



# Chapter 1

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## Introduction to AutoCAD

### Learning Objectives

**After completing this chapter you will be able to:**

- Start AutoCAD and start a drawing in AutoCAD.
- Understand the various components of the initial AutoCAD screen.
- Invoke AutoCAD commands from the keyboard, menu, toolbar, shortcut menu, and **TOOL PALETTES**.
- Understand the functioning of dialog boxes in AutoCAD.
- Start a new drawing using the **QNEW** command and the Startup dialog box.
- Save the work using various file-saving commands.
- Close a drawing.
- Open an existing drawing.
- Understand the concept of Multiple Document Environment.
- Quit AutoCAD.
- Use the various options of AutoCAD's help.
- Understand the use of Active Assistance, Learning Assistance, and other interactive help topics.

## STARTING AutoCAD

When you turn on your computer, the operating system (Windows 95, Windows NT, Windows 98, Windows XP, and so on) is automatically loaded. This will display the Windows screen with various application icons. You can start AutoCAD by double-clicking on the AutoCAD 2004 icon available on the desktop of your computer. You can also load AutoCAD from the Windows taskbar by choosing the **Start** button at the bottom left corner of the screen (default position) to display the menu. Choose **Programs** to display the program folders. Now, choose the **Autodesk > AutoCAD 2004** folder to display the AutoCAD programs and then choose **AutoCAD 2004** to start AutoCAD, see Figure 1-1.

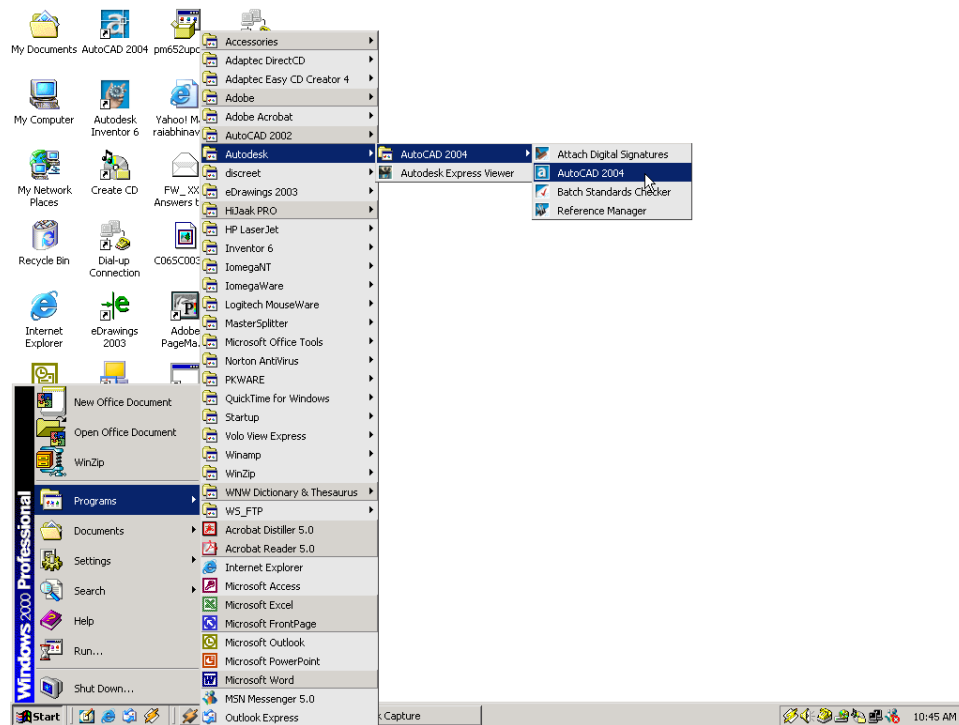


Figure 1-1 Windows screen with taskbar and application icons

## AutoCAD SCREEN COMPONENTS

The various components of the initial AutoCAD screen are the drawing area, the command window, menu bar, several toolbars, model and layout tabs, and the status bar (Figure 1-2). A title bar that has the AutoCAD symbol and the current drawing name is displayed on top of the screen.

### Drawing Area

The drawing area covers the major portion of the screen. Here you can draw the various objects and use the various commands. To draw the objects you need to define the coordinate points, which can be selected by using your pointing device. The position of the pointing

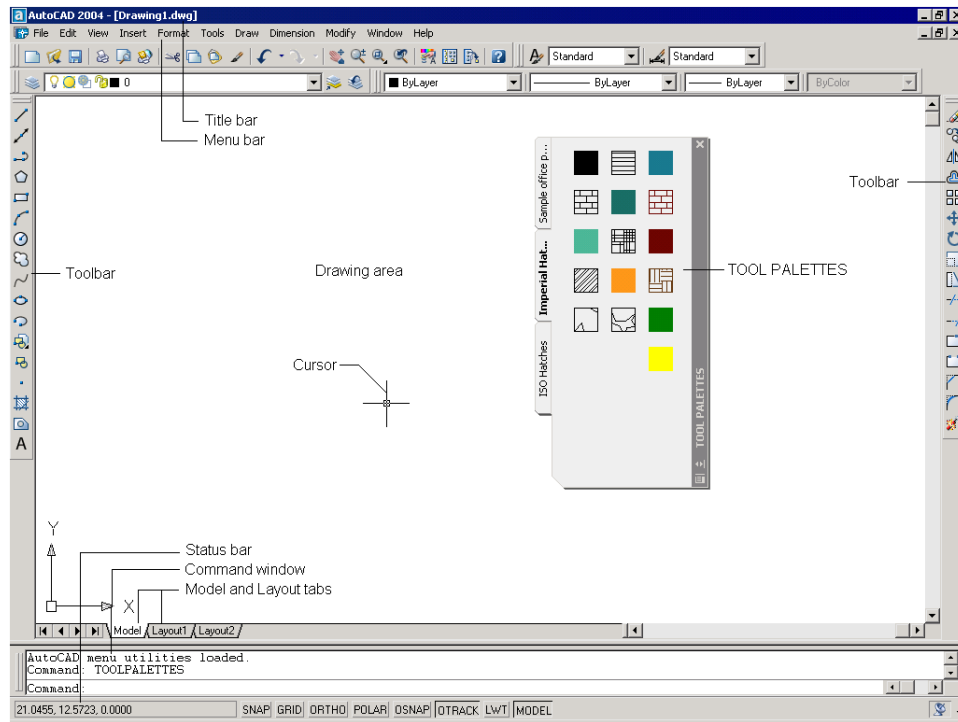


Figure 1-2 AutoCAD screen components

device is represented on the screen by the cursor. There is a coordinate system icon at the lower left corner of the drawing area. The window also has the standard Windows buttons such as close, minimize, scroll bar, and so on, available on the top right corner. These buttons have the same functions as for any other standard window.

## Command Window

The command window is present at the bottom of the drawing area and has the Command prompt where you can enter the commands. It also displays the subsequent prompt sequences and the messages. You can change the size of the window by placing the cursor on the top edge (double line bar known as the grab bar) and then dragging it. This way you can increase its size to see all the previous commands you have used. By default the command window displays only three lines. You can also press the F2 key to display the **AutoCAD Text window**, which displays the previous commands and prompts.



### Tip

You can hide all the toolbars displayed on the screen by either pressing the **CTRL+0** keys or by choosing the **Clean Screen** option from the **View** menu. To turn on the display of the toolbars again press the **CTRL+0** keys on the keyboard.

## Status Bar

The status bar is displayed at the bottom of the screen (Figure 1-3). This bar contains some useful information and buttons that will make it easy to change the status of some AutoCAD functions. To change the status, you must choose the buttons that toggle between on and off.

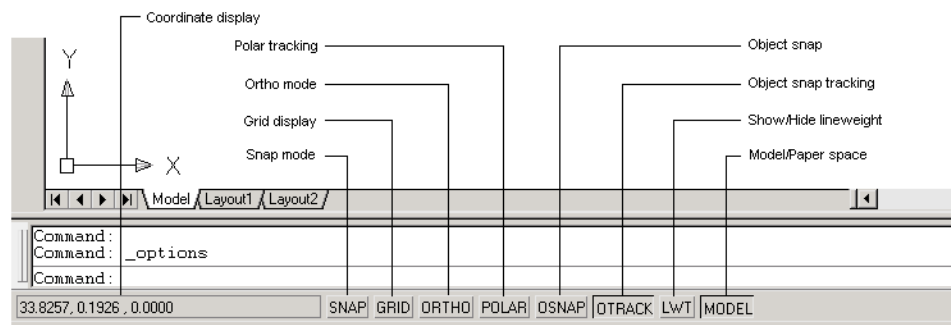


Figure 1-3 Default status bar display

## Coordinate Display

The coordinates information is displayed in the left corner of the status bar. You can select this coordinate button to toggle between on and off. The **COORDS** system variable controls the type of display of the coordinates. If the value of the **COORDS** variable is set to 0, the coordinate display is static, that is, the coordinate values displayed in the status bar change only when you specify a point. If the value of the **COORDS** variable is set to 1 or 2, the coordinate display is dynamic. When the variable is set to 1, AutoCAD constantly displays the absolute coordinates of the graphics cursor with respect to the UCS origin. The polar coordinates (length<angle) are displayed if you are in an AutoCAD command and the **COORDS** variable is set to 2. You can use the key F6 to turn the coordinate display on or off.

## SNAP

The snap mode allows you to move the cursor in fixed increments. If the snap mode is on, the **SNAP** button is displayed as pressed in the status bar; otherwise, it is not displayed. You can also use the function key F9 as a toggle key to turn Snap off or on.

## GRID

The grid lines are used as reference lines to draw objects in AutoCAD. If the grid display is on, the **GRID** button is displayed as pressed and the grid lines are displayed on the screen. The function key F7 can be used to turn the grid display on or off.

## ORTHO

The ortho mode allows you to draw lines at right angles only. If this mode is on, the **ORTHO** button is pressed in the status bar. You can use the F8 key to turn Ortho on or off.

## POLAR

If you turn the polar tracking on, the movement of the cursor is restricted along a path based

on the angle set as the polar angle settings. Choosing the **POLAR** button in the status bar turns the polar tracking on. You can also use the function key F10. Remember that turning the polar tracking on, automatically turns off the ortho mode.

### OSNAP

When object snap is on, you can use the running object snaps to snap on to a point. If object snap is on, the **OSNAP** button is displayed as pressed in the status bar. You can also use the F3 key to turn the object snap on or off. If **OSNAP** is off, the running object snaps are temporarily disabled. The status of **OSNAP** (off or on) does not prevent you from using immediate mode object snaps.

### OTRACK

Choosing the **OTRACK** button turns object snap tracking on or off.

### LWT

Choosing this button in the status bar allows you to turn on or off the display of lineweights in the drawing. If the **LWT** button is not pressed, the display of Lineweight is turned off.

### MODEL

The **MODEL** button is displayed in the status bar when you are working in the model space to create drawings. You can choose this button to shift to the layouts (paper space) where you can create drawing views. Once you switch to layouts, this button is replaced by the **PAPER** button. You can choose the **PAPER** button to shift back to the model space.



#### Note

*All the buttons in the status bar are discussed in detail in Chapter 4, Working With Drawing Aids.*

*The menu bar and toolbar are discussed in the following section. The model and layout tabs are discussed in Chapter 11, Model Space Viewports, Paper Space Viewports, and Layouts.*

## Status Bar Tray Options\*

The status bar tray options are displayed at the lower-right corner of the screen. These options are used to access the frequently used commands in AutoCAD.

### Communication Center\*



The **Communication Center** displays a message and an alert whenever Autodesk provides the latest information regarding software updates and their other products.

You can configure the settings of the **Communication Center** by clicking on the **Communication Center** icon. The **Communication Center** dialog box is displayed. Choose the Settings button to display the **Configuration Settings** dialog box. The **Please Select Country** drop-down list available in the **Country** area allows you to select the name of your country. The **Check for New Content** area allows the **Communication Center** to update you daily, weekly, monthly, or on demand on the latest information provided by Autodesk.

### Manage Xrefs\*



The **Manage Xrefs** icon is displayed whenever an external reference drawing is attached to the selected drawing. This icon displays a message and an alert whenever an xref drawing is required to be reloaded. To know about the detailed information regarding the status of each xref in the drawing and the relation between the various Xrefs, pick the **Manage Xrefs** icon. The **XRef Manager** dialog box is displayed. The Xrefs are discussed in detail in Chapter 16, Understanding External References.

### CAD Standards\*



The **CAD Standards** icon is displayed whenever a standard drawing is associated with the selected drawing to compare the standards. This icon displays a message and an alert whenever standard violation occurs in the drawing. The drawing can be checked for the standard violation and edited using the **Check Standards** dialog box, which is invoked by clicking on the **CAD Standards** icon.

### Validate Digital Signatures\*



The **Validate Digital Signatures** icon is displayed whenever AutoCAD drawing has a valid digital signature. You can validate the digital signature by clicking on this icon.

## INVOKING COMMANDS IN AutoCAD

When you start AutoCAD and you are in the drawing area, you need to invoke AutoCAD commands to perform any operation. For example, if you want to draw a line, first you have to invoke the **LINE** command, and then you define the start point and endpoint of the line. Similarly, if you want to erase objects, you must enter the **ERASE** command, and then select the objects for erasing. AutoCAD has provided the following methods to invoke commands:

**Keyboard**  
Shortcut menu

**Menu**  
**TOOL PALETTES\***

**Toolbar**

### Keyboard


You can invoke any AutoCAD command at the keyboard by typing the command name at the Command prompt, and then pressing ENTER or the SPACEBAR. Before you enter a command, make sure the Command prompt is displayed as the last line in the command window area. If the Command prompt is not displayed, you must cancel the existing command by pressing ESC (escape) on the keyboard. The following example shows how to invoke the **LINE** command from the keyboard:

Command: **LINE** or **L**  (L is command alias)

### Menu

You can also select commands from the menu. The menu bar that displays the menu bar titles is at the top of the screen. As you move the cursor over the menu bar, different titles are highlighted. You can choose the desired item by pressing the pick button of your pointing device. Once the item is selected, the corresponding menu is displayed directly under the

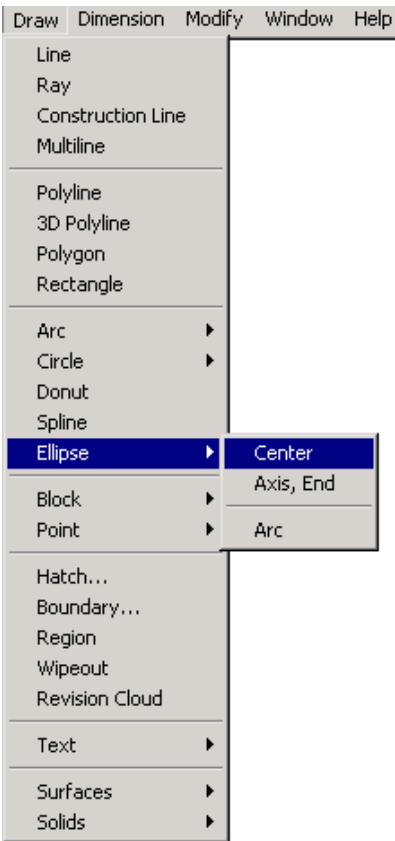
title. You can invoke a command from the menu by pressing the pick button of your pointing device. Some of the menu items in the menu display an arrow on the right side, which indicates that the menu item has a cascading menu. The cascading menu provides various options to execute the same AutoCAD command. You can display the cascading menu by choosing the menu item or by just moving the arrow pointer to the right of that item. You can then choose any item in the cascading menu by highlighting the item or command and pressing the pick button of your pointing device. For example, if you want to draw an ellipse using the Center option, choose **Draw** from the menu bar, then choose **Ellipse** from the **Draw** menu, and finally choose **Center** from the cascading menu as shown in Figure 1-4. In this text, this command selection sequence will be referenced as **Draw > Ellipse > Center**.

 **Note**  
*The menus and toolbars tend to vary in every release of AutoCAD.*

**Toolbar**

In Windows, the toolbar is an easy and convenient way to invoke a command. Each toolbar contains a group of buttons representing various AutoCAD commands. When you move the cursor over the buttons of a toolbar, the button gets lifted and a three-dimensional (3D) box encloses the button on which the cursor is resting. The tooltip (name of the button) is also displayed below the button. Once you locate the desired button, the command associated with that button can be invoked by choosing the button. For example, you can invoke the **LINE** command by choosing the **Line** button from the **Draw** toolbar, see Figure 1-5.

Some of the buttons in a toolbar have a small triangular mark at the lower right corner. This indicates that the button has a flyout attached to it. If you hold the button down, the flyout is displayed. The flyout contains the various options for the command. When you choose a command from the toolbar, the command prompts are displayed in the command window. By default the **Standard**, **Styles**, **Layers**, **Properties**, **Draw**, and **Modify** toolbars are displayed on the screen and are docked to the top and the left side edges of the drawing area.



**Figure 1-4** Invoking the **ELLIPSE** command from the **Draw** menu

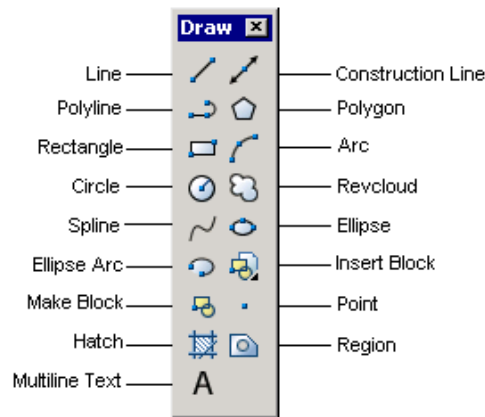


Figure 1-5 The **Draw** toolbar

## Displaying Toolbars

The various toolbars can be displayed by selecting their respective check boxes in the **Toolbars** tab of the **Customize** dialog box (Figure 1-6). The **Customize** dialog box can be invoked by choosing **View > Toolbars** from the menu bar. You can also display a toolbar from the shortcut menu, which is displayed by right-clicking anywhere on any toolbar on the screen and choosing the name of the toolbar to display from the shortcut menu.

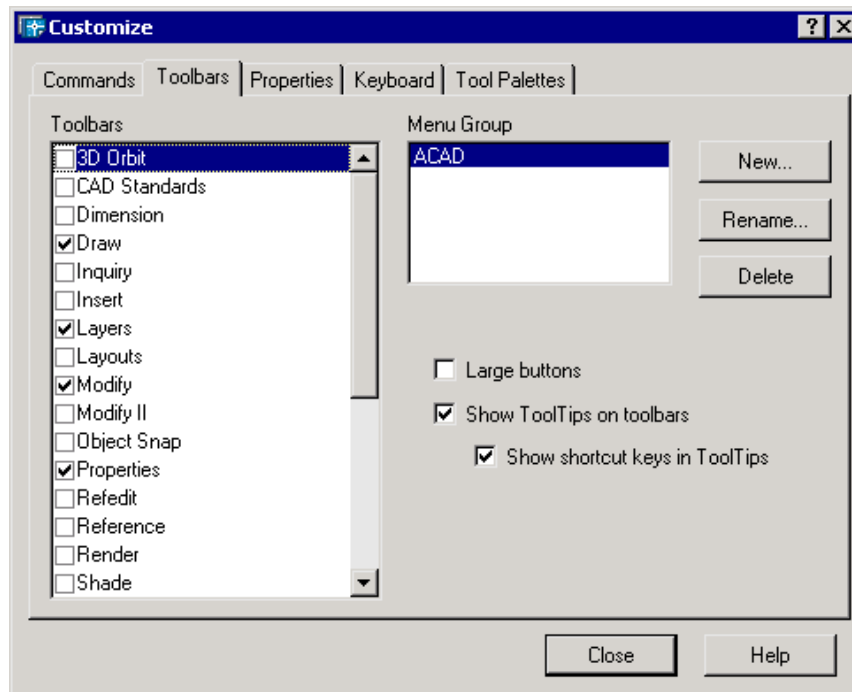


Figure 1-6 List of toolbars in the **Toolbars** tab of the **Customize** dialog box



Moving and Reshaping Toolbars

The toolbars can be moved anywhere on the screen by placing the cursor on the title bar area and then dragging it to the desired location. You must hold the pick button down while dragging. While moving the toolbars you can dock them to the top or sides of the screen by dropping them in the docking area. You may also prevent docking by holding the CTRL key when moving the toolbar to a desired location. You can also change the shape of the toolbars by placing the cursor anywhere on the border of the toolbar where it takes the shape of a double arrow (Figure 1-7), and then pulling it in the desired direction (Figure 1-8). You can also customize toolbars to meet your requirements (see Chapter 32, Pull-down, Shortcut, and Partial Menus and Customizing Toolbars).



Figure 1-7 Reshaping the *Draw* toolbar



Figure 1-8 *Draw* toolbar reshaped

Shortcut Menu

AutoCAD has provided shortcut menus as an easy and convenient way of invoking commands. These menus are context-sensitive, which means that the commands present in them are dependent on the place/object for which they are displayed. This menu is invoked by right-clicking and is displayed at the cursor location.

You can right-click anywhere on the drawing area to display the general shortcut menu. It generally contains an option to select the previously invoked command again (Figure 1-9) apart from the common commands for Windows.

If you right-click on the drawing area while a command is in effect, the shortcut menu displayed contains the various options of that particular command. Figure 1-10 shows the shortcut menu when the **POLYLINE** command is active.

If you right-click on the layout tabs, the shortcut menu displayed contains the various options for the layouts (Figure 1-11).

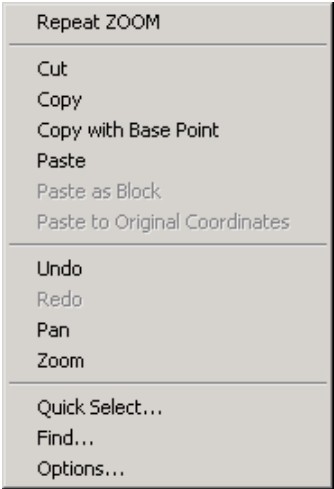
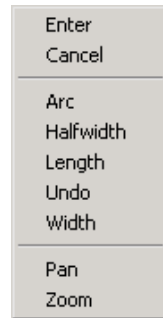
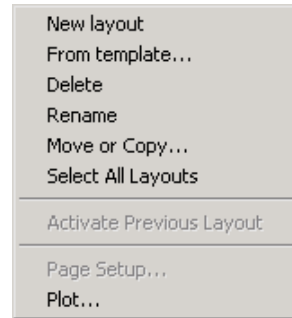


Figure 1-9 Shortcut menu without an active command

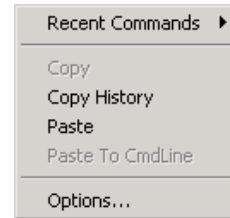


**Figure 1-10** Shortcut menu with the **POLYLINE** command active



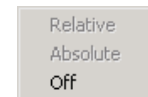
**Figure 1-11** Shortcut menu for the Layout tab

You can also right-click on the command window to display the shortcut menu. This menu displays the six most recently used commands and some of the window options like Copy and Paste (Figure 1-12). The commands and their prompt entries are displayed in the History window (previous command lines not visible) and can be selected, copied, and pasted in the command line using the shortcut menu. As you press the up arrow key, the previously entered commands are displayed in the command window. Once the desired command is displayed at the Command prompt you can execute the command by simply pressing the ENTER key. You can also copy and edit any previously invoked command by locating it in the History window and then selecting the lines. Right-click in the command window to display the shortcut menu (Figure 1-12); select copy, and then paste the selected lines in the command line. After the lines are pasted, you can edit them.



**Figure 1-12** Command line window shortcut menu

You can right-click on the status bar to display the shortcut menu. This menu contains the options to change the settings of drawing tools (Figure 1-13).



**Figure 1-13** Status bar shortcut menu



**Tip**

A shortcut menu is available for any situation while working in AutoCAD. You should try to make use of it frequently by right-clicking at various positions.

## TOOL PALETTES\*

AutoCAD has provided **TOOL PALETTES** (Figure 1-14) as an easy and convenient way of placing and sharing hatch patterns and blocks in the current drawing. By default, AutoCAD displays the Tool Palettes as a window on the right of the drawing area. Also, the **TOOL PALETTES** window can be turned on or off by either choosing the **Tool Palettes** button available on the **Standard** toolbar or by pressing the CTRL+3 keys. The **TOOL PALETTES** are discussed in detail in Chapter 13, Hatching Drawings.

## AutoCAD DIALOG BOXES

There are certain commands which when invoked display a dialog box. A dialog box is a convenient method of user interface. In the menus, the menu item with the ellipses [...] displays the dialog box when you choose that item. For example, **Options** in the **Tools** menu displays the **Options** dialog box. Any dialog box contains a number of parts like the dialog label, radio buttons, text or edit boxes, check boxes, slider bars, image boxes, and command buttons. These components are also referred to as **TILES**. Some of the components of a dialog box are shown in Figure 1-15.

You can select the desired tile using the pointing device, which is represented by an arrow when a dialog box is invoked. The title bar displays the name of the dialog box. The **tabs** specify the various sections with a group of related options under them. The **check boxes** are toggle buttons for making the particular option available or unavailable. The **drop-down list** displays an item and an arrow on the right which when selected displays a list of items to choose from. You can make a selection in the **radio buttons**. Only one can be selected at a time. The **image box** displays the preview image of the item selected. The **text box** is an area where you can enter a text like a file name. It is also called an **edit box** because you can make any change to the text entered. In some dialog boxes there is the [...] **button**, which displays another related dialog box. There are certain **command buttons** (OK, Cancel, Help) at the bottom of the dialog box. The name implies their functions. The button with a dark border is the default button. The dialog box has a **Help** button for getting help on the various features of the dialog box. There is also a **question mark** (?) button near the top right corner of the dialog box meant for feature-specific help. If you want help on a particular feature of a dialog box, select the ? button. The ? gets attached with the cursor. You can then select the feature to display its help.

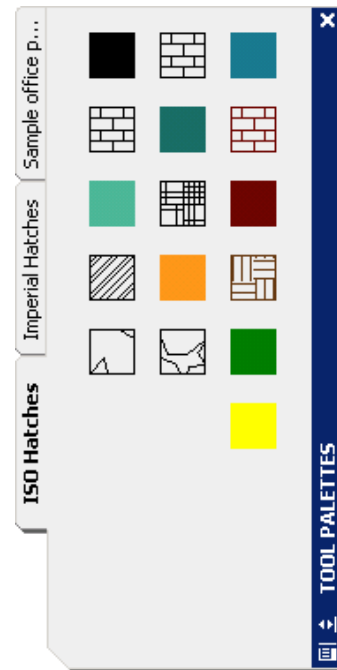


Figure 1-14 TOOL PALETTES window

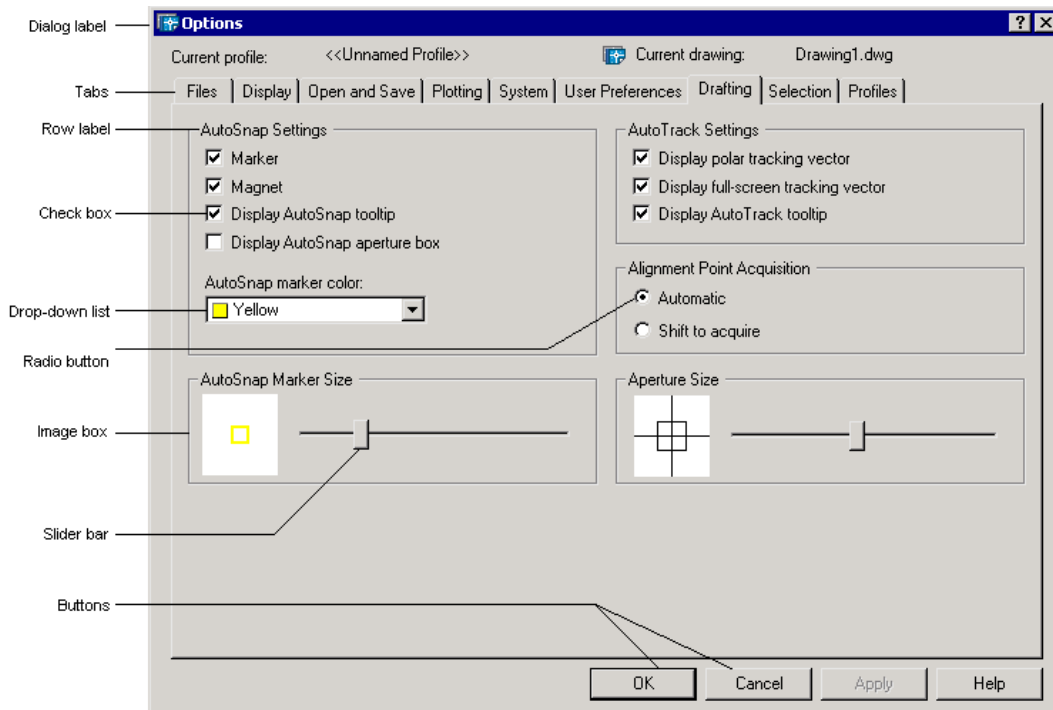


Figure 1-15 Components of a dialog box

## STARTING A NEW DRAWING

**Toolbar:** Standard toolbar > QNew  
**Menu:** File > New  
**Command:** NEW or QNEW



You can open a new drawing using the **QNEW** command. When you invoke the **QNEW** command, by default AutoCAD will display the **Select template** dialog box, as shown in Figure 1-16. The dialog box displays a list of the default templates available in AutoCAD 2004. You can select the desired template to open a new drawing, which will use the settings of the selected template.

By default, when you invoke the **QNEW** command, AutoCAD displays the **Select template** dialog box. You can also open a new drawing using the **Use a Wizard** and **Start from Scratch** options available in the **Create New Drawing** dialog box. By default, the display of this dialog box is turned off. To turn on the display of the **Create New Drawing** dialog box, choose **Tools > Options** from the menu bar. The **Options** dialog box is invoked; choose the **System** tab. Under the **General Options** area, select the **Show Startup dialog box** from the **Startup** drop-down list. Choose **Apply** and then choose the **OK** button. Next, whenever you invoke the **QNEW** command, the **Create New Drawing** dialog box will be displayed as shown in Figure 1-17. The options provided in this dialog box are discussed next.

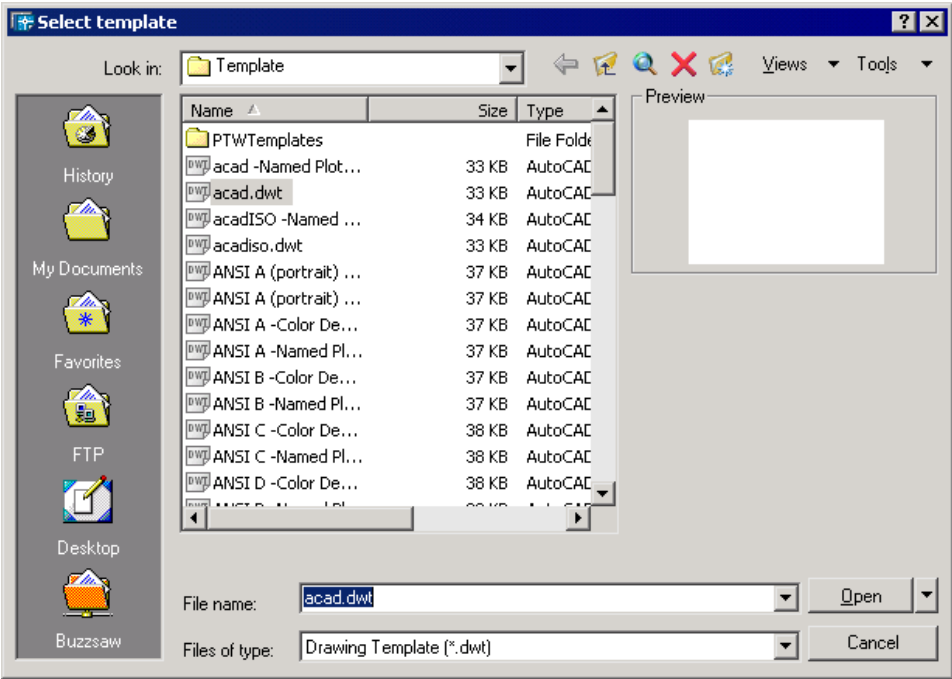


Figure 1-16 Select template dialog box

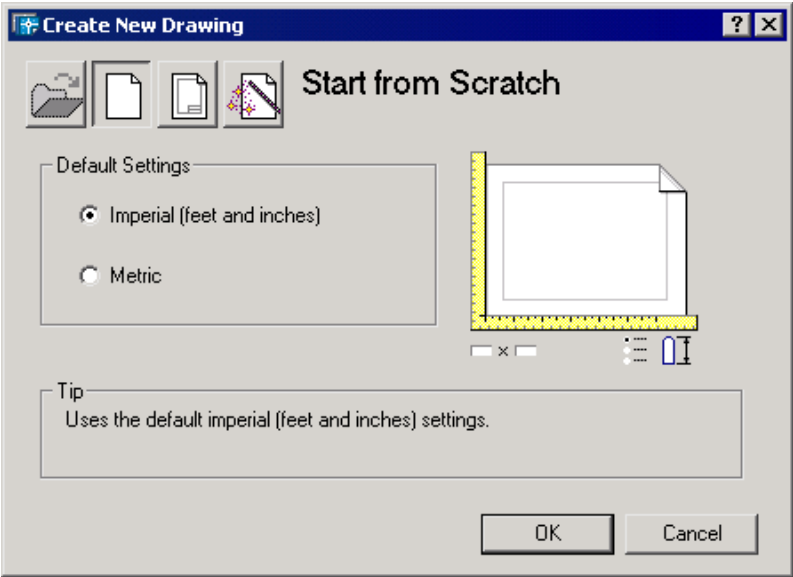


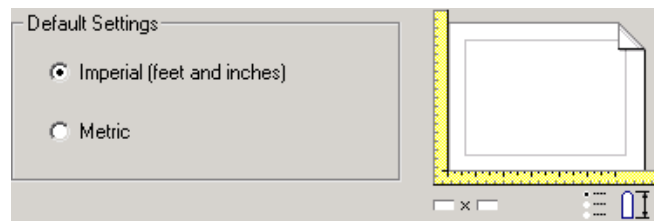
Figure 1-17 Create New Drawing dialog box

## Open a Drawing

By default this option is not available.

## Start from Scratch

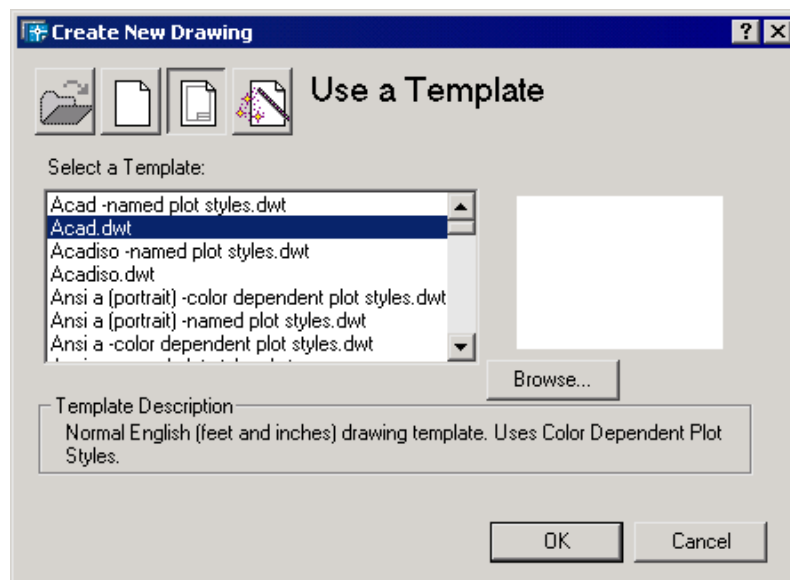
When you choose the **Start from Scratch** button (Figure 1-18), AutoCAD provides you with options to start a new drawing that contains the default AutoCAD setup for Imperial (*acad.dwt*) or Metric drawings (*acadiso.dwt*). If you select the Imperial default setting, the limits are 12X9, text height is 0.20, and dimensions and linetype scale factors are 1.



*Figure 1-18 Options that are displayed to start a new drawing when you choose the **Start from Scratch** button*

## Use a Template

When you choose the **Use a Template** button in the **Create New Drawing** dialog box, AutoCAD displays a list of templates supplied with AutoCAD, see Figure 1-19.

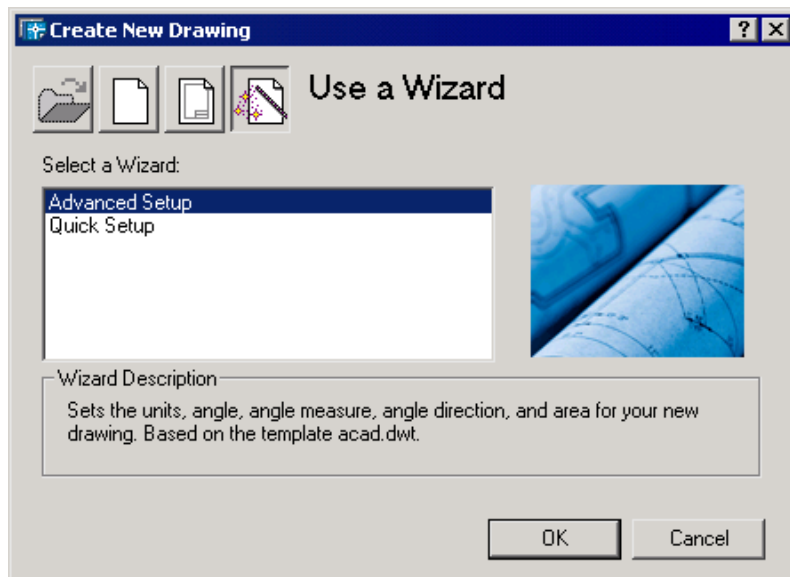


*Figure 1-19 The default templates that are displayed when you choose the **Use a Template** button*

The default template file is *acad.dwt* or *acadiso.dwt*, depending on the installation. If you use a template file, the new drawing will have the same settings as specified in the template file. All the drawing parameters of the new drawing such as the units, limits, and other settings are already set according to the template file used. The preview of the template file selected is displayed in the dialog box. You can also define your own template files that are customized to your requirements (see Chapter 29, Template Drawings). To differentiate the template files from the drawing files, the template files have *.dwt* extension whereas the drawing files have *.dwg* extension. Any drawing file can be saved as a template file. You can use the **Browse** button to select other template files. When you choose the **Browse** button, the **Select a template file** dialog box is displayed with the **Template** folder open, displaying all the template files.

## Use a Wizard

The **Use a Wizard** option allows you to set the initial drawing settings before actually starting a new drawing. When you choose the **Use a Wizard** button, AutoCAD provides you the option of using the **Quick Setup** or **Advanced Setup**, see Figure 1-20.



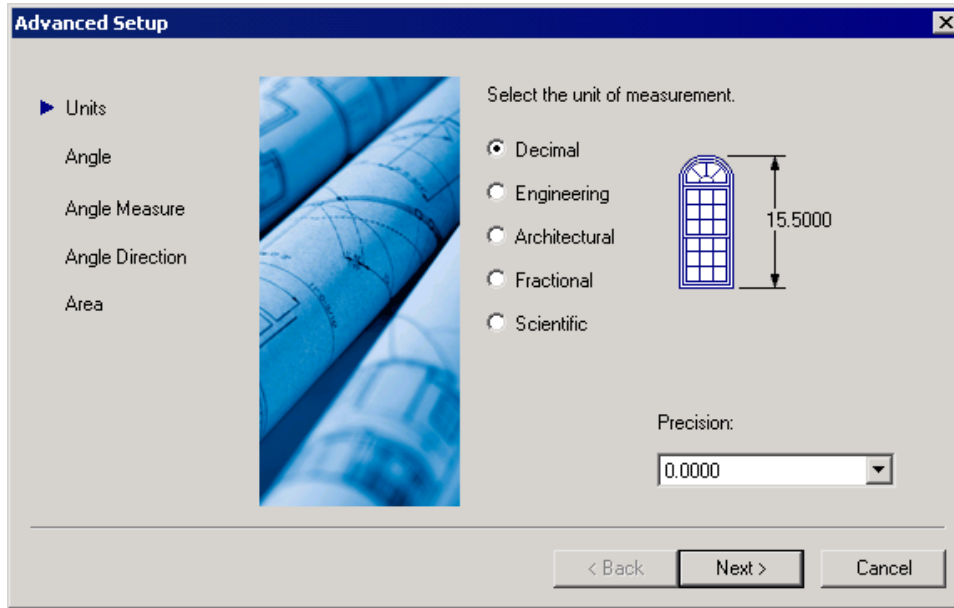
**Figure 1-20** The Wizard options that are displayed when you choose the **Use a Wizard** button

In the **Quick Setup**, you can specify the units and the limits of the work area. In the **Advanced Setup**, you can set the units, limits, and the different types of settings for a drawing.

## Advanced Setup

This option allows you to preselect various parameters of a new drawing such as the units of linear and angular measurements, type and direction of angular measurements, approximate area desired for the drawing, precision for displaying the units after decimal, and so on.

When you select the **Advanced Setup** wizard option from the **Create New Drawing** dialog box and choose the **OK** button, the **Advanced Setup** dialog box is displayed. The **Units** page is displayed by default as shown in Figure 1-21.



*Figure 1-21 The Units page of the Advanced Setup dialog box*

This page is used to set the units for measurement in the current drawing. You can select the required unit of measurement by selecting its respective radio button. You will notice that the preview image is modified accordingly. The different units of measurement you can choose from are Decimal, Engineering, Architectural, Fractional, and Scientific. You can also set the precision for measurement units by selecting it from the **Precision** drop-down list.

Choose the **Next** button to open the **Angle** page as shown in Figure 1-22. You will notice that an arrow appears on the left of **Angle** in the **Advanced Setup** dialog box. This suggests that this page is current.

This page is used to set the units for angular measurements and the precision for it. The units for angle measurement can be set by selecting its radio button. The units for angular measurements that you can select are Decimal Degrees, Deg/Min/Sec, Grads, Radians, and Surveyor. The preview of the selected angular unit is displayed on the right of the radio buttons. The precision format changes automatically in the **Precision** drop-down list depending on the angle measuring system selected. You can then select the precision from the drop-down list.

The next page is the **Angle Measure** page as shown in Figure 1-23. This page is used to select the direction of the base angle from which the angles will be measured. You can also set your



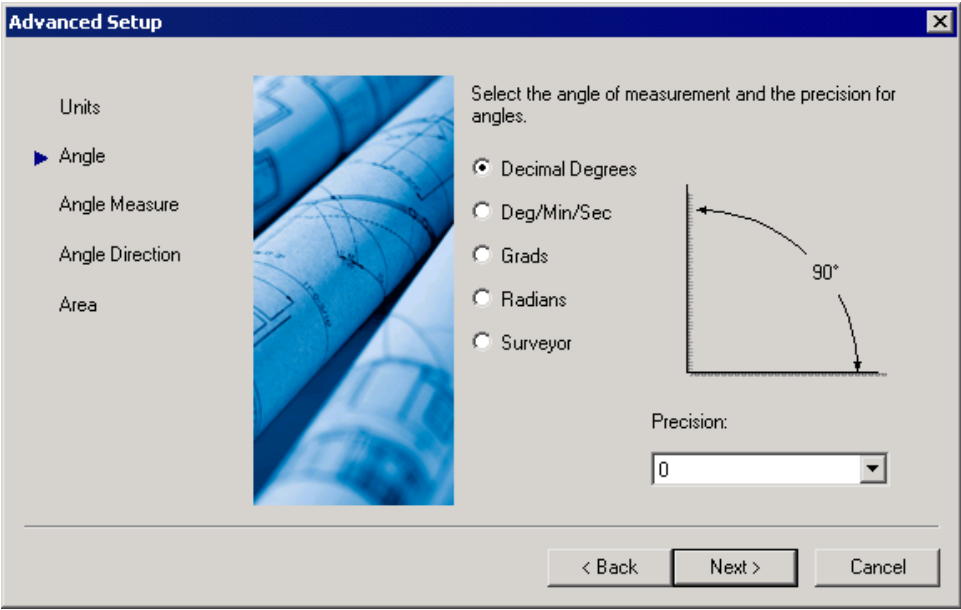


Figure 1-22 The *Angle* page of the *Advanced Setup* dialog box

own direction by selecting the **Other** radio button and then entering the value in its edit box. This edit box is available when you select the **Other** radio button.

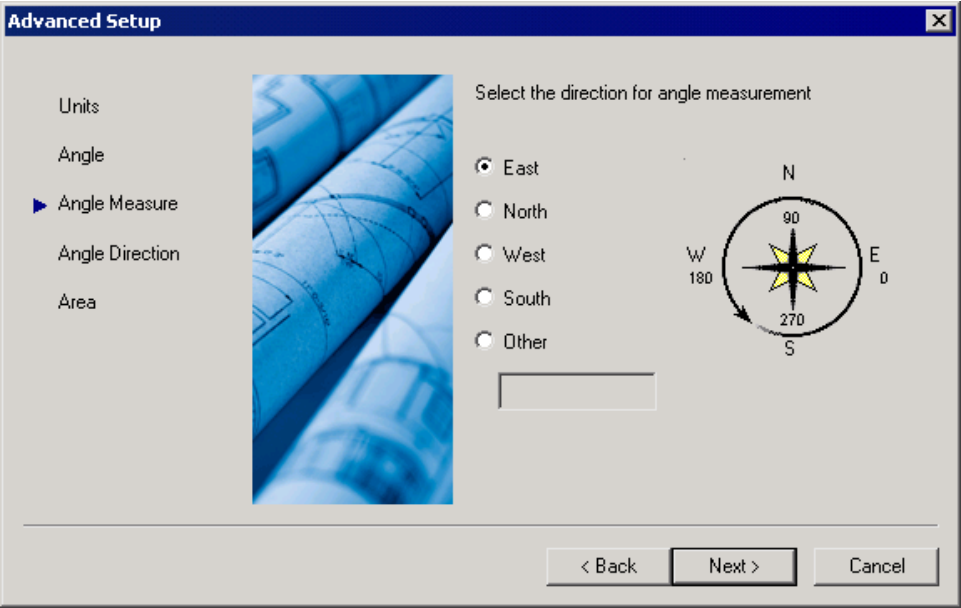


Figure 1-23 The *Angle Measure* page of the *Advanced Setup* dialog box

Choose **Next** to display the **Angle Direction** page (Figure 1-24) to set the orientation for angle measurement. By default the angles are positive if measured in a counterclockwise direction. This is because the **Counter-Clockwise** radio button is selected. If you select the **Clockwise** radio button, the angles will be considered positive when measured in clockwise direction.

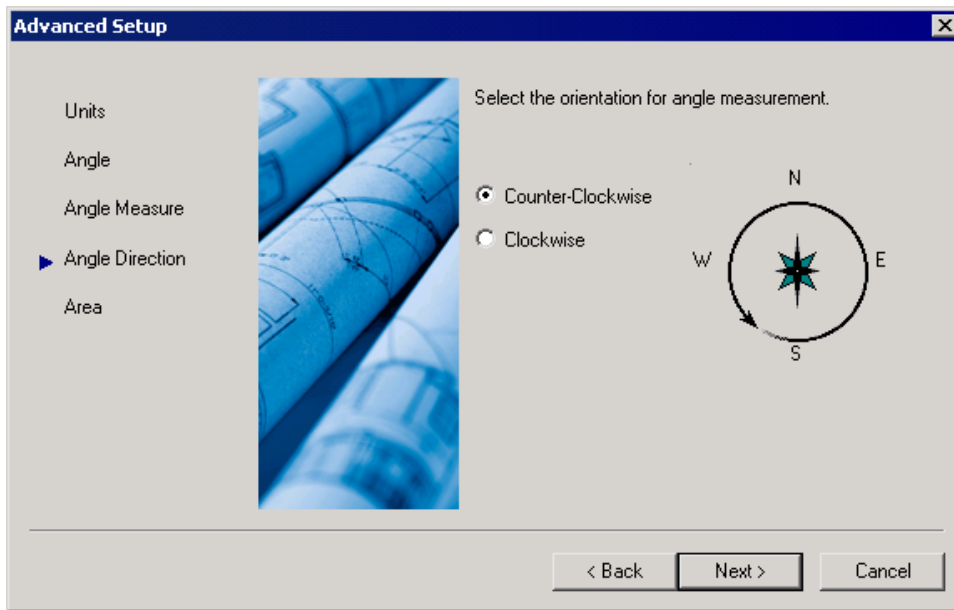


Figure 1-24 The **Angle Direction** page of the **Advanced Setup** dialog box

To set the limits of the drawing, choose the **Next** button. The **Area** page is displayed as shown in Figure 1-25. You can enter the width and length of the drawing area in the respective edit boxes.



#### Note

*Even after you increase the limits of the drawing, the drawing display area is not increased. You need to invoke the **ZOOM** command and then invoke the **All** option to increase the drawing display area.*

#### Quick Setup

When you select **Quick Setup** and choose the **OK** button, the **Quick Setup** dialog box is displayed. This dialog box has just two pages: **Units** and **Area**. The **Units** page opened by default as shown in Figure 1-26. The options in the **Units** page are similar to those in the **Units** page of the **Advanced Setup** dialog box. The only difference is that you cannot set the precision for the units in this dialog box.

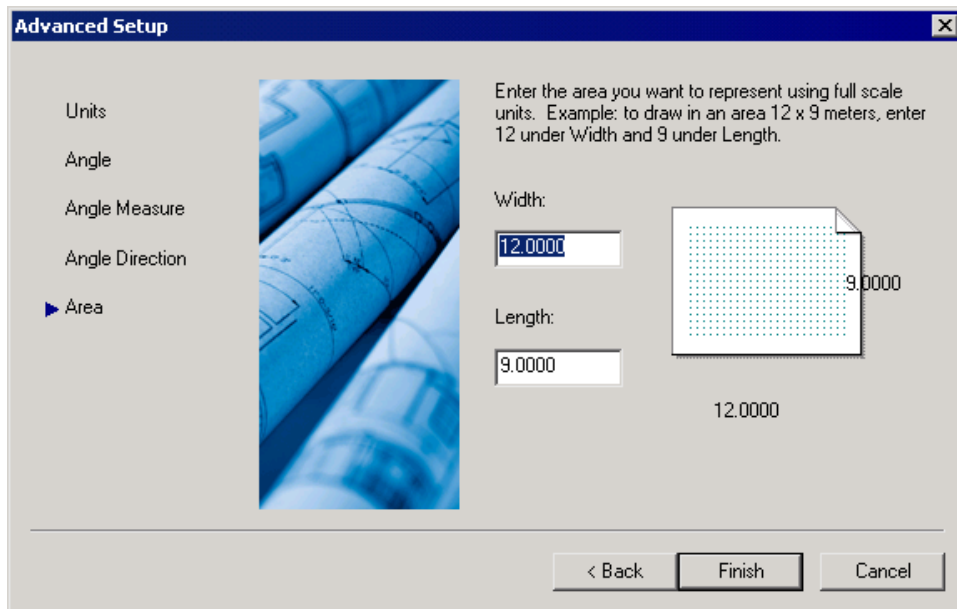


Figure 1-25 The *Area* page of the *Advanced Setup* dialog box

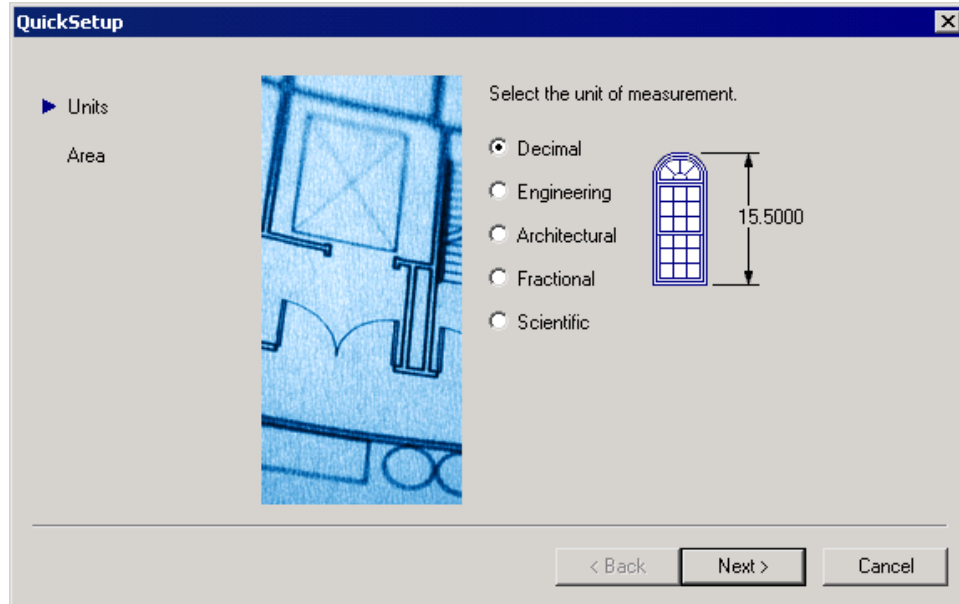


Figure 1-26 The *Units* page of the *QuickSetup* dialog box

Choose **Next** to display the **Area** page as shown in Figure 1-27. The **Area** page is similar to that of the **Advanced Setup** dialog box where you can set the drawing limits.

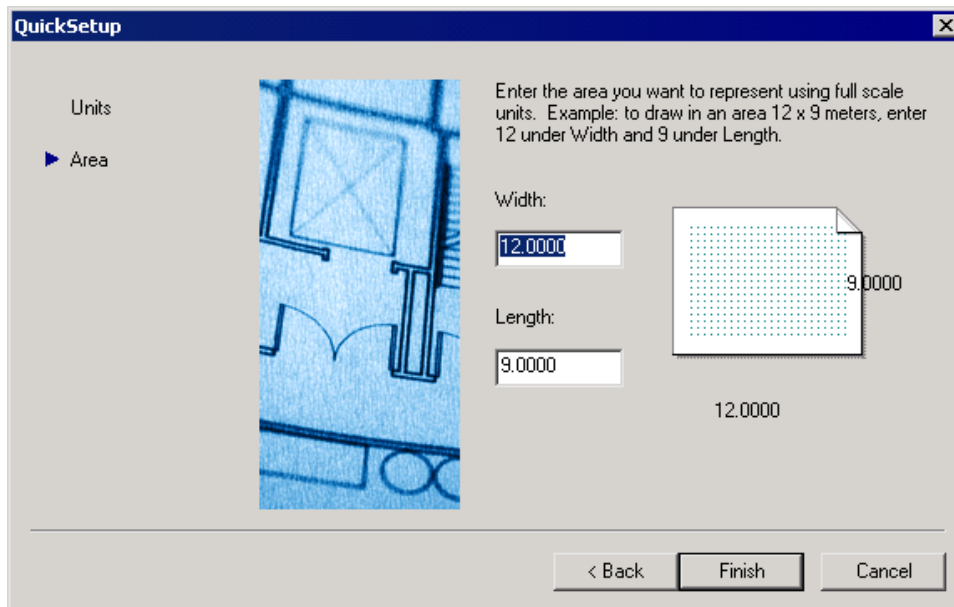


Figure 1-27 The Area page of the *QuickSetup* dialog box



#### Tip

By default, when you open an AutoCAD session, a drawing opens automatically. But you can open a new drawing using various options such as **Start from Scratch** and **Wizards** before entering into the AutoCAD environment using the **Startup** dialog box. As mentioned earlier, the display of the **Startup** dialog box is turned off by default. Refer to the section of **Starting a New Drawing** to know how to turn on the display of this dialog box.

## SAVING YOUR WORK

<b>Toolbar:</b>	Standard > Save
<b>Menu:</b>	File > Save or Save As
<b>Command:</b>	QSAVE , SAVEAS , SAVE



In AutoCAD or any computer system, you must save your work before you exit from the drawing editor or turn the system off. Also, it is recommended that you save your drawings after regular time intervals. In case of a power failure, an editing error, or other problems, all work saved before the problem started will be retained.

AutoCAD has provided the following commands that allow you to save your work on the hard disk of the computer or on the floppy diskette.

**QSAVE      SAVEAS      SAVE**

The **QSAVE**, **SAVEAS**, and **SAVE** commands allow you to save your drawing by writing it to

a permanent storage device, such as a hard drive, or on a diskette in any removable drive.

When you choose **Save** from the **File** menu as shown in Figure 1-28, or choose the **Save** button in the **Standard** toolbar, the **QSAVE** command is invoked. If the current drawing is unnamed and you are saving the drawing for the first time in the present session, the **QSAVE** command will prompt you to enter the file name in the **Save Drawing As** dialog box (Figure 1-29). You can enter the name for the drawing and then choose the **Save** button in the dialog box. Once the drawing is saved and you make some changes to it, you can use the **QSAVE** command to save the drawing with the current name without prompting you to enter a file name. This allows you to do a quick save.

When you invoke the **SAVEAS** command, the **Save Drawing As** dialog box is displayed as shown in Figure 1-29. Even if the drawing has been saved with a file name, this command gives you an option to save it with a different file name. In addition to saving the drawing, it sets the name of the current drawing to the file name you specify, which is displayed in the title bar. This command is used when you want to save a previously saved drawing under a different file name. You can also use this command when you make certain changes to a template and want to save the changed template drawing but leave the original template unchanged.

The **SAVE** command is the most rarely used command and can be invoked only from the command line by entering **SAVE** at the Command prompt. It is similar to the **SAVEAS** command and displays the **Save Drawing As** dialog box always. With this command you can save a previously saved drawing under a different file name, but this command does not set it as the current drawing.

Save Drawing As Dialog Box

The **Save Drawing As** dialog box displays the information related to the drawing files on your system. The various components of the dialog box are described next.

Places list

A column of icons is displayed on the left side of the dialog box. These icons contain the shortcuts to the folders that are frequently used. You can quickly save your drawings in one of these folders. The **History** folder displays the list of most recently saved drawings. You can save your personal drawings in the **My Documents** or the **Favorites** folder. The **FTP** folder

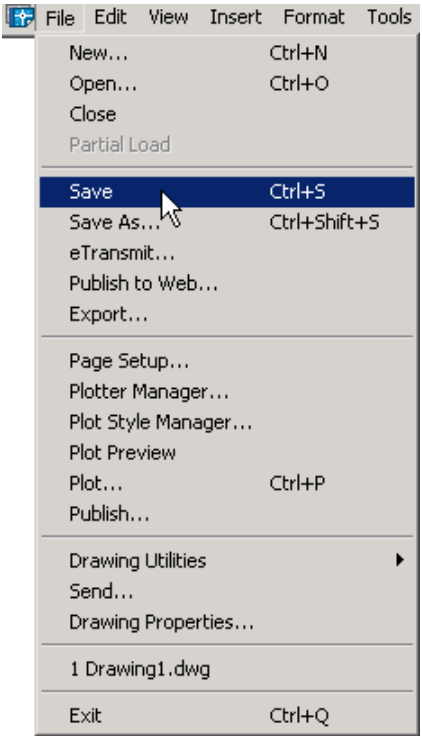


Figure 1-28 Different Save options in the File menu

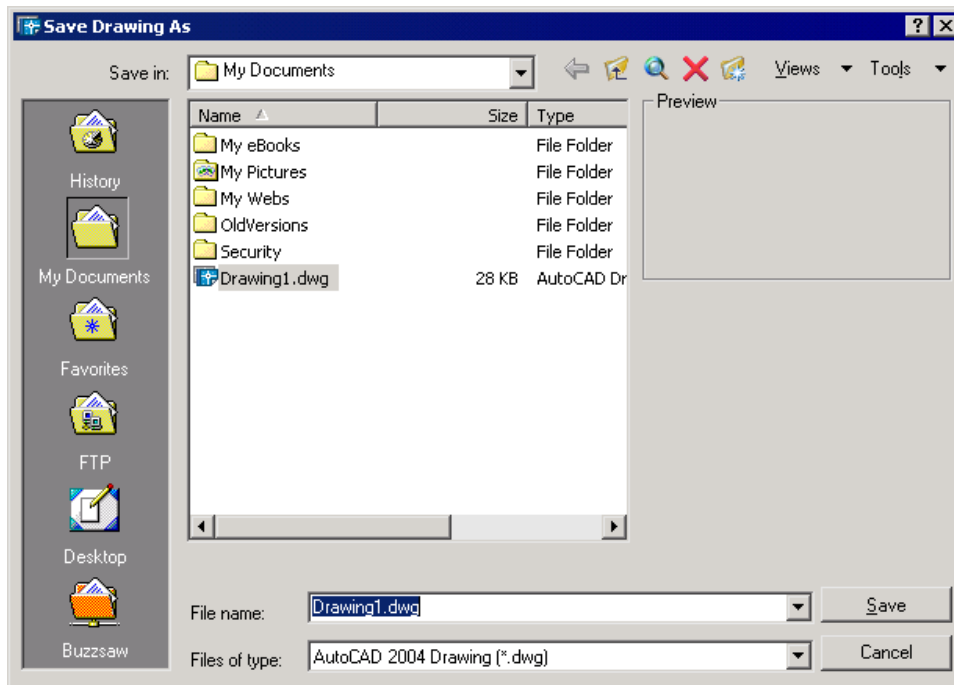


Figure 1-29 Save Drawing As dialog box

displays the list of the various FTP sites that are available for saving the drawing. By default no FTP sites are shown in the dialog box. To add a FTP site to the dialog box choose the Tools button available on the upper-right corner of the dialog box. When you choose this button a shortcut menu is displayed. Select **Add/Modify FTP Locations**. The **Desktop** folder displays the list of contents available on the desktop. The **Buzzsaw** icons connect you to their respective pages on the Web. You can add any new folder in this list for easy access by simply dragging this folder on to the Places list area and then leaving it. You can rearrange all these folders by dragging them and then placing them at the desired locations. It is also possible to remove the folders when not in frequent use. Right-click on the particular folder and then select **Remove** from the shortcut menu.

### File name edit box

To save your work, enter the name of the drawing in the **File Name** edit box. This can be done by typing the file name or selecting it from the drop-down list. If you select the file name you want from the drop-down list, the name you select automatically appears in the **File name** edit box. If you have already assigned a name to the drawing, the current drawing name is taken as default. If the drawing is unnamed, the default name *Drawing1* is displayed in the **File Name** edit box. You can also choose the down arrow at the right of the edit box to display the names of the previously saved drawings and choose a name here.

### Files of type drop-down list

The **Files of type** drop-down list (Figure 1-30) is used to specify the drawing format in which

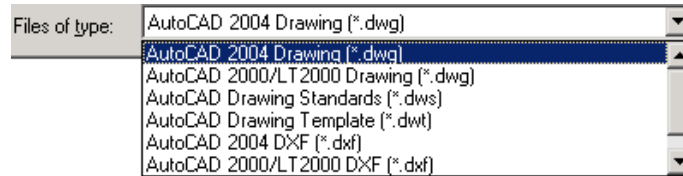


Figure 1-30 Files of type drop-down list

you want to save the file. For example, to save the file as AutoCAD 2000 drawing file, select **AutoCAD 2000/LT Drawing (\*.dwg)** from the drop-down list.

### Save in drop-down list

The current drive and path information is listed in the **Save in** drop-down list, see Figure 1-31. AutoCAD will initially save the drawing in the default folder, but if you want to save the drawing in a different folder, you have to specify the path. For example, if you want to save the present drawing under the file name *house* in the *C1* folder, choose the arrow button in the **Save in** drop-down list to display the drop-down list and select C:. When you select C: all folders in C drive will be listed in the **File** list box. Double-click on 2004 or select 2004 and choose the **Open** button to display its folders. Again double-click on *C1* or select *C1* and choose the **Open** button to display drawing names in the **File** list box. Select *house* from the list, if it is already listed there, or enter it in the **File name** edit box and then choose the **Save** button. Your drawing (*house*) will be saved in the *C1* folder (*C:\2004\C1\house.dwg*). If you want to save the drawing on the A drive, select A: in the **Save in** drop-down list.

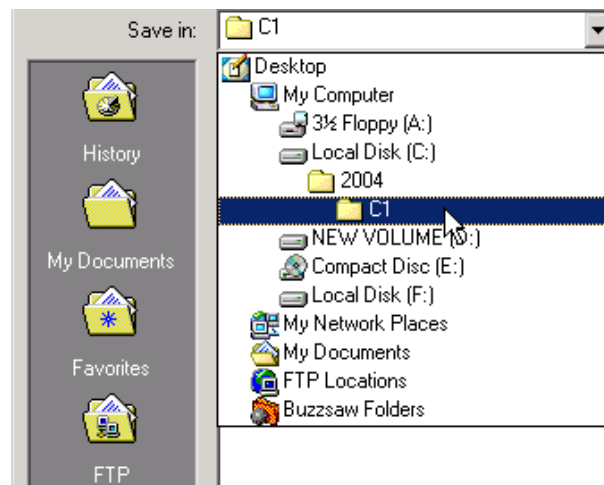


Figure 1-31 Save in drop-down list



#### Tip

The file name you enter to save a drawing should match the contents of the drawing. This helps you to remember the drawing details and makes it easier to refer to them later. Also the file name can be 255 characters long and can contain spaces and punctuation marks.



**Note**

If you want to save a drawing on the A or B drive, make sure the diskette you are using to save the drawings is formatted.

## Views List

The **Views** drop-down list has options for the type of listing of files and displaying the preview images (Figure 1-32).

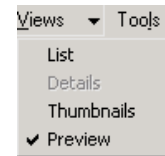


Figure 1-32 Views list

### List, Details, Thumbnails, and Preview options

If you choose the **Details** option, it will display detailed information about the files (size, type, date, and time of modification) in the **Files** list box. In the detailed information if you click on the **Name** label, the files are listed with the names in alphabetical order. If you double-click on the **Name** label, the files will be listed in reverse order. Similarly if you click on the **Size** label the files are listed according to the size in ascending order. Double-clicking on the **Size** label will list the files descending by order of size. Similarly you can click on the **Type** label or the **Modified** label to list the files accordingly. If you choose the **List** option, all files present in the current folder will be listed in the **File** list box. If you select the **Preview** option, the list box displays the Preview image box wherein the bitmap image of the file chosen is displayed. If cleared, the Preview box is not displayed. If you select the **Thumbnails** option, the list box displays the preview of the all the drawings along with their names displayed at the bottom of the drawing preview.

## Folder Button



If you choose the **Create New Folder** button, AutoCAD creates a new folder under the name **New Folder**. The new folder is displayed in the **File** list box. You can accept the name or change it to your requirement.

## Up One Level Button



The **Up one level** button displays the folders that are up by one level. For example, if you are in the *Sample* subfolder of the *AutoCAD 2004* folder, then choosing the **Up one level** button will take you to the *AutoCAD 2004* folder.

## Search the Web



It displays the **Browse the Web** dialog box that enables you to access and store AutoCAD files on the Internet. You can also use ATL+3 keys to browse the Web when this dialog box is available on the screen.

## Tools List

The **Tools** drop-down list (Figure 1-33) has an option for adding or modifying the FTP sites. These sites can then be browsed from the FTP shortcut in the **Places** list. The **Add Current Folder to Places** and **Add to Favorites** options add the folder displayed in the **Save in** edit box to the Places list or to the Favorites folder. The **Options** button displays the **Saveas**

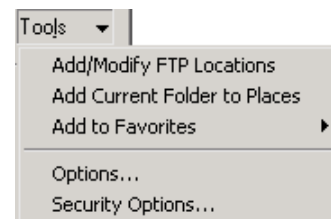


Figure 1-33 Tools list



**Options** dialog box where you can save the proxy images of custom objects. It has the **DWG Options** and **DXF Options** tabs. The **Security Options** button displays the **Security Options** dialog box, which is used to configure the security options of the drawing.

## AUTOMATIC TIMED SAVE

AutoCAD allows you to save your work automatically at specific intervals. To change the time intervals you can enter the time intervals in minutes in the **Minutes between saves** text box in the **File Safety Precautions** area available in the **Options** dialog box (**Open and Save** tab). This dialog box can be invoked from the **Tools** menu. Depending on the power supply, hardware, and type of drawings, you should decide on an appropriate time and assign that time to this variable. AutoCAD saves the drawing under the file name *auto.sv\$*. The extension of the auto-save file is *.sv\$*. You can also change the time interval by using the **SAVETIME** system variable.

## CREATION OF BACKUP FILES

If the drawing file already exists and you use **SAVE** or **SAVEAS** commands to update the current drawing, AutoCAD creates a backup file. AutoCAD takes the previous copy of the drawing and changes it from a file type *.dwg* to *.bak*, and the updated drawing is saved as a drawing file with the *.dwg* extension. For example, if the name of the drawing is *myproj.dwg*, AutoCAD will change it to *myproj.bak* and save the current drawing as *myproj.dwg*.



### Tip

*Although the Automatic save saves your drawing after a certain time interval, you should not completely depend on it because the procedure for converting the *sv\$* file into a drawing file is cumbersome. Therefore, it is recommended that you save your files regularly using the **QSAVE** or **SAVEAS** commands.*

## CHANGING AUTOMATIC TIMED SAVED AND BACKUP FILES INTO AutoCAD FORMAT

Sometimes you may need to change the automatic timed saved and backup files into the AutoCAD format. To change the backup file into an AutoCAD format, open the folder in which you have saved the backup or the automatic timed saved drawing using **My Computer** or **Windows Explorer**. Choose the **Tools > Folder Options** from the menu bar to invoke the **Folder Options** dialog box. Choose the **View** tab and under the **Advanced settings** area, clear the **Hide file extensions for known file types** text box, if selected. Exit the dialog box. Rename the automatic saved drawing or the backup file with a different name and also change the extension of the drawing from *.sv\$* or *.bak* to *.dwg*. After you rename the drawing, you will notice that the icon of the automatic saved drawing or the backup file is replaced by the AutoCAD icon. This indicates that the automatic saved drawing or the backup file is changed into an AutoCAD drawing.

## CLOSING A DRAWING

You can use the **CLOSE** command to close the current drawing file without actually quitting AutoCAD. If you choose **Close** from the **File** menu or enter **CLOSE** at the Command prompt, the current drawing file is closed. If you have not saved the drawing after making the last changes to it and you invoke the **CLOSE** command, AutoCAD displays a dialog box that allows you to save the drawing before closing. This box gives you an option to discard the current drawing or changes made to it. It also gives you an option to cancel the command. After closing the drawing you are still in AutoCAD from where you can open a new or an already saved drawing file. You can also use the close button (**X**) of the drawing window to close the drawing.



### Note

*You can close a drawing in AutoCAD 2004 even if a command is active. But in earlier AutoCAD releases, you were prompted to first exit the current command and then the selected drawing could be closed.*

## OPENING AN EXISTING DRAWING

You can open an existing drawing file that has been saved previously. There are three methods that can be used to open a drawing file, the **Select File** dialog box, **Startup** dialog box, and by **Dragging and Dropping**.

### Opening an Existing Drawing Using the Select File Dialog Box

<b>Toolbar:</b>	Standard > Open
<b>Menu:</b>	File > Open
<b>Command:</b>	OPEN



If you are already in the drawing editor, and you want to open a drawing file you can use the **OPEN** command. The **OPEN** command also displays the **Select File** dialog box, see Figure 1-34. You can select the drawing to open using this dialog box. This dialog box is similar to the standard dialog boxes. You can choose the particular file you want to open from the particular folder. You can change the folder from the **Look in** drop-down list. You can then select the name of the drawing from the list box or you can enter the name of the drawing file you want to open in the **File name** edit box. After selecting the drawing file you can select the **Open** button to open the file. Here you can choose *Drawing1* from the list and then choose the **Open** button to open the drawing.

When you select a file name, its image is displayed in the **Preview** box. If you are not sure about the file name of a particular drawing but know the contents, you can select the file names and look for the particular drawing in the **Preview** box. You can also change the file type by selecting it in the **Files of type** drop-down list. Apart from the *dwg* files, you can open the *dwt* (template) files or the *dxf* files. You have all the standard icons in the **Places** list, which can be used to open the drawing files from different locations. The **Open** button has a

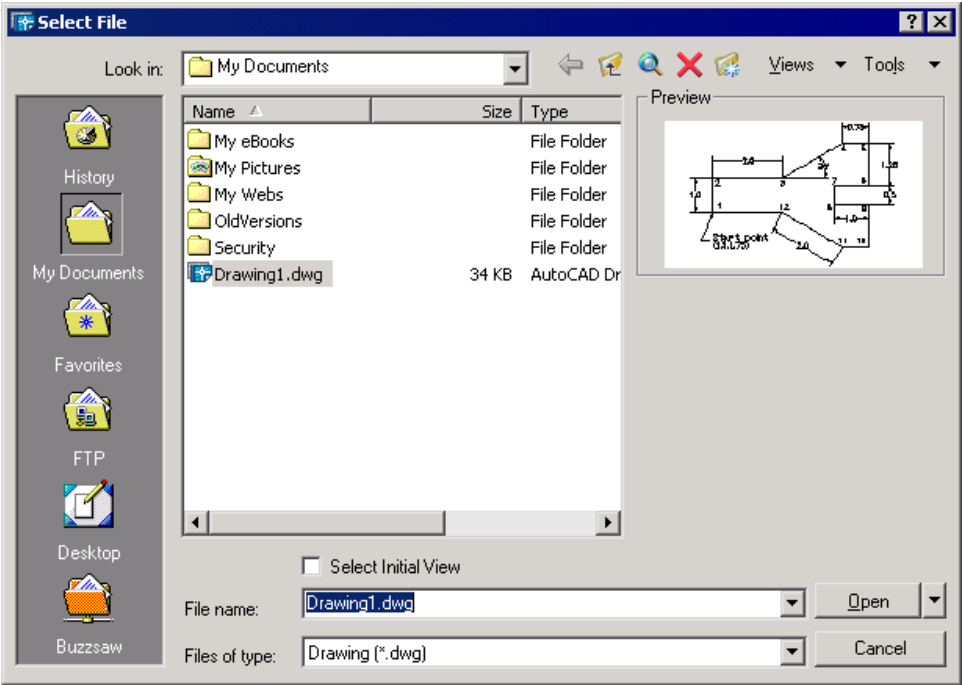


Figure 1-34 Select File dialog box

drop-down list as shown in Figure 1-35. You can choose a method for opening the file using this drop-down list. These methods are discussed next.

**Open Read-Only**

If you want to view a drawing without altering it, you must select the **Open Read-Only** option from the drop-down list. In other words, read only protects the drawing file from changes. AutoCAD does not prevent you from editing the drawing, but if you try to save the opened drawing to the original file name, AutoCAD warns you that the drawing file is **write protected**. However, you can save the edited drawing to a file with a different file name using the SAVEAS command. This way you can preserve your drawing.

**Partial Open**

The **Partial Open** enables you to open only a selected view or a selected layer of a selected drawing. This option can be used to edit small portions of a complicated drawing and then save it with the complete drawing. When you choose the **Partial Open** option from the **Open** drop-down list, the **Partial Open** dialog box (Figure 1-36) is displayed, which contains the different views and layers of the selected drawing. When you select a check box for a layer and then choose the **Open** button, only the objects drawn in that particular layer for the drawing are displayed in a new drawing window. You can make the changes and then save it. For example, in the *C:/Program Files/AutoCAD 2004* folder, double-click on the **Sample** folder

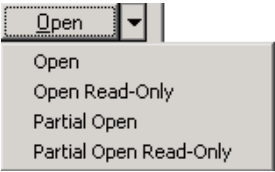


Figure 1-35 Open drop-down list

and then choose *8th floor furniture.dwg* from the list. Now, choose the down arrow available on the right of the **Open** button to display the drop-down list and choose **Partial Open**. All the views and the layers of this drawing are displayed in the **Partial Open** dialog box. Select the check box available on the right of the layer that you want to be opened. When you choose the **Open** button after selecting the layers, the drawing will be opened with only the selected layers.

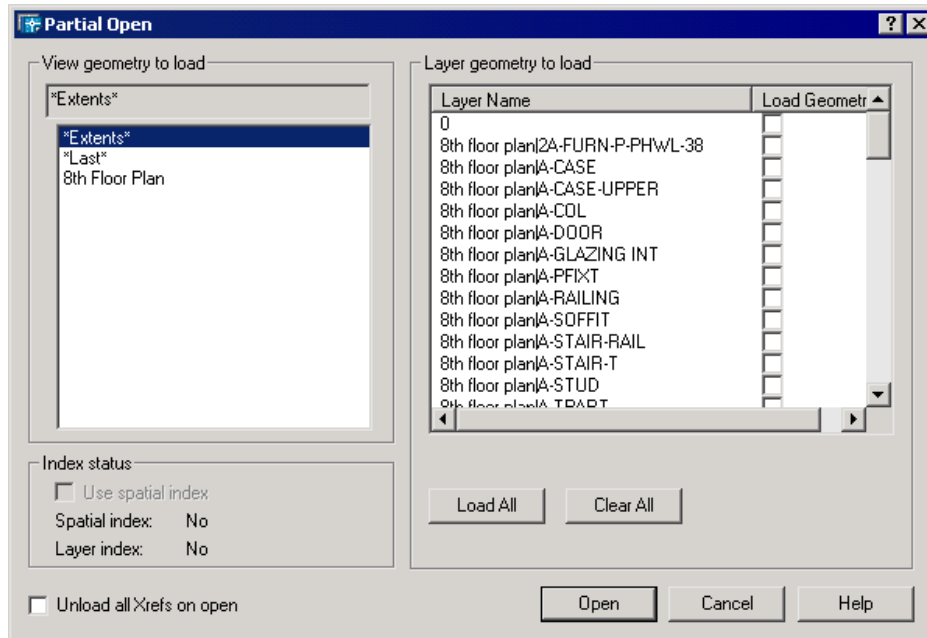


Figure 1-36 **Partial Open** dialog box



#### Note

The concept of layers is discussed in Chapter 4, *Working with Drawing Aids*.

### Using the PARTIALLOAD Command

Once you have opened a part of a drawing and made the necessary changes, you may want to load additional objects or layers on the existing ones. This can be done by using the **PARTIALLOAD** command, which can be invoked by choosing **Partial Load** in the **File** menu, or by entering **PARTIALLOAD** at the Command prompt. This command displays the **Partial Load** dialog box, which is similar to the **Partial Open** dialog box. You can choose another layer and the objects drawn in this layer will be added to the partially loaded drawing.



#### Note

The **Partial Load** option is not enabled in the **File** menu unless a drawing has been partially opened.

*Loading a drawing partially is a good practice when you are working with objects on a specific layer in a large complicated drawing.*

**Tip**

*If a drawing was partially opened and saved previously, it is possible to open it again with the same layers and views. AutoCAD remembers the settings so that while opening a previously partially opened drawing, a dialog box is displayed asking for an option to either fully open it or restore the partially opened drawing.*

**Note**

*In the **Select File** dialog box, the preview of a drawing which was partially opened and then saved is not displayed.*

**Select Initial View**

A view is defined as the way you look at an object. The **Select Initial View** option allows you to specify the view you want to load initially when AutoCAD loads the drawing. This option will work if the drawing has saved views. This option is generally used while working on a large complicated drawing in which you want to work on a particular portion of the drawing. You can save that particular portion as a view and then select it to open the drawing next time. You can save a desired view by using AutoCAD's **VIEW** command (see “**Creating Views**”, Chapter 7). If the drawing has no saved views, selecting this option will load the last view. If you select the **Select Initial View** check box and then the **OK** button, AutoCAD will display the **Select Initial View** dialog box. You can select the view name from this dialog box, and AutoCAD will load the drawing with the selected view displayed.

**Tip**

*Apart from opening a drawing from the **Startup** dialog box or the **Select File** dialog box, you can also open a drawing from the **File** menu, which displays the four most recently opened drawings, by simply choosing the desired file name.*

*It is possible to open an AutoCAD 2000 drawing in AutoCAD 2004. When you save this drawing it is automatically converted and saved as an AutoCAD 2004 drawing file.*

**Opening an Existing Drawing Using the Startup Dialog Box**

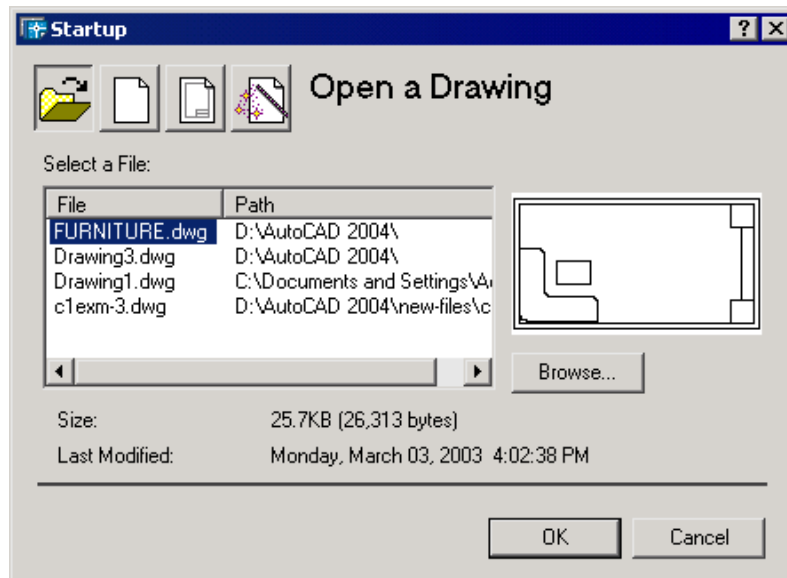
If you have configured the settings to show the **Startup** dialog box from the **Options** dialog box, the **Startup** dialog box is displayed every time you start a new AutoCAD session. The first button in this dialog box is the **Open a Drawing** button. When you choose this button, a list of the most recently opened drawings is displayed for you to select from, see Figure 1-37. The **Browse** button displays the **Select File** dialog box, which allows you to browse another file.

**Note**

*The display of the dialog boxes related to opening and saving drawings is disabled if the **FILEDIA** system variable is set to 0. The initial value of this variable is 1.*

**Opening an Existing Drawing Using the Drag and Drop Method**

You can also open an existing drawing in AutoCAD by dragging it from the Window Explorer and dropping it into AutoCAD. If you drop the selected drawing in the drawing area, the



*Figure 1-37 List of recently opened drawings*

drawing will be inserted as a block and as a result it cannot be modified. But, if you drag the drawing from the Window Explorer and drop it anywhere other than the drawing area AutoCAD opens the selected drawing.

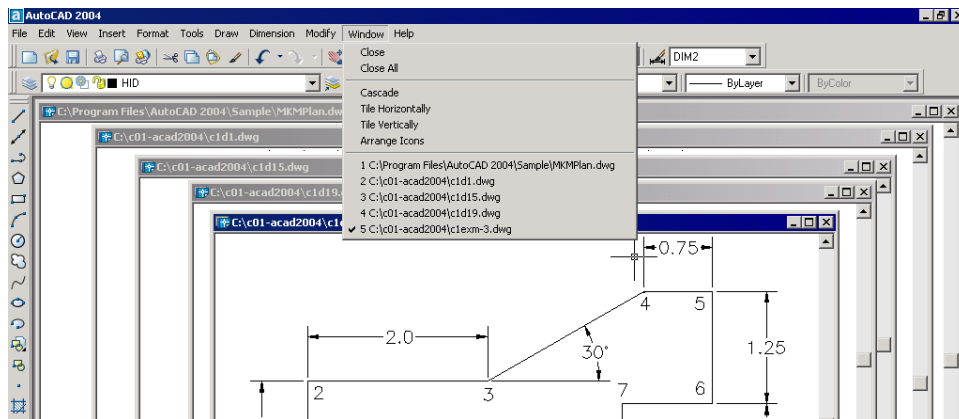
## MULTIPLE DOCUMENT ENVIRONMENT (MDE)

The MDE is a Windows feature that allows you to open more than one drawing at a time in one AutoCAD session. This feature is very helpful when you want to work on different drawings simultaneously and make changes to them with reference to each other. For example, if you are working on an architectural plan of a building and you want to make changes to it while referring to its elevations, this feature allows you to open all these drawings simultaneously and work on them. Sometimes you may want to incorporate certain features from different old drawings into a new drawing. With the help of MDE you can open all these drawings and the new drawing and then copy the features from the old drawings into the new drawing by simply dragging and dropping. This way it is very convenient to create an assembly by copying the components created in separate drawings. You can also use the **Cut/Copy** and **Paste** instead of drag and drop. These commands are invoked from the shortcut menu, or the **Edit** menu, or you can use the keyboard shortcuts such as CTRL+C, CTRL+V, and so on. It is possible for you to shift from one drawing to another leaving a command incomplete and then start working on another drawing. When you come back to that particular drawing the command resumes from the point you had left it.

**Tip**

If you want to place an object at a particular location in a drawing, it is better to use the **Copy/Cut** and **Paste** options rather than drag and drop. AutoCAD allows you to define the coordinates for the insertion point while pasting the object. This makes the placement of objects accurate.

When you open the first drawing, by default its file name merges with the AutoCAD title bar. When you want to work on more than one drawing simultaneously, choose the **Restore** button present in the right corner of the menu bar to make it floating. This drawing will be placed as a floating window inside the main AutoCAD window. Now if you open another drawing, this window will be placed over the first drawing window but the title bar of the previous window will remain visible. Similarly the rest of the drawings opened are placed over the previous ones with the latest drawing opened being active. The active drawing is specified by the dark blue band in the title bar. You can make any drawing active by simply clicking in it. This type of arrangement is the cascading arrangement and can be changed as per your requirements. If the title bar of a particular drawing is not visible and you want it active, choose the drawing name in the **Window** menu, see Figure 1-38.



**Figure 1-38** MDE showing different drawings and the **Window** menu (*c1exm-3.dwg* active)

A maximum of nine drawing names are listed in the **Window** menu. If more than nine drawings are opened at a time, **More Windows** is displayed in the list. Choosing this option opens the **Select Window** dialog box where all the drawing names are listed. You can arrange the drawing windows vertically and horizontally by choosing the desired option from the **Window** menu. You can also minimize the drawing files using the **Minimize** button at the top right corner of any window. Here only a small portion of the title bar is visible at the bottom of the window area. You can get the drawings to fill the drawing area using the **Restore** button, which replaces the Minimize button after minimizing. The **Arrange Icons** option in the **Window** menu arranges these minimized title bars at the bottom.



## QUITTING AutoCAD

You can exit the AutoCAD program by using the **EXIT** or **QUIT** commands. Even if you have a command active, you can choose **File > Exit** from the menu bar to quit the AutoCAD program. In case the drawing has not been saved, it allows you to save the work first through a dialog box. Note that if you choose **No** in this dialog box, all the changed made in the current list till the last save will be lost. You can also use the close button (**X**) of the main AutoCAD window (present in the title bar) to end the AutoCAD session.

## UNDERSTANDING THE CONCEPT OF SHEET SETS\*

The sheet sets feature allows you to logically organize a set of multiple drawings as a single unit, called sheet set. For example, consider a setup in which there are a number of drawings in different folders in the hard drive of a computer. Organizing or archiving these drawings is tedious and time consuming. However, this can be easily and efficiently done by creating sheet sets. In a sheet set, you can import the layouts from an existing drawing or create a new sheet with a new layout and place views in the new sheet. You can easily plot and publish all the drawings in the sheet set. You can manage and create sheet sets using the **Sheet Set Manager**, which is displayed by default on the screen. If it is not displayed, choose the **Sheet Set Manager** button from the **Standard** toolbar or press CTRL+4 keys.

### Creating a Sheet Set

AutoCAD allows you to create two different types of sheet sets. The first one is an example sheet set that uses a well organized structure of settings. The second one is used to organize existing drawings. The process of creating both these types of sheet sets is discussed next.

### Creating an Example Sheet Set

To create an example sheet set, select **New Sheet Set** from the **Open** drop-down list in the **Sheet Set Manager** or choose **File > New Sheet Set** from the menu bar. You can also enter **NEWSHEETSET** at the Command prompt. When you invoke this command, the **Create Sheet Set** wizard will be displayed with the **Begin** page, as shown in Figure 1-39. From this page, select the **An example sheet set** radio button, if it is not selected by default. Choose the **Next** button. The **Sheet Set Example** page will be displayed, as shown in Figure 1-40.

By default, the **Select a sheet set to use as an example** radio button is selected in this page. The list box below this radio button displays the list of sheet sets that you can use as an example. Each of these sheet sets has a structurally organized settings for the sheets. You can select the desired sheet set from this list box. The title and the description related to the selected sheet set is displayed in the lower portion of the dialog box.

You can also select the **Browse to another sheet set to use as an example** radio button to select another sheet set located in a different location. You can enter the location of the sheet set in the edit box available below this radio button or choose the [...] button to display the **Browse for Sheet Set** dialog box. Using this dialog box, you can locate the sheet set file, which is saved with the *.dst* extension.



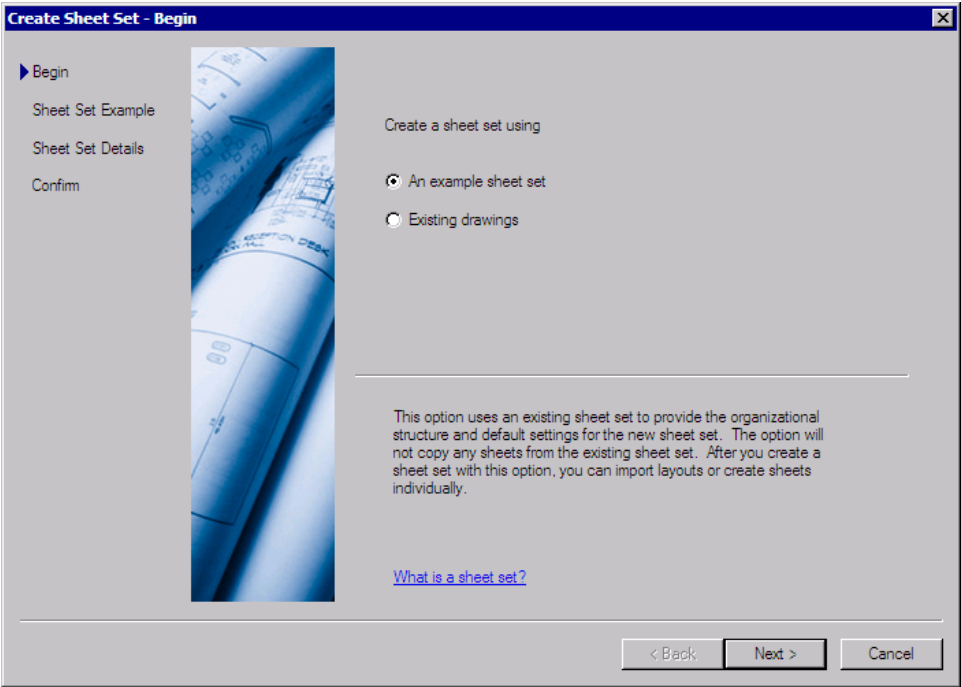


Figure 1-39 Create Sheet Set dialog box with the *Begin* page

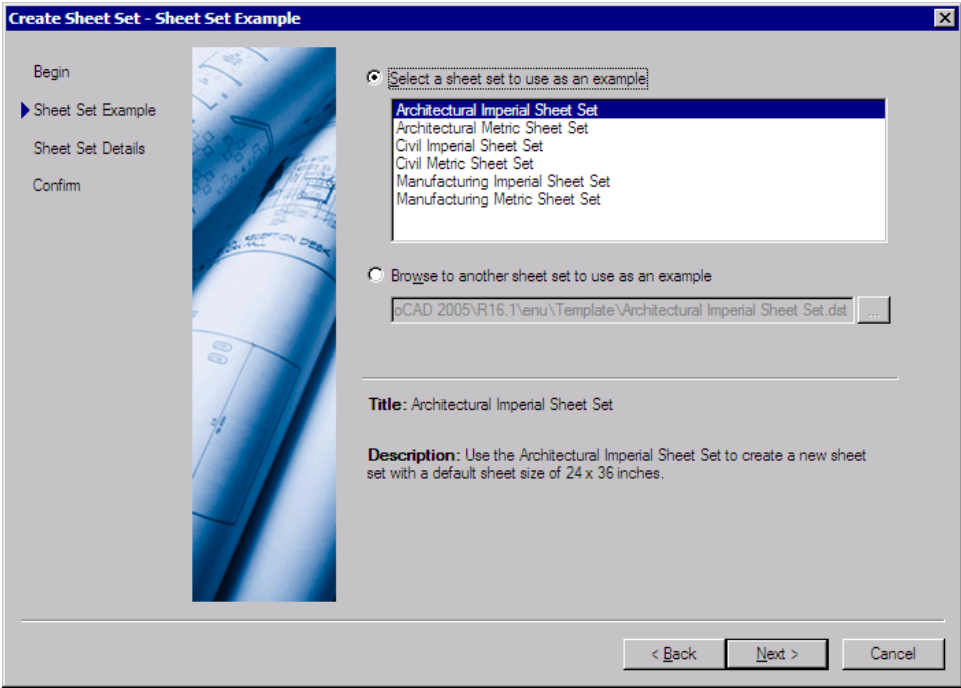
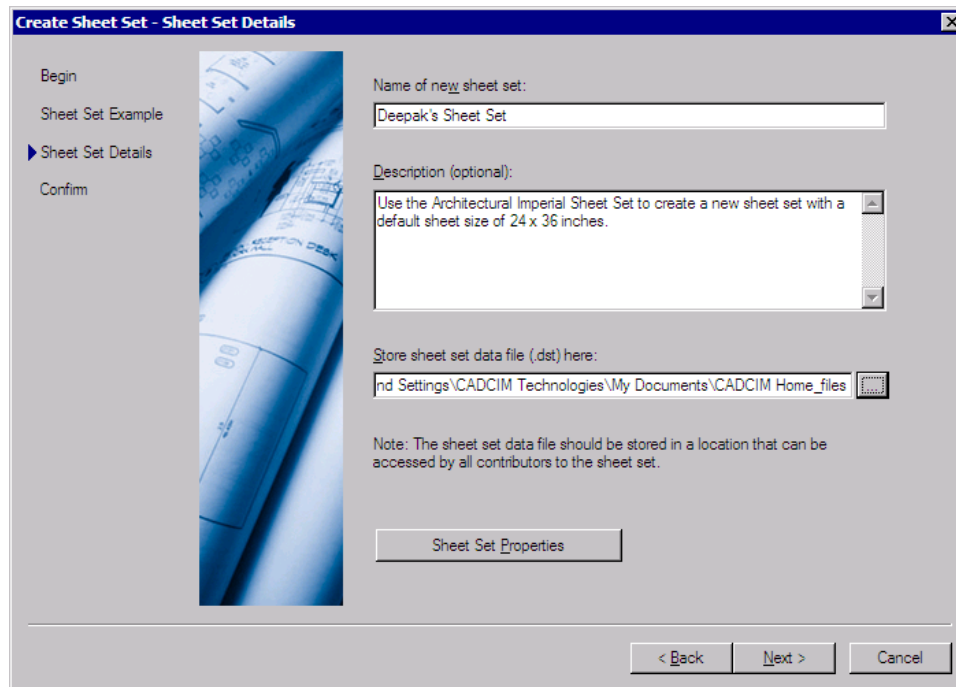


Figure 1-40 Create Sheet Set dialog box with the *Sheet Set Example* page

After selecting the sheet set to use as an example, choose the **Next** button. The **Sheet Set Details** page will be displayed, as shown in Figure 1-41.



*Figure 1-41 Create Sheet Set dialog box with the Sheet Set Details page*

Enter the name of the new sheet set in the **Name of new sheet set** edit box. By default, some description is added in the **Description (optional)** area. You can enter additional description in this area. The **Store sheet set data file (.dst) here** edit box displays the default location in which the sheet set data file will be stored. You can modify this location by entering the new location or by selecting the folder using the **Browse for Sheet Set Folder** dialog box, which is displayed by choosing the [...] button.

You can modify the sheet set properties such as name, storage location, template, description, and so on by choosing the **Sheet Set Properties** button.

Once all the parameters on this page are configured, choose the **Next** button. The **Confirm** page is displayed, as shown in Figure 1-42. This page shows the detailed structure of the sheet set and also lists its parameters and properties.

After checking all the parameters and properties, choose the **Finish** button. The **SHEET SET MANAGER** displays the sheet structure in the **Sheets** area and the details of that sheet set in the **Details** area, as shown in Figure 1-43. If the **Details** area is not displayed, choose the **Details** available on the left of the **Preview** button in the lower portion of the **SHEET SET MANAGER**.

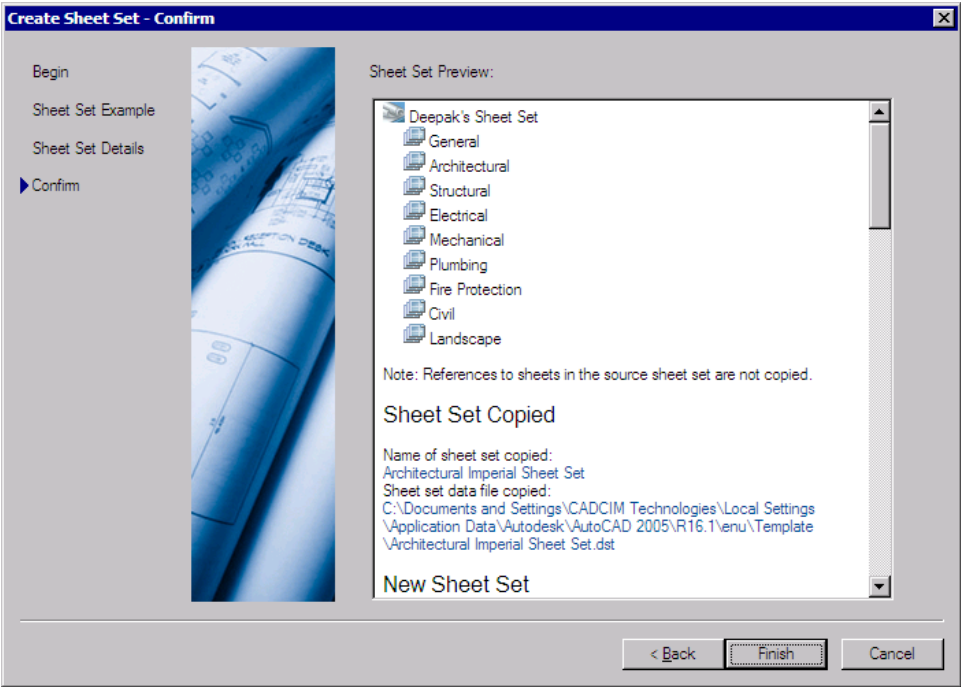


Figure 1-42 Create Sheet Set dialog box with the Confirm page

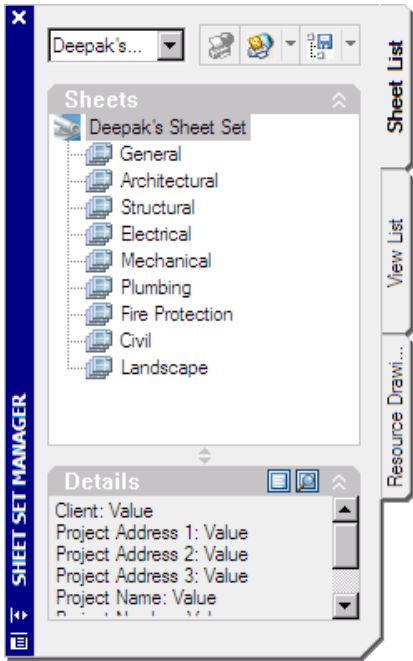


Figure 1-43 SHEET SET MANAGER

### Creating a Sheet Set Using Existing Drawings

As mentioned earlier, this sheet set is used to organize and archive an existing set of drawings. To create this type of sheet set, select the **Existing drawings** radio button from the **Begin** page of the **Create Sheet Set** wizard and choose **Next**. The **Sheet Set Details** page is displayed, which is similar to the one shown in Figure 1-41. Enter the name of the sheet set and the description on this page. Note that by default, there will be no description given about the new sheet set. After setting the parameters on this page, choose the **Next** button. The **Choose Layouts** page is displayed, as shown in Figure 1-44.

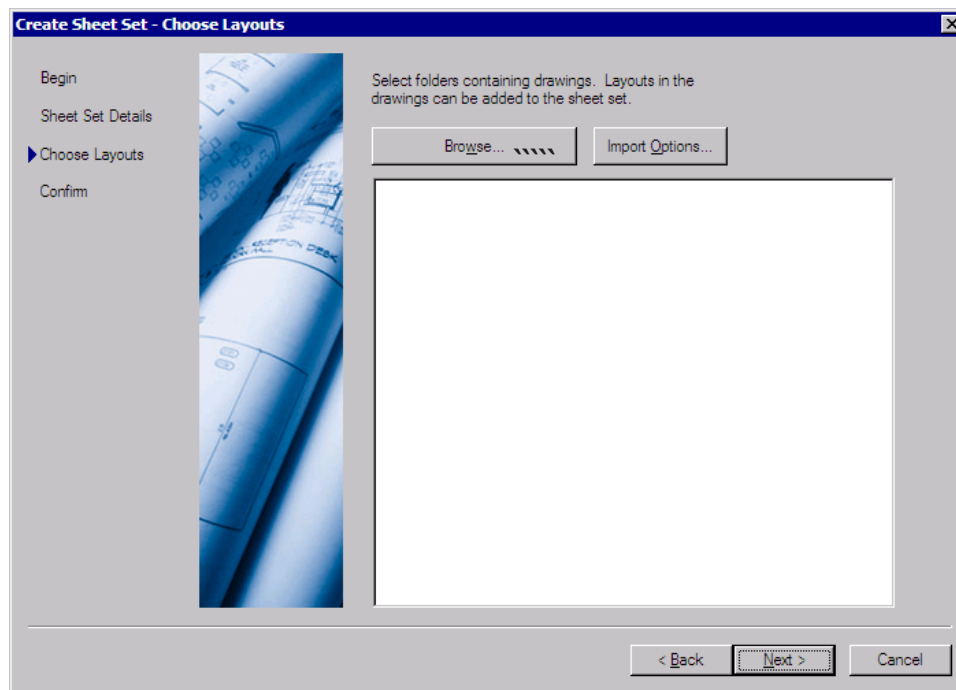


Figure 1-44 Create Sheet Set dialog box with the **Choose Layouts** page

Choose the **Browse** button from this page and browse for the folder in which the files to be included in the sheet set are saved. All the drawing files along with their initialized layouts are displayed in the list box available below the **Browse** button. You can select as many folders as you want by choosing the **Browse** button.



#### Tip

You can remove the folders from the list box in the **Choose Layouts** page by selecting them and pressing the **DELETE** key.

When you select a folder, all the drawings in that folder and all the initialized layouts in those drawings have a check mark on their left. This suggests that all these drawings and layouts will be included in the sheet set. You can clear the check box of the folder to clear all the

check boxes and then select the check boxes of only the required drawings and layouts. You can modify the import options by using the **Import Options** dialog box, which is displayed by choosing the **Import Options** button.

After selecting the layouts to be included, choose the **Next** button to display the **Confirm** page similar to that shown in Figure 1-42. This page lists all the layouts that will be included in the sheet set. Choose **Finish** to complete the process of creating the sheet set.

## Adding a Subset to a Sheet Set

For a better and more efficient organization of a sheet set, it is recommended that you add subsets to the sheet set. For example, consider a case where you have created a sheet set called Mechanical Drawings, in which you want to store all the mechanical drawings. In this sheet set, you can create subsets such as Bolts, Nuts, Washers, and so on and place the sheets of bolts, nuts, and washers for a more logical organization of the sheet set.

To add a subset to a sheet set, right-click on the sheet set or subset and choose **New Subset** from the shortcut menu. The **Subset Properties** dialog box is displayed, see Figure 1-45.

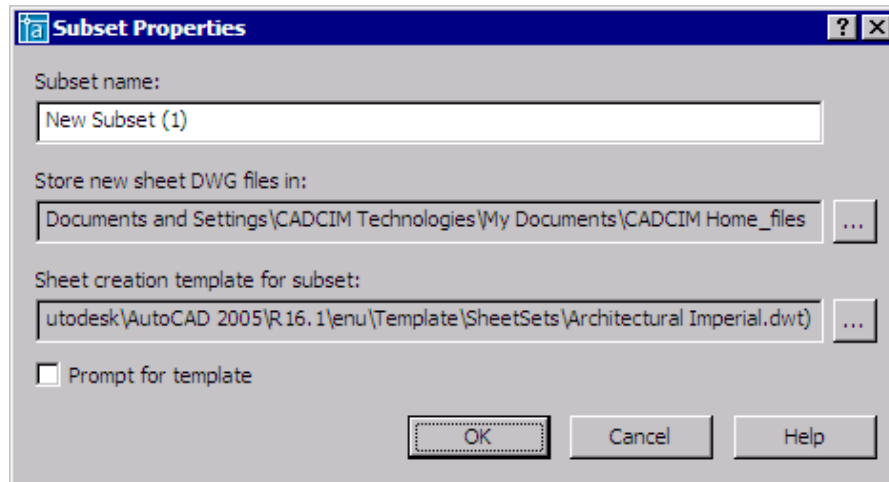


Figure 1-45 *Subset Properties* dialog box

Enter the name of the subset in the **Subset name** edit box. Also, specify the location for saving the DWG file and the template for creating the sheets using this dialog box. You can also select the **Prompt for template** check box, which will prompt you to select the template for the drawings. Choose **OK** after configuring all the parameters. A new subset will be added to the sheet set or the subset that you selected.

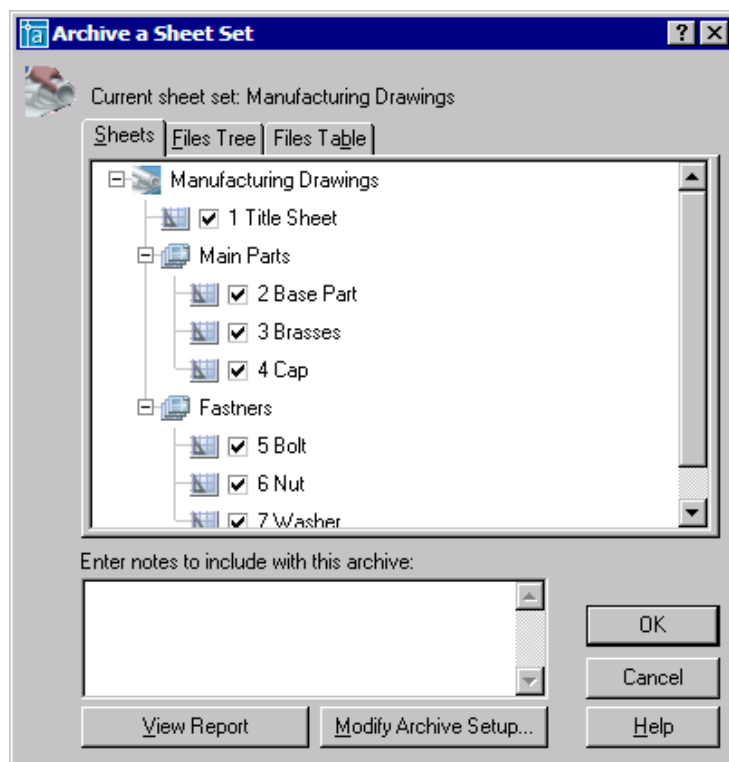
## Adding Sheets to a Sheet Set or a Subset

To add a new sheet to a sheet set or a subset, right-click on it in the **SHEET SET MANAGER** window and choose **New Sheet** from the shortcut menu. The **New Sheet** dialog box is displayed. In this dialog box, enter the number and the title of the sheet, along with the file name. You

can also set the path of the folder and the sheet template to be used, using this dialog box. Choose **OK** after configuring all the parameters. A new sheet will be added to the sheet set or the subset that you selected.

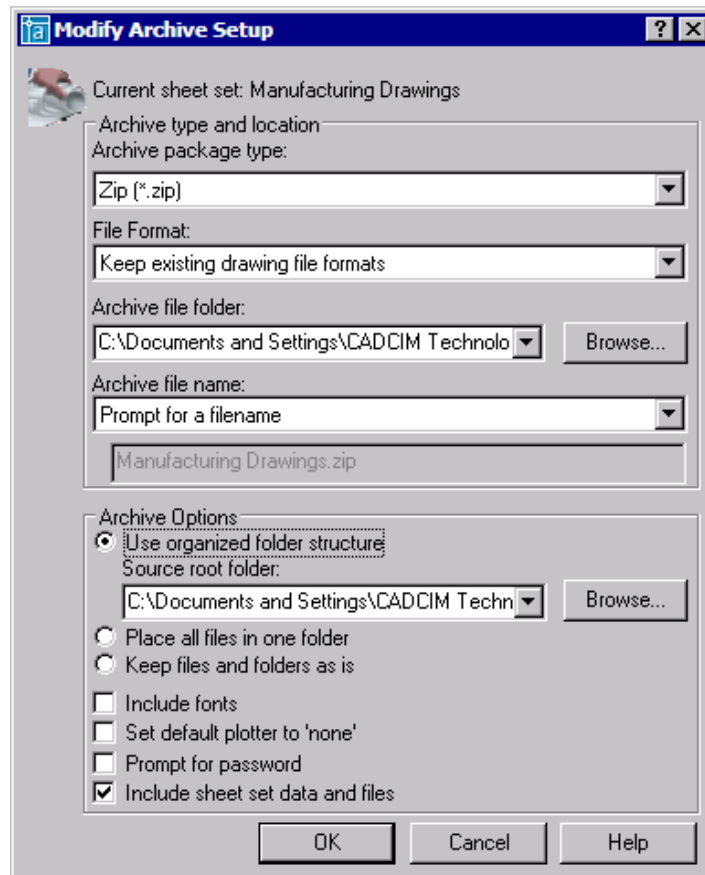
## Archiving a Sheet Set

AutoCAD allows you to archive the sheet set as a zip file, a self-extracting executable file (exe), or a file folder. All the files related to the sheet set are automatically included in the zip file. To archive a sheet set, right-click on its name in the **SHEET SET MANAGER** and choose **Archive** from the shortcut menu. After AutoCAD gathers the archive information, the **Archive a Sheet Set** dialog box is displayed, as shown in Figure 1-46.



*Figure 1-46 Archive a Sheet Set dialog box*

Before archiving the sheet set, you can modify the archiving options by using the **Modify Archive Setup** dialog box, as shown in Figure 1-47. This dialog box is displayed when you choose the **Modify Archive Setup** button. Using the **Archive package type** drop-down list, you can specify whether the archived file is a zip file, a self-extracting executable file (exe), or a file folder. You can also specify the format in which you want to save the files. You can select the current release format, AutoCAD 2004/LT 2004, or AutoCAD 2000/LT 2000 formats for archiving the files.

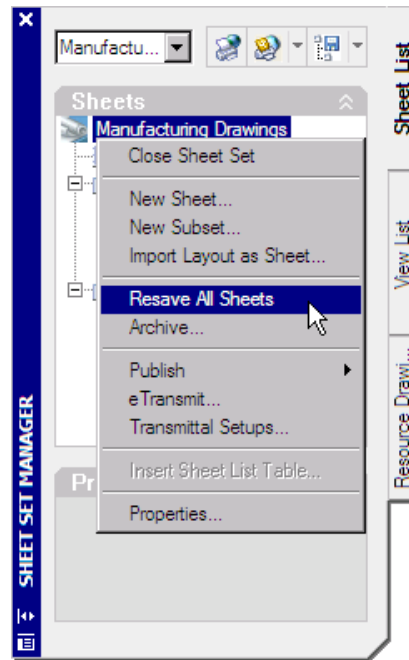


*Figure 1-47 Modify Archive Setup dialog box*

After setting all the parameters, choose the **OK** button from the **Archive a Sheet Set** dialog box. The standard save dialog box will be displayed, which can be used to specify the name and the location of the resultant file.

## Resaving All the Sheets in a Sheet Set

The **SHEET SET MANAGER** allows you to easily resave all the sheets in a sheet set. To save all the sheets in a sheet set again, right-click on the name of the sheet set in the **SHEET SET MANAGER** and choose **Resave All Sheets** from the shortcut menu, as shown in Figure 1-48. All the sheets in the sheet set will be saved once again.



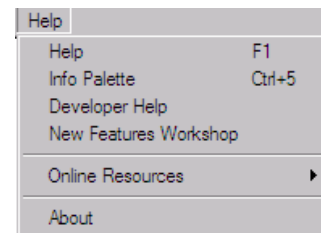
*Figure 1-48 Resaving all the sheets in a sheet set using the SHEET SET MANAGER*

## AutoCAD'S HELP

**Toolbar:** Standard > Help  
**Menu:** Help > Help  
**Command:** HELP or ?



You can get the online help and documentation on the working of AutoCAD 2005 commands from the **Help** menu, see Figure 1-49, or by pressing the F1 key. The various options available in the **Help** menu are discussed next.



*Figure 1-49 Help menu*

## Help

Choosing the **Help** option displays the **AutoCAD 2005 Help: User Documentation** dialog box as shown in Figure 1-50.

You can use this dialog box to access help on different topics and commands. It has five tabs: **Contents**, **Index**, **Search**, **Favorites**, and **Ask me**, which display the corresponding help topics. If you are in the middle of a command and require help regarding it, choosing the **Help** button displays information about that particular command in the dialog box.



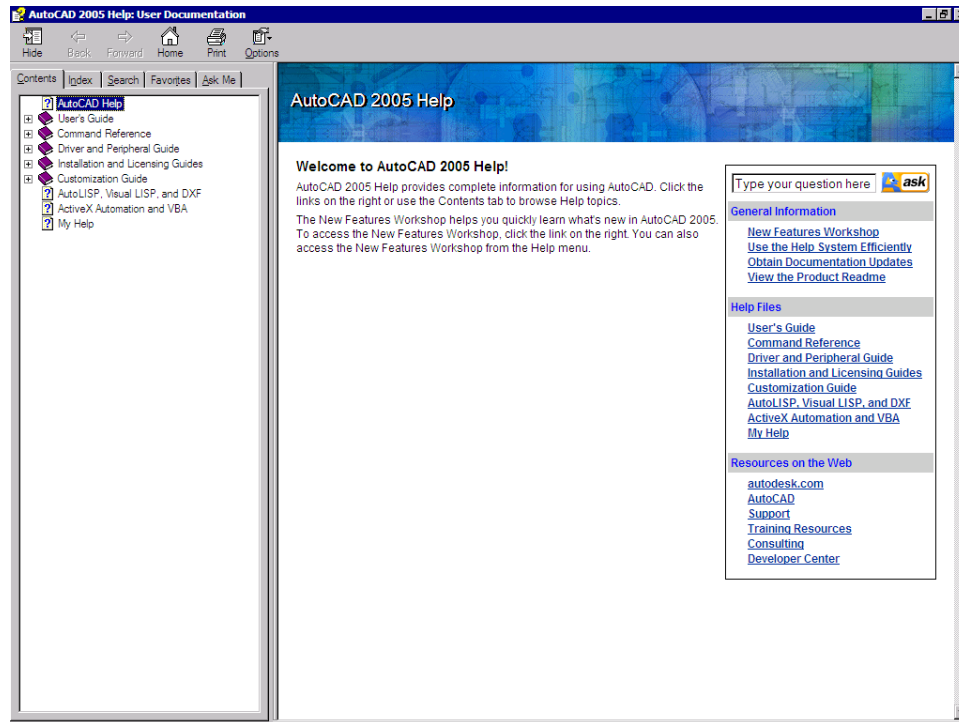


Figure 1-50 AutoCAD 2005 Help: User Documentation dialog box (Contents tab)

## Contents

This tab displays the help topics, which are organized by categories, pertaining to different sections of AutoCAD such as the User's Guide, Command Reference, and so on. To select a category, double-click on the corresponding book icon or choose the plus sign on the left. The icon becomes an open book with a minus (-) sign and a list of headings associated with that category is displayed. Use the plus sign (+) to further open the headings until you reach the help topic, which has a question mark (?) displayed with it. Choose the topic to display information about the selected topic or command in the window present on the right side of the dialog box.

## Index

This tab displays the complete index (search keywords) in an alphabetical order. To display information about an item or a command, type the item (word) or command name in the edit box. With each letter entered, the listing keeps on changing in the list area, displaying the possible topics. When you enter the word and if AutoCAD finds that word, it is automatically highlighted in the list area. Choose the **Display** button to display information about it.

## Search

This tab creates a word list based on all the keywords present in the online help files. When you type a word you are looking for and then choose the **List Topics** button, a list of matching

words is displayed in a window below to narrow down your search. This search is dependent on the option you have selected at the bottom of the dialog box, where you can search the previous results and also match words similar to those you searched. Use the scroll bar to scroll through the list, select the desired topic, and then choose the **Display** button to display its help.

### **Favorites**

This tab lets you create a list of your own topics that you need to access regularly. The topic which you have chosen in any other tab of **Help** is displayed in the **Current Topic** box when you choose the **Favorites** tab. Use the **Add** button to add it to your own list. You can use the **Remove** button to remove a topic from your list and the **Display** button to display its help.

### **Ask Me**

When you choose this tab, you will be prompted to enter a query in the edit box and then press ENTER. A list of topics related to the question follow. It also shows the book (category) from which it has been selected.

### **Info Palette**

Choosing this option displays **INFO PALETTE**, which gives you an access to context-sensitive help. The **INFO PALETTE** can be started by entering **ASSIST** at the Command prompt. Whenever you invoke a command, the **INFO PALETTE** displays quick help related to that command.

### **Developer Help**

This option gives a detailed help on customizing AutoCAD. You can click on any link provided on the right of the window, which is displayed when you choose this option.

### **New Features Workshop**

This option gives you an interactive list of all the new features in AutoCAD 2005. You can choose this option from the **Help** menu, which displays the **New Features Workshop** window with a list of various topics (Figure 1-51). When you choose a topic, a description of the feature improvement is displayed.

### **Online Resources**

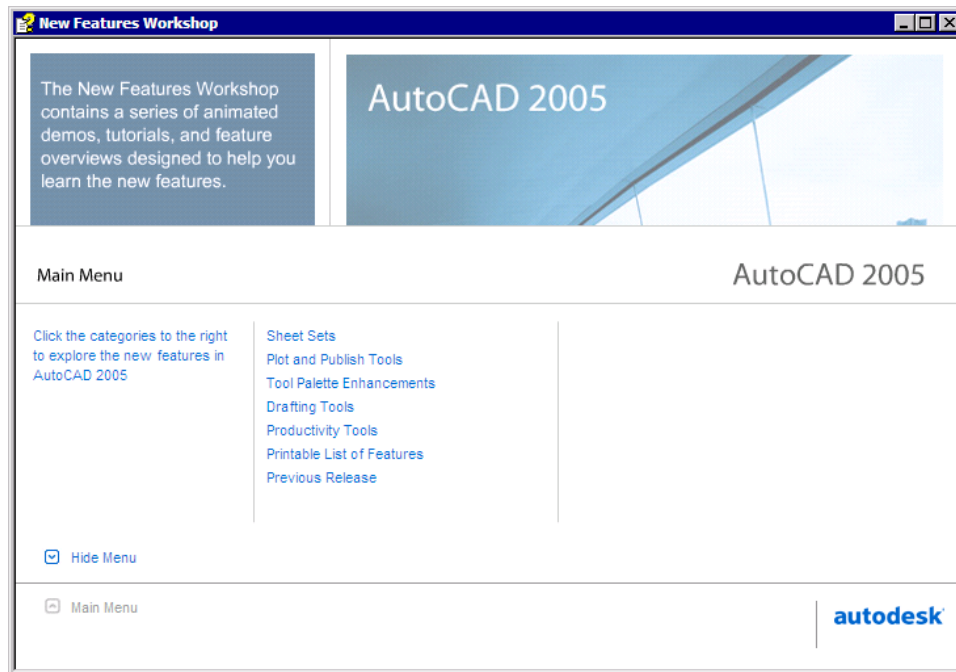
This utility connects you to the **Product Support, Training, Customization, Autodesk User Group International** Web pages and Web sites through the Microsoft Internet Explorer.

### **About**

This option gives you information about the Release, Serial Number, Licensed To, and also the legal description about AutoCAD.

## **ADDITIONAL HELP RESOURCES**

1. You can get help for a command while working by pressing the F1 key. The **Help** dialog



**Figure 1-51** *New Features Workshop* window

box containing information about the command is displayed. You can exit the dialog box and continue with the command.

2. You can get help about a dialog box by choosing the **Help** button in that dialog box.
3. Some of the dialog boxes have a **question mark** (?) button at the top right corner just adjacent to the **close** button. When you choose this button the ? gets attached to the cursor. You can then drop it on any item in the dialog box to display information about that particular item.
4. Autodesk has provided several resources that you can use to get assistance with your AutoCAD questions. The following is a list of some of the resources:
  - a. Autodesk Web site <http://www.autodesk.com>
  - b. AutoCAD Technical Assistance Web site <http://www.autodesk.com/support>
  - c. AutoCAD Discussion Groups Web site <http://discussion.autodesk.com/index.jspa>
5. You can also get help by contacting the author, Sham Tickoo, at [stickoo@calumet.purdue.edu](mailto:stickoo@calumet.purdue.edu).
6. You can download AutoCAD drawings, programs, and special topics by accessing the author's Web site at <http://technology.calumet.purdue.edu/met/tickoo/students/students.htm>.

### Self-Evaluation Test

Answer the following questions and then compare your answers to the correct answers given at the end of this chapter.

1. You can press the F3 key to display the **AutoCAD Text Window**, which displays the previous commands and prompts. (T/F)
2. You cannot create a new sheet set using the **SHEET SET MANAGER**. (T/F)
3. If a drawing was partially opened and saved previously, it is not possible to open it again with the same layers and views. (T/F)
4. If the current drawing is unnamed and you are saving the drawing for the first time in the present session, the **QSAVE** command will prompt you to enter the file name in the **Save Drawing As** dialog box. (T/F)
5. You can archive a sheet set by right-clicking on the name of the sheet set in the **SHEET SET MANAGER** and choosing \_\_\_\_\_ from the shortcut menu.
6. The \_\_\_\_\_ displays a message and an alert whenever Autodesk provides the latest information regarding software updates and their other products.
7. If you want to work on a drawing without altering the original, you must select the \_\_\_\_\_ option from the **Open** drop-down list in the **Select File** dialog box.
8. The \_\_\_\_\_ enables you to open only a selected view or a selected layer of a selected drawing.
9. You can use the \_\_\_\_\_ command to close the current drawing file without actually quitting AutoCAD.
10. The \_\_\_\_\_ system variable can be used to change the time interval for automatic save.

### Review Questions

Answer the following questions.

1. The shortcut menu invoked by right-clicking in the command window displays the six most recently used commands and some of the window options such as **Copy**, **Paste**, and so on. (T/F)

2. It is possible to open an AutoCAD 2002 drawing in AutoCAD 2005. (T/F)
3. The file name you enter to save a drawing in the **Save Drawing As** dialog box file name can be 255 characters long but cannot contain spaces and punctuation marks. (T/F)
4. You can close a drawing in AutoCAD 2005 even if a command is active. (T/F)
5. Which one of the following combination of keys is pressed to hide all the toolbars displayed on the screen?
  - (a) CTRL+3
  - (b) CTRL+0
  - (c) CTRL+5
  - (d) CTRL+2
6. Which one of the following combination of keys is pressed to turn on or off the display of the **TOOL PALETTES** window?
  - (a) CTRL+3
  - (b) CTRL+0
  - (c) CTRL+5
  - (d) CTRL+2
7. Which of the following commands is used to exit from the AutoCAD program?
  - (a) **QUIT**
  - (b) **END**
  - (c) **CLOSE**
  - (d) None
8. Which of the following options available in the **Startup** dialog box is used to set the initial drawing settings before actually starting a new drawing?
  - (a) **Start from Scratch**
  - (b) **Use a Template**
  - (c) **Use a Wizard**
  - (d) None
9. When you choose **Save** from the **File** menu or choose the **Save** button in the **Standard** toolbar, which of the following commands is invoked?
  - (a) **SAVE**
  - (b) **LSAVE**
  - (c) **QSAVE**
  - (d) **SAVEAS**
10. AutoCAD has provided \_\_\_\_\_ as an easy and convenient way of placing and sharing hatch patterns and blocks in the current drawing.
11. By default the angles are positive if measured in a \_\_\_\_\_ direction.
12. You can change the shape of the toolbars by placing the cursor anywhere on the \_\_\_\_\_ of the toolbar where it takes the shape of a double-sided arrow.
13. To differentiate the template files from the drawing files, the template files have \_\_\_\_\_ extension whereas the drawing files have \_\_\_\_\_ extension.

14. You can also use \_\_\_\_\_ and \_\_\_\_\_ instead of dragging and dropping the objects from one drawing to another while multiple drawings are opened.
15. The \_\_\_\_\_ tab of the **AutoCAD 2005 Help: User Documentation** dialog box displays the help topics that are organized by categories pertaining to different sections of AutoCAD.

**Answers to Self-Evaluation Test**

1 - F, 2 - F, 3 - F, 4 - T, 5 - Archive, 6 - Open Read-Only, 7 - Communication Center, 8 - Partial Open, 9 - CLOSE, 10 - SAVETIME