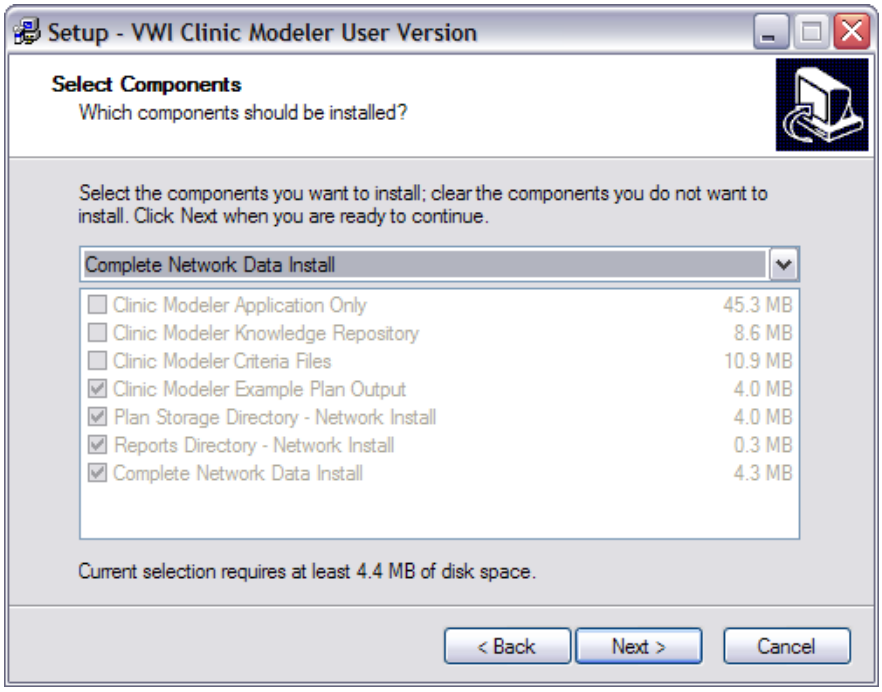

Figure 102: Complete Network Data Install

After performing the above installation of the plan folder storage directory, the following should be done for each client machine. A mapped drive must be created to the network share. (The clinic modeler application will not access an UNC data path). Each client machine should then run the Clinic Modeler application and select **"Administration-Edit Path Settings-Network Path"** from the menu,

this will open the path settings window for the "Network Settings", see Figure 103. This should be done with no windows open in the Clinic Modeler application. Then once the file path setup window is open, click the **"Browse…"** button for the Modeling Plan Files path. Navigate to the directory on the network where the plans' folder was installed. The file "PlanList.dbf" should be found at that location. Repeat this process for the Reports directory, and the Bug listing and Data directory.

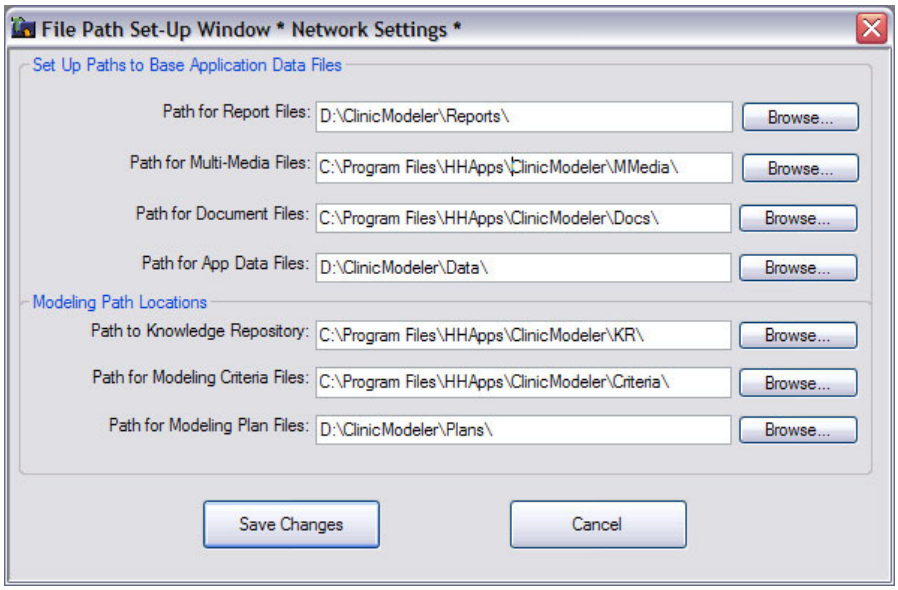

Figure 103: Setting the paths for network settings from the client machine

The other path settings may be left unchanged. Then click on "Save Changes".

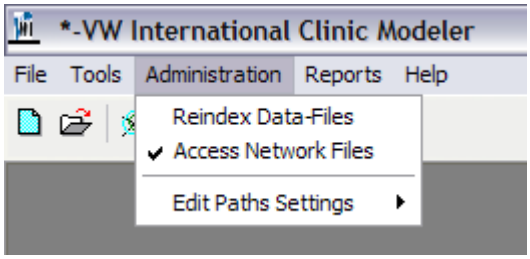

Figure 104: Setting the access to Network files

Finally to access the plan files located on the network, the user should select **"Administration-Access Network Files"** from the menu. Once that is done, any plans that are opened will be from the network location. As shown in Figure 104, there are two indicators to the user that they are accessing network files:

- The Administration menu shows a toggle beside the **"Access Network Files"** menu option.
- The caption title of the application shows an Asterisk, indicating network access.

Required Files

Following is a complete listing of the application files required for the application to properly function (excluding the data files, extensions ".dbf" and ".fpt", and any report files with extension ".rpt").

File Name
_DBFCDX.RDD
VWIClinicModeler.exe
cain4shl.dll
CAINDREG.EXE
calm_w32.dll
CATO3CNT.DLL
CATO3DAT.DLL
CATO3MSK.DLL
CATO3NBR.DLL
CATO3SPL.DLL
CATO3TIM.DLL
CATOCFGE.EXE
CAVO2GUI.DLL
CAVO2RDD.DLL
CAVO2SYS.DLL
CAVODBF.RDD
CAVONT20.DLL
CAVORT20.DLL
DBFBLOB.RDD
DBFCDX.RDD
DBFMEMO.RDD
DBFNTX.RDD
DELIM.RDD
Install.isc
Labels.sys
MSVCRT20.DLL
VWIClinicModeler.HLP
VWI Clinic Modeler Manual.pdf
Rp2Dsn.hlp
Rp2dsn32.dll
Rp2Eng32.DLL

File Name
Rp2s32.dll
Rpexport.dll
SDF.RDD
VWICM.man
GdiPlus.dll
Unzdll.dll
Zipdll.dll
SPEDBF.RDD
Spe15.DLL
SpeEnglish.DLL
SpeDlg.DLL
SPESQL.RDD
SpeLib32.DLL
UIPRECAL.EXE

If any of the above files are missing they may be copied from the support web site:

www.Hungry-Hippo.com/MedPlanning/ClinicModeling/

Concept Model

This section is essentially a reprint of the early concept model narrative created at the start of the software development.

Framework of Software

The software application will be capable of operating on a freestanding computer and will not require connection to the Internet or to a local area network to operate. The application will also be capable of operating in a client/server environment allowing users to share a common set of data files. The datasets used by the application will be dBase compatible files, using a memo/index format compatible with the FoxPro CDX standard.

The nature of a database is to save changes to each record immediately. Unlike a spreadsheet or word document there is no new file being created when a "save" occurs. This behavior means that when a user wants to capture a certain state of the created clinical plan, they must make the effort to export the entire Plan to a ZIPPED file. If this export process is not accomplished there is no history of the changes being maintained, and no ability for the user to step back in his or her edits once they have moved to another data record. This type of database behavior will be inherent in the Clinic Modeler application. Separate versions of the generated Clinic Plan may only be created and maintained by exporting a complete "Plan" to a ZIPPED file, see “Saving a Plan”.

Installation

The normal installation of the application will use a Setup executable that will step the user through the process of selecting which software components are to be installed, the directory where the application is to be installed, and whether or not to add a shortcut for the application to the user's desktop and shortcut tool bar.

The Setup utility will initially install three major components (all of which are necessary for proper operation); subsequent installs may be for only one of the three major components. These three components are as follows:

- The Application executables and main data files.

- The data files of the knowledge repository. These files may be updated separately over time, and thus the install is structured to support subsequent updates.

- The criteria data files of the DOD SEPS application. Similar to the data files of the Clinic Modeler knowledge repository, these criteria files may be updated separately overtime, and therefore may be installed separately.

Directory Paths

The default installation of the Clinic Modeler application and its data files are as follows:

The application will be installed into the directory "Clinic Modeler". This directory will by default be created in the path "C:\Program Files\HHApps\". During the setup process the user will be allowed to change any part of this install path.

Underneath this "Clinic Modeler" directory there will be by default several subordinate directories. They are:

"\Sys" which is short for "system" and is where the application executables, documentation, and help files will be located.

"\Data" is where the basic data files of the application will be installed. This includes files controlling shared access to the application (authorized users); local listing of software bugs discovered by the user(s) and periodically updated by the developer, and report file formats. These files are isolated into a separate directory permitting their location onto a shared server directory. Such a shared installation will allow numerous network users to run the application over the network with each using the same report structures. Such an installation setup would allow any changes to reports made by a user to be shared by all on the network. Similarly observed software bugs would be available to all network users. This data directory may be installed on the local client machine (even during a network installation) without any detriment to the software's normal operation.

There will also be available the option to share a remote bug listing file located on the www.VWI.com Internet server. This central server allows any status of bug fixes or known bugs to be shared by all users and the developer.

"\KR" which is short for "Knowledge Repository" is where the main data files that are used for modeling the various clinic proposals are stored. These data files consist of key modeling statistics regarding population demographics, workload utilizations, staffing ratios, spatial templates and estimating factors. This directory represents the "brains" of the Clinic Modeler.

"\Criteria" is where a copy of the SEPS criteria files is stored. These files will have been converted to an earlier version of the FoxPro CDX format than that used by the normal SEPS application. These converted files are however still compatible with the SEPS application, and the user may choose to overwrite their SEPS "\criteria" directory without an impact to the SEPS application (v2.4). These SEPS Criteria files will be principally used in several report formats mimicking the PFD output and also the Room Contents list. While overwriting the SEPS files with the Clinic Modeler version of the criteria will support both applications functioning properly, the Clinic Modeler cannot make use of the original SEPS Criteria files. The SEPS files are in a data format that is not compatible, plus they do not contain specific data entries that support key Clinic Modeler report outputs, e.g. Communications requirements report. These criteria files are also used when generating an exportable PFD dataset for subsequent import to a SEPS Project listing.

Maintaining compatibility of these criteria files with the SEPS application is not a stated goal of this development, and subsequent versions of the application may result in this backward compatibility being abandoned.

The final installation subdirectory is the "\Plans" directory. This is the directory where all created Clinic Modeler "plans" will be stored. Each generated Clinic Modeler "plan" will be stored within its own "plan" directory, typically as a subdirectory underneath the main "\Plans" directory. A typical Clinic Modeler "Plan" output will consist of several data files. Each plan directory will also contain a copy of the knowledge repository and criteria files in effect when the plan was first created. This permits the transfer of a completed “plan” from one computer to another and still enables consistent results. In addition to the individual plan's subdirectories, a single data file (PlanList) storing the current listing of plans will be located in this "\Plans" directory. In a shared environment, it is sensible to establish the "\Plans" directory on a common network server, where all users may have access.

Saving a Plan

The above framework for the storage of data files for each "plan" mimics the design of the SEPS application. The SEPS application stores each "projects" PFD and room contents files in a single directory, along with a copy of the criteria that was used to generate the PFD and room contents. When the user wants to transfer the PFD to another user or computer (such as for submission to DMFO), the SEPS application gathers all the data files within that project's directory, makes a copy of the project record stored in the listing of all projects (within SEPS) and then compresses them into a single ZIP

file. This enables an easy and quick method of archiving record copies and transmitting numerous files to other users.

When a SEPS user imports a previously prepared Project ZIP file, a new directory is created, the numerous files are expanded into that project's directory, and a record of the project is added to the consolidated project list data file. If SEPS already has a similar project stored in the project's list, then the project being imported is added as a new version and the version number is incremented.

The Clinic Modeler application will use a similar method of file management. Each user will have the ability to save a copy of a plan by exporting it to a zipped file. They will also be able to import this zipped file as a new version of the "plan".

Plan Creation Process Flow

Following is an overview of the plan creation process.

Overview of Model

The goal of the Clinic Modeler application is to enable the quick estimation of a clinic's required size and its likely cost of construction. The intent is to provide a broad level of accuracy enabling the planner to rapidly and to accurately estimate the size and cost of a clinic. It is not intended to replace the detailed space programming process that results in a scrubbed PFD, nor is it intended to replace the installation's participation in the estimation of DD1391 costs. The modeler is also not meant to replace the analytical studies of the master planning process which involves detailed data pulls of the actual workload, staffing and population records from the CHCS, DEERs and MEPRS systems. Rather this Clinic Modeler is intended to provide a scientific "off-the-cuff" level of estimation for a clinic's size and it's cost. The goal is to provide this estimate at a 95% level of confidence and attempts this by making use of past PFD and master planning efforts as a base of knowledge for future estimates. The application performs this estimate with a minimal of detailed inputs.

Basically, the user will provide an estimate of the population being supported and the type of clinic being planned (medical, dental or a combined facility). In addition to the above some other descriptive information is requested to assist in determining a suitable model of likely workload demand, and factors for estimating costs of construction or renovation. One of these key inputs is the proposed location of the planned clinic.

From this basic input the application will determine a reasonable population model, and from that generate estimated workload and staffing. The staffing estimates will be based upon the current ASAMs

model. From these workload and staffing estimates a suitable PFD will be selected from a pre-developed suite of possible clinic PFDs.

A finite number of clinic PFDs will be developed (probably around 10). The application will use the estimated workload and staffing to determine what size clinic is required. The application will then pick the "right size" PFD from the selection of predetermined sizes. The model is comparable to shopping in a clothing store for a casual shirt, where the sizes range from small to extra large. Contrast this process with the detailed PFD sizing process. The detailed PFD programming process is more like going to a custom tailor for a dress shirt. The goal is to have a perfect "glove-like" fit. The expectation is that with a suitable range of PFD sizes to choose from, the application will get a close enough fit to meet the 95% confidence goal.

This model of predetermined sizes will be applied to specific clinic departments, i.e. pharmacy, laboratory, radiology, etc. Other sections of the clinic that are readily related to key parameters, such as exam rooms being a factor of the estimated number of physicians, will be estimated using those factors.

Estimating Population

This section describes the overall processes and assumptions used by the application in determining the demographics of the population supported.

When the user of the application selects a particular installation for the new facility project and then selects the community type (see **"Community Types"**), these two choices are utilized to select from the repository a best fit for population demographics. If the installation selected is for a stateside location then the user may indicate if retirees are also to be considered in the population modeling. This option to consider retirees is not available for overseas sites since overseas facilities are not authorized sizing to accommodate retirees and their workload (only on a space available status).

Graphical feedback is provided to the user indicating the demographic mix being used to determine total populations. These graphs are pie charts showing the percentage mixes based upon the site selected and the community type. These graphs are generated real-time based upon the knowledge repository and the user's selections.

After selecting the planned location and community type, the user must indicate the active duty population expected for the planned facility. If the site is a training site then the number of trainees expected must be indicated (this number being the average monthly trainees). These two inputs are required, since they cannot be estimated.

Given the input of active duty, the application will lookup the particular installation that the user has selected as the planned site. The user may select either a locale (country or state) or a specific installation. This site will then be looked up within the knowledge repository. The most recent historical record of population data for that specific installation, or average for that locale will be retrieved as being the best likely indicator of the future population to be supported. If a site is selected for which there is no actual historical record, then the overall average will be utilized.

This record will indicate the historical numbers for the population; the percentage mixes of beneficiary categories at that installation (or locale), and respective enrollment numbers for each of the beneficiary categories.

The user may at a later time after the initial plan creation, edit the population numbers derived by the application.

Community Types

The estimation of population models will be dependent upon the concept of "Community Types", these community types will be used to group like population demographics (mix of the key Beneficiary Categories), and their behaviors (utilization rates).

Three community types have been defined:

- Field,
- Garrison and,
- Training.

Field is defined as a community where only active duty military are assigned. This may include government contractors and civilian workers who are authorized care. It would specifically exclude retirees and their dependents from the population. This would be applicable to forward units such as those assigned to the DMZ on the Korean peninsula, a missile-listening post in the highlands of Turkey, or a unit assigned to Iraq or Bosnia.

Garrison is defined as a community where active duty and dependents would be supported as authorized beneficiaries. This would also include the category of "Others" which is meant to catch all authorized contractors and government civilian employees. Garrison specifically excludes active duty trainees from the population mix. Retirees and their dependents may be included in this population if the location being planned is within the U.S. and not overseas. This assumes that overseas facilities are planned to support retirees only on a space available basis, and therefore their potential workload is not considered for planning purposes.

The final community type is Training. This community is similar to that of the garrison community except that it also includes active duty trainees as part of the supported beneficiary population.

Determining Workload From Population

This section describes the methodology for determining the workload for the new facility once population numbers, beneficiary categories and their enrollments have been determined.

Utilization rates for each MEPRS code (third level) for each beneficiary category and for each installation will reside within the knowledge repository. This data is derived from past Master Planning efforts for those installations available. This repository will include a record for the overall locale average, and the army wide average utilization rate for the MEPRs code. These averages will be used in the cases where the proposed site is not found within the knowledge repository of available installations.

The application will take the selected site/locale selected by the user, and seek within the knowledge repository for the most current record for that site/locale. If the site is not found, then the locale average will be used; if the locale is not found then the overall Army average will be used. This record will then be retrieved as the best indicator of the population's demand for a particular medical service. That service being indicated by the MEPRs code. These retrieved records will consist of utilization rates for each MEPRs code for each beneficiary category (AD, FM, Other, Retiree, AD Trainee). These utilization rates will then be multiplied against the projected population numbers for each expected beneficiary category that was generated from the population stage.

When the user requests to edit the workload they will be provided with a listing of possible MEPRs codes of medical and dental services, with the estimated demand for such services resulting from the application's calculations, they will have the ability to edit this workload. The workload value is keyed to the utilization rates. This will enable the application to retain a relation to the assumed population. For those services where the initial estimate does not indicate any workload a check box is available to allow the user to add this service to the model's outputs. Once the user checks the box, indicating that the service will be offered, the workload data will automatically set to the result of the known average utilization rate for that service times the indicated population for the plan. The user may then adjust the assumed utilization rate.

The above available MEPRs codes presented to the user for edit will be consistent with the building type selected during creation. Dental workload will not be presented unless a dental clinic is selected as the building type. Similarly, MEPRs codes inapplicable to medical clinics

will not be presented, e.g. Surgical MEPRs codes will not be presented or generated.

Generating Staffing.

Staffing is generated using the Army MEDCOM's ASAMs staffing model as the underlying logic for estimating staff. Additionally, the ability to estimate provider staffing based upon expected throughputs applied to visits will be available. The ASAMs model uses panel sizes to estimate providers. This method ignores expected workload visits for that service and instead is tied directly to the population being supported. Use of provider throughput models utilizes workload to generate expected provider counts. These are competing models and the user may select which model to use to generate staffing and resultant space requirements. Similarly exam room requirements may also be generated strictly based upon expected workloads, throughputs and available usage hours. This method of space determination for exam rooms is a third user-selected option for space generation.

The ASAMs model requires several input parameters to determine the various sectional staffing for the proposed clinic. These parameters are normally generated by the actual clinic being evaluated and include such items as: the monthly budget for supplies, number of mail items being processed, the existence of an area support mission, and the current manpower TDA. These items are not necessarily tied directly to workload or population data. As a proxy for these various inputs, factors relating to workload or population will be generated. These factors were created using available ASAM sample manpower estimates over several sites. These inputs were then correlated with known workload and population data from those same worksheets to arrive at an average proxy factor for each required input.

The user may edit the manpower requirements directly increasing the line item total for each staff type, or by adding a new staff type. The user must provide complete details about any staff type being added, by selecting from a list of possibilities, each having a predetermined space requirement. For example, if the user chooses to add a secretary, he must indicate that the staff type is a secretary as opposed to a clerk. This difference in type will enable accurately providing the required 140 NSF for the secretary instead of the 60NSF for the clerk. The user will be allowed to create new support sections (typically administrative in nature) but will not be allowed to create workload-generated sections except by going back to the MEPRs workload-editing sheet.

Space Determination

Space determination is performed by using a "kit of parts" model. Specific sections are tied solely to manpower being indicated (e.g.

Number of clerk workspaces), while others have a basic requirement across a broad range of workload figures (a radiology suite, or laboratory) changing only when the workload has crossed a particular threshold such as requiring an additional diagnostic radiology machine. These parts have been prepared manually across the required spectrum of sizes. The application then determines the required part size needed and selects that part from the pre-positioned spectrum. To these sectional components, the application adds exam rooms and offices based upon the applicable ratios of rooms per provider as determined by one of three rules:

Provider staffing as determined by Panel size (this is the model used by the MEDCOM ASAMs staffing guide);

Provider staffing as determined by provider throughput applied to the estimated workload (visits).

Workload space throughput (provider staffing is not used) applied to the estimated workload numbers.

Other space determinations are based upon the number of exam rooms and treatment rooms such as the number of waiting room seats. Certain rooms, such as records file storage, are determined using the enrollment-supported numbers.

These space requirements are generated in a format compatible with the SEPS program version 2.4. As such, they will be transferable to SEPS for further refinement.

Estimating GSF

The clinic's total Gross Square Footage is determined by applying the standard net to gross factors for each individual department. These departmental GSF are then added to arrive at a total GSF tally. This total will be shown broken out as follows:

- Total NSF,
- Mechanical SF,
- Circulation SF,
- Partitions SF,
- Half-Areas (allowance for overhangs)
- Flexibility.

Certain factors of the staffing model require the facility estimated GSF and the square footage cleaned. The latter is considered to be the total of the NSF, plus the SF for circulation and the SF estimated for flexibility. Half areas (because they are outside the building) and the mechanical spaces will not be included in the total SF cleaned to.

Estimating the Replacement Costs.

The estimated replacement cost utilizes several of the inputs provided by the user in combination with US Government planning factors. The following provides an overall summary of the process. The GSF determined by the estimating process is multiplied by the adjusted unit cost per SF, to this total, line items for other costs within the primary facility are estimated using percentage factors, similarly line items for supporting facility costs are also estimated based upon percentage factors. Medical equipment costs logistics category E & F are determined using the standard room contents templates from SEPS with the estimated equipment item costs contained in SEPS. Finally, typical factors for OCE administration and supervision, and contingency are applied to arrive at the program amount estimate.

The unit cost of the construction is the result of the base unit cost for a category code, multiplied by adjustment factors for area costs, inflation, size, technological and complexity challenges. The application uses the selected clinic building type to determine the category code for the project. This value is then used to retrieve the latest unit cost for construction from the knowledge repository. The application then uses the selected site location to look up the appropriate area cost factor, which is the multiplied against the base unit cost. The size adjustment is then determined by determining the ratio of the estimated GSF to the unit cost assumed GSF and the resultant ratio is used to retrieve the applicable adjustment factor from the table in the knowledge repository. A standard technology factor of 1.05 and a complexity factor of 1.05 are applied for all clinic types. Finally, based upon the site location selected the period of construction is determined. The user entered Fiscal Year is then used to determine the inflation factor for the project. An assumed construction start date of January 15, FY+1 is used along with the period of construction to estimate the mid-point of construction date. January 15th is based upon an optimistic budget approval of October 1st, and allowing for 90 days advertisement and award, followed by 15 days for mobilization. The applicable inflation factors are then looked up from within the knowledge repository. The final adjusted unit cost is then the product of all the determined factors applied to the initial unit cost.

The supporting costs portion of the DD1391 estimate will utilize VWI planning factors based upon a user-assessed risk of a poor site. This risk will be a rating of high, medium or low with medium being the default of the application. A risk assessment of low would indicate a highly favorable site, with readily available utilities, while an assessment of high would indicate a highly unfavorable site with probable long utility runs, poor soil conditions, etc.

Finally standard factors for Supervision and Administration (S&A), and contingency will be added, along with the calculated estimate of

logistical category E & F equipment, to arrive at the DD1391 program amount.

Process Flow Diagrams

Following are process flow diagrams showing the overall facility estimating process and the likely data stores being utilized, along with some details of internal processes described above.

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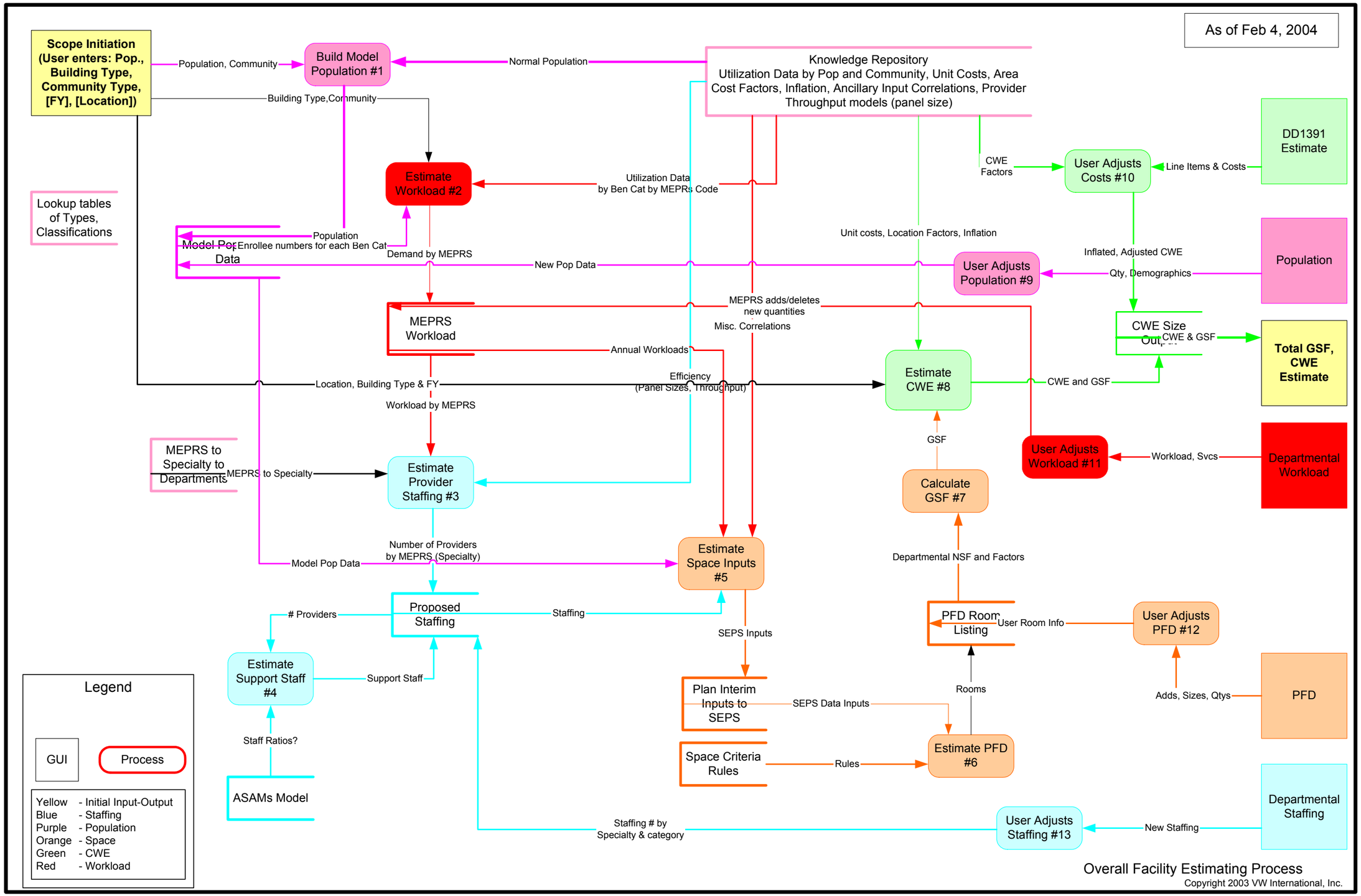
As of Feb 4, 2004
Scope Initiation (User enters: Pop., Building Type, Community Type, [FY], [Location])
Population, Community
Build Model Population #1
Normal Population
Knowledge Repository
Utilization Data by Pop and Community, Unit Costs, Area Cost Factors, Inflation, Ancillary Input Correlations, Provider Throughput models (panel size)
Building Type,Community
Estimate Workload #2
Utilization Data by Ben Cat by MEPRS Code
CWE Factors
User Adjusts Costs #10
Line Items & Costs
DD1391 Estimate
Lookup tables of Types, Classifications
Population
Model Pop Data
Enrollee numbers for each Ben Cat
Demand by MEPRS
New Pop Data
Unit costs, Location Factors, Inflation
User Adjusts Population #9
Inflated, Adjusted CWE
Qty, Demographics
Population
MEPRS adds/deletes new quantities
Misc. Correlations
MEPRS Workload
CWE Size Output
CWE & GSF
Total GSF, CWE Estimate
Annual Workloads
Efficiency (Panel Sizes, Throughput)
Location, Building Type & FY
Estimate CWE #8
CWE and GSF
Workload by MEPRS
GSF
MEPRS to Specialty to Departments
MEPRS to Specialty
Estimate Provider Staffing #3
User Adjusts Workload #11
Workload, Svcs
Departmental Workload
Calculate GSF #7
Number of Providers by MEPRS (Specialty)
Model Pop Data
Estimate Space Inputs #5
Departmental NSF and Factors
Providers
Proposed Staffing
Staffing
PFD Room Listing
User Room Info
User Adjusts PFD #12
SEPS Inputs
Estimate Support Staff #4
Support Staff
Plan Interim Inputs to SEPS
SEPS Data Inputs
Rooms
Adds, Sizes, Qtys
PFD
Staff Ratios?
Space Criteria Rules
Rules
Estimate PFD #6
ASAMs Model
Staffing # by Specialty & category
User Adjusts Staffing #13
New Staffing
Departmental Staffing
Legend
GUI
Process
Yellow - Initial Input-Output
Blue - Staffing
Purple - Population
Orange - Space
Green - CWE
Red - Workload
Overall Facility Estimating Process
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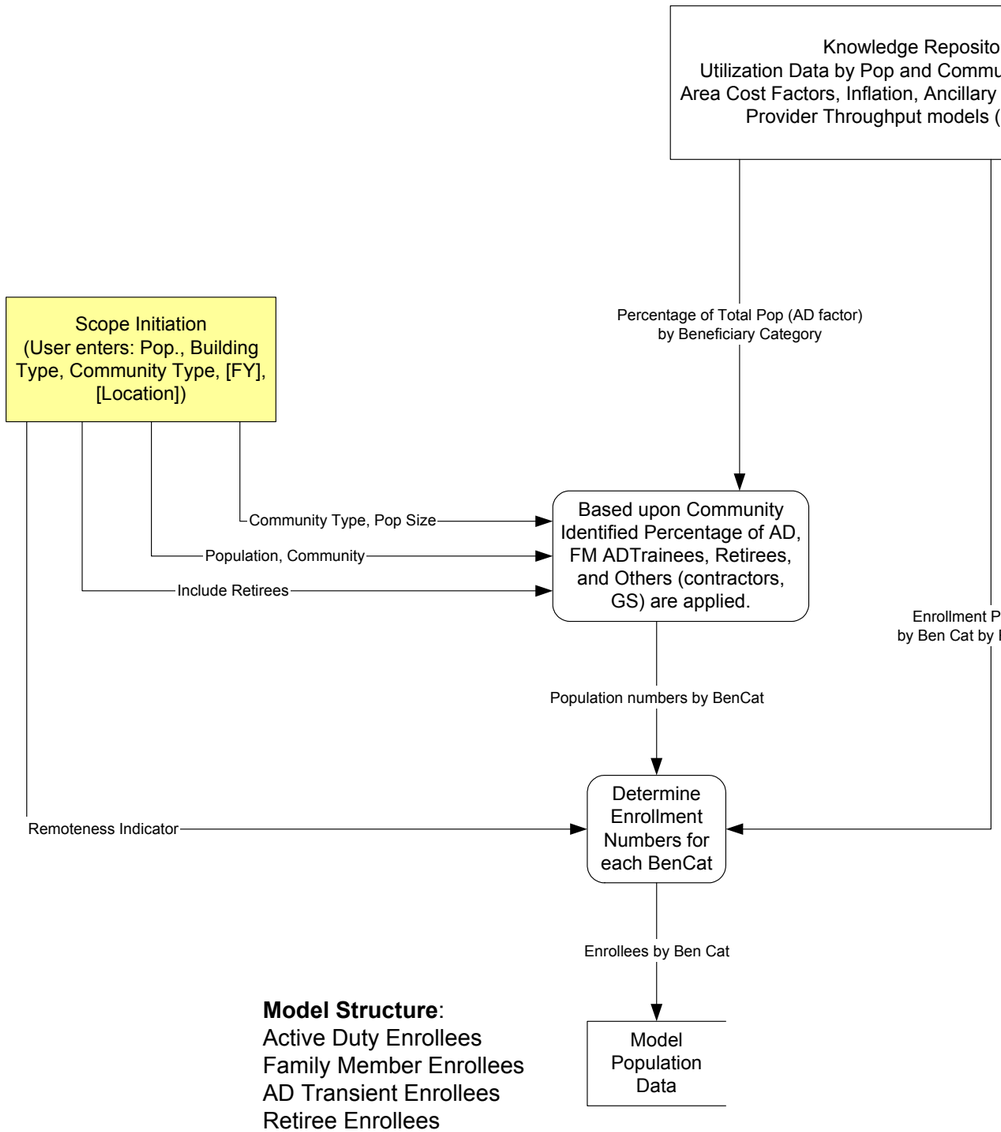
As of Feb 4, 2004



Percentages are keyed to site and CONUS/ OCONUS

Trainees are 100% Enrolled regardless of remoteness
Active Duty Permanent party are 100% enrolled unless not remote then they are ???85%.
Family Members are ?90% enrolled (target) for remote, non remote is 80%?? (target).
Contractors & GS if supported have same factors as Family Members.
Retirees are the same enrollment regardless of remoteness, and the ???%.

Model Structure:
Active Duty Enrollees
Family Member Enrollees
AD Transient Enrollees
Retiree Enrollees
Other Enrollees
Active Duty Population
Family Member Population
AD Transient Population
Retiree Population
Other Population

Build Model Population Process #1

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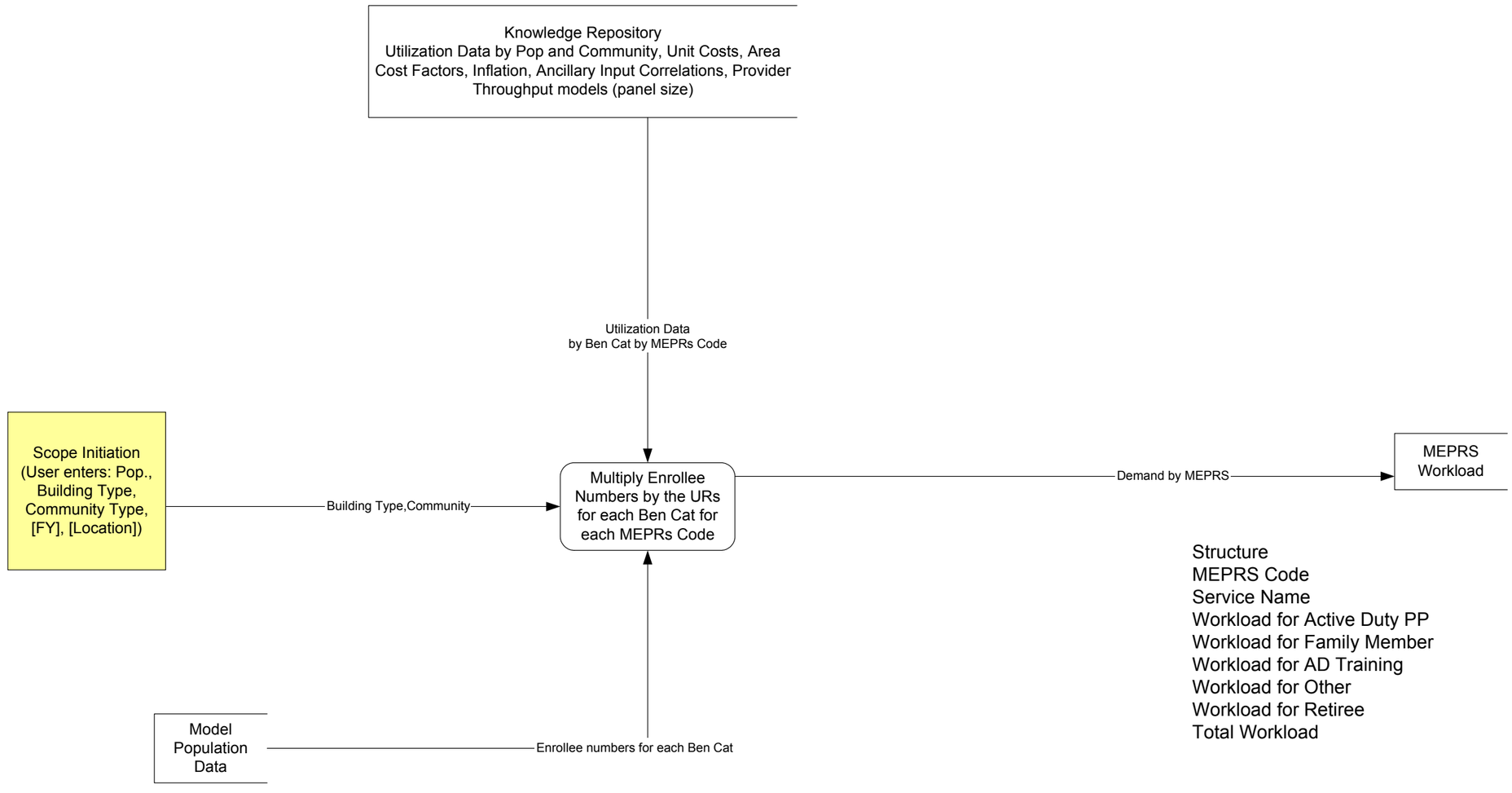
As of Feb 4, 2004



Estimate Workload Process #2

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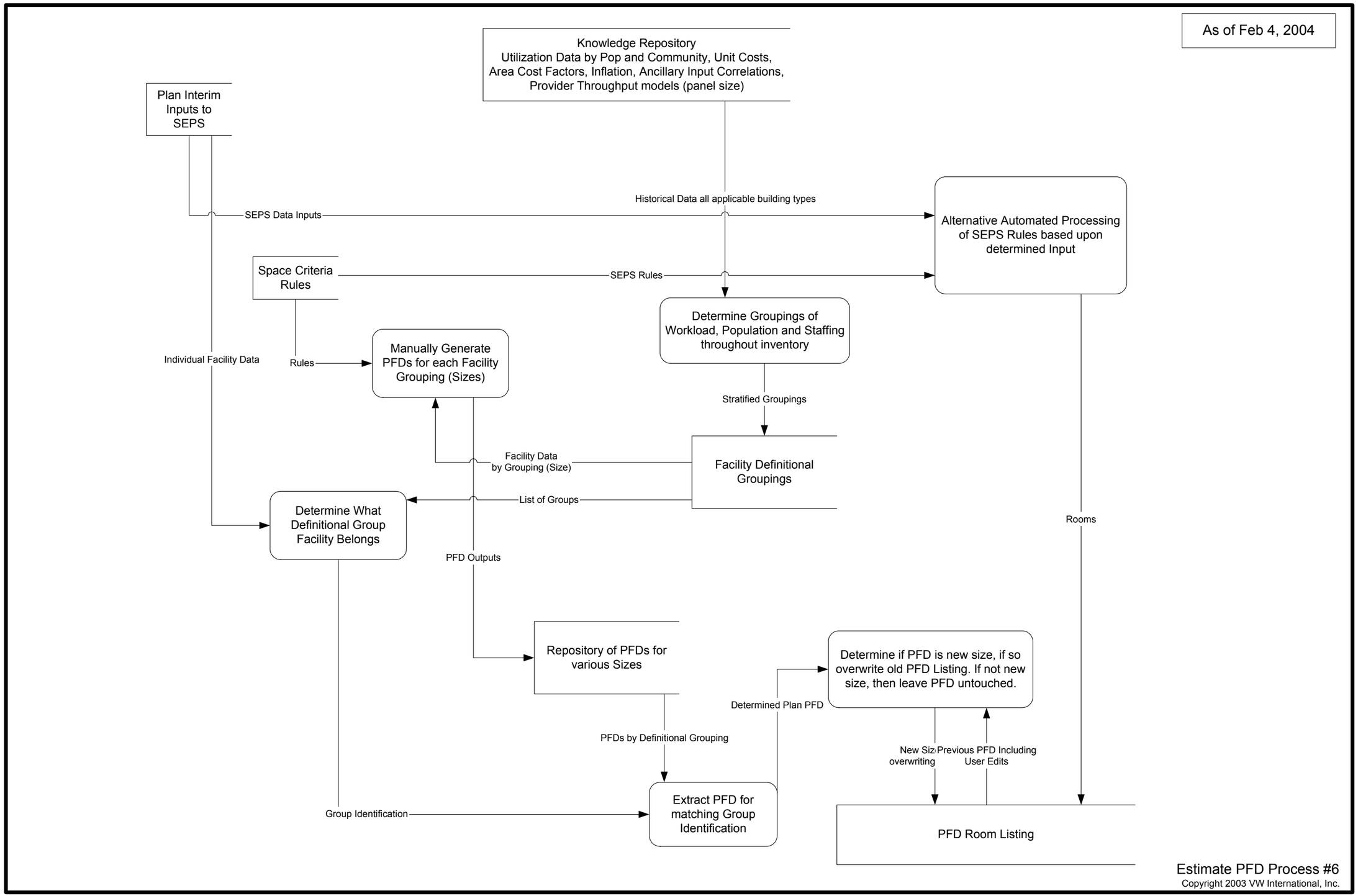

Estimate PFD Process #6

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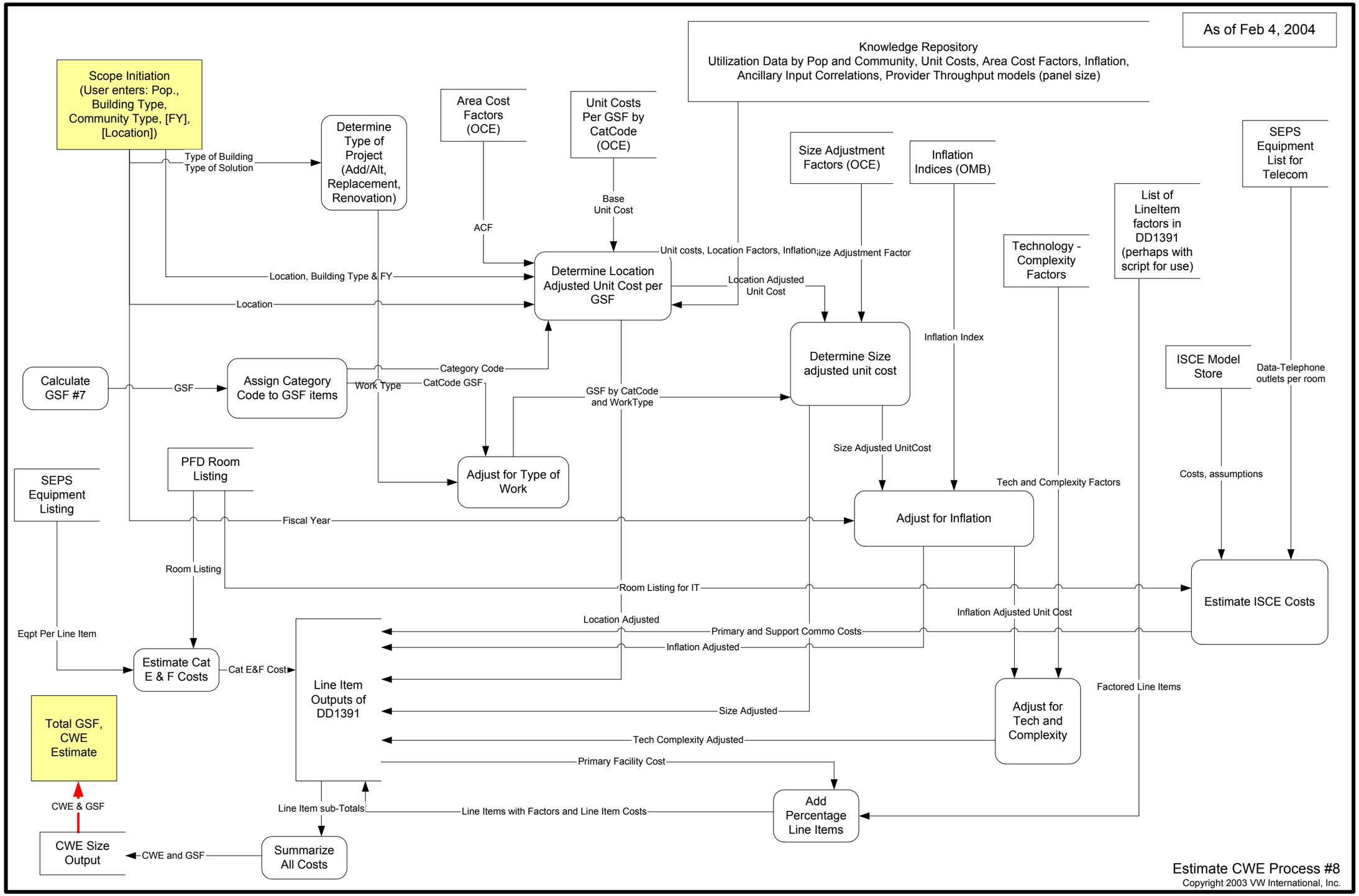
As of Feb 4, 2004
Knowledge Repository
Utilization Data by Pop and Community, Unit Costs, Area Cost Factors, Inflation, Ancillary Input Correlations, Provider Throughput models (panel size)
Scope Initiation (User enters: Pop., Building Type, Community Type, [FY], [Location])
Type of Building
Type of Solution
Determine Type of Project (Add/Alt, Replacement, Renovation)
Area Cost Factors (OCE)
Unit Costs Per GSF by CatCode (OCE)
Size Adjustment Factors (OCE)
Inflation Indices (OMB)
SEPS Equipment List for Telecom
List of LineItem factors in DD1391 (perhaps with script for use)
Technology - Complexity Factors
Base Unit Cost
ACF
Unit costs, Location Factors, Inflation
Size Adjustment Factor
Location, Building Type & FY
Location Adjusted Unit Cost
Location
Determine Location Adjusted Unit Cost per GSF
Inflation Index
Calculate GSF #7
GSF
Assign Category Code to GSF items
Category Code
Work Type
CatCode GSF
GSF by CatCode and WorkType
Determine Size adjusted unit cost
ISCE Model Store
Data-Telephone outlets per room
PFD Room Listing
Adjust for Type of Work
Size Adjusted UnitCost
Tech and Complexity Factors
Costs, assumptions
SEPS Equipment Listing
Fiscal Year
Adjust for Inflation
Room Listing
Room Listing for IT
Estimate ISCE Costs
Location Adjusted
Inflation Adjusted Unit Cost
Eqpt Per Line Item
Primary and Support Commo Costs
Inflation Adjusted
Estimate Cat E & F Costs
Cat E&F Cost
Line Item Outputs of DD1391
Factored Line Items
Size Adjusted
Adjust for Tech and Complexity
Total GSF, CWE Estimate
Tech Complexity Adjusted
Primary Facility Cost
CWE & GSF
Line Item sub-Totals
Line Items with Factors and Line Item Costs
Add Percentage Line Items
CWE Size Output
CWE and GSF
Summarize All Costs
Estimate CWE Process #8
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User Edits

The user will be capable of editing each of the following output stages:

- Population
- Workload
- Staffing
- Space
- Cost

These are listed in their sequential order. Each output stage is dependent upon the output preceding it. Changes to one stage will impact all subsequent stages following it. Thus a user change to the population numbers would result in potential changes to Workload, Staffing, Space and Cost.

The user will be able to edit each one of the above stages but only one at a time. After they edit these outputs the dependent stages will be recalculated. This process can be seen in the "Overall Facility Estimating Process" flow diagram.

At each stage, the user will be presented with an interface that will allow user edits, but will also keep track of a single prior iteration's calculations. In general there will be three groups of data presented:

1. The original calculated number based upon the original inputs by the user during the Plan Creation Wizard process. These numbers will not be editable by the user and will not be subsequently changed by the application. They represent the initial baseline of estimation.
2. A copy of the prior iteration's calculation based upon the earlier user entry. This allows reference to one complete prior-iteration. These values will be read-only.
3. The modeler estimates resulting from the previous stage's user entries. This is a read-only display and is not editable by the user.
4. Finally, the user's most recent entry for the current stage of the process is maintained. These will initially be the same as the estimates in group 3 above, but the user will be capable of editing them.

Those fields prefixed with "Est" for estimate, indicate the result of the application's modeler based upon the previous entries or the initial entries into the Plan Creation Wizard by the user. These estimate

fields are what the user will see when the plan is first created. The user does not have edit access to these fields.

Those fields prefixed with "User" indicate the entries that the user may override. They are initiated to the same values as the estimate fields.

Once the user makes changes to the "User" fields and then selects "recalculate" or clicks elsewhere in the Modeler treeview, the application will recalculate all subsequent steps in the modeling process. The results of these steps will then be stored into the "Estimate" fields of the subsequent tables. The "User" fields of those tables will not be reset to the new "Estimate" values.

The general rule is that the "User" fields will be initiated once at the plan creation stage to match the estimate output. However, once the user changes these values, they will not be coordinated with any new recalculation estimates. This allows the user to compare their entries with the models results, while also maintaining the original model's output as a baseline for comparison.

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