

Oracle® CADView-3D

DeskTop User's Guide

Release 12

Part No. B31983-03

November 2007

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- Did you understand the context of the procedures?
- Did you find any errors in the information?
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- Do you need different information or graphics? If so, where, and in what format?
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Preface

Intended Audience

Welcome to Release 12 of the *Oracle CADView-3D DeskTop User's Guide*.

The purpose of this manual is to describe how to use the CADView-3D DeskTop Web browser plug-in and ActiveX control to view CADView-3D models and collaborate with other users over the Internet.

This manual is intended for all levels of end users. Basic Web browser and Windows computer system knowledge is assumed.

Important: The license cost of CADView-3D includes only Translators for the VRML v2 and STL open-source formats. Translators for other formats and CAD systems may be available through Oracle partners or third-party independent software vendors.

See Related Information Sources on page x for more Oracle Applications product information.

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Structure

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Related Information Sources

This manual is intended to be used in conjunction with the other CADView-3D manuals. The following documents are also available for the CADView-3D product suite:

- *Oracle CADView-3D Studio User Guide*
Describes how to install CADView-3D Studio
- *Oracle CADView-3D Translators User Guide*
Describes how to install CADView-3D Translators used to convert 3D models to CADView-3D format and optimize

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

Do Not Use Database Tools to Modify Oracle Applications Data

Oracle **STRONGLY RECOMMENDS** that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle Applications data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle Applications data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle Applications tables are interrelated, any change you make using an Oracle Applications form can update many tables at once. But when you modify Oracle Applications data using anything other than Oracle Applications, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle Applications.

When you use Oracle Applications to modify your data, Oracle Applications automatically checks that your changes are valid. Oracle Applications also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

CADVIEW-3D Overview

This chapter covers the following topics:

- Conventions
- What is CADView-3D DeskTop?
- CADView-3D System Overview

Conventions

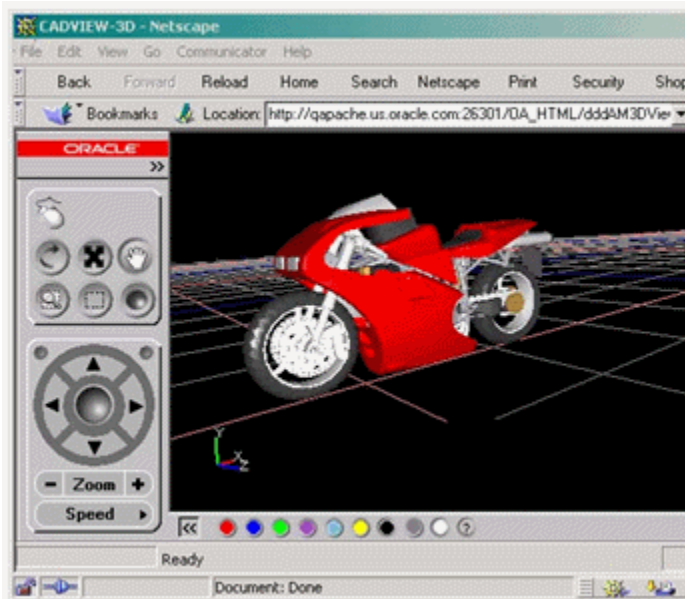
The following conventions are used in this manual:

Convention	Meaning
<>	Angle brackets enclose user-defined data in filenames and paths as in C:\<orant>\CADView-3D\DeskTop\ where <orant> is the name of the Oracle Home directory defined on your system.
Boldface text	Boldface type in text indicates emphasis on a particular word or phrase.
Boldface Text With Initial Caps	Boldface type with initial capital letters indicates a menu item or text in title bar of user interface.

What is CADView-3D DeskTop?

The Oracle CADView-3D DeskTop is a Windows-based Web browser plug-in and ActiveX control that allows you to view and interact with 3D models that have been

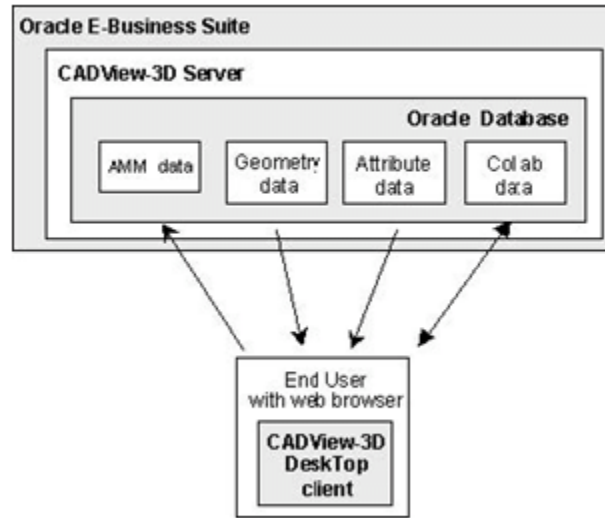
translated from a computer-aided design (CAD) source file and published to a CADView-3D Server and Oracle database. The DeskTop viewer uses streaming technology to render large models in which you can navigate, query information, and interact with other users.



In a realtime collaboration meeting, a group of users can collectively view the model and make group markups containing color-coded comments from each user that are stored with the model.

CADView-3D System Overview

From the perspective of an end user, the CADView-3D system components work together in the following manner when connected to the Oracle E-Business Suite:



- A user with a Web browser and the CADView-3D client clicks a link to open a document attachment for an item in the Oracle application.
- An HTML page is created on the fly that points to the AMM data published in the Oracle database for that model.
- CADView-3D DeskTop plug-in is launched. If a more recent version is available, you will be prompted to have it installed automatically.
- AMM data points to records for geometry data, attribute data, and collaboration data in the Oracle database.
- As the user navigates the model, geometry content (3D data) is streamed as needed to the DeskTop plug-in.
- As the user queries the model or views the Parts List or Attributes window, attribute data (extracted from the original CAD model during optimization) is streamed to the DeskTop plug-in.
- While viewing the model with DeskTop, users can send collaboration data to the database and receive collaboration data stored by other users in their group.

Installing CADView-3D DeskTop

This chapter covers the following topics:

- Overview
- DeskTop Installation
- Notes About Installation and Auto-Upgrade

Overview

For more information about installation and system requirements, see:

- Minimum and Optimal System Requirements
- Oracle E-Business Suite Applications Supported
- DeskTop Installation

Minimum System Requirements

- CPU: Pentium class 500 MHz+ or equivalent
- RAM: 128 Mb+
- Hard disk and I/O: IDE
- Operating System: Windows XP /2000 / 2003 Server
- Web Tools: Internet Explorer v5, Netscape Navigator v4.7+, FireFox Mozilla 1.5.0.1 or older
- Network Card (if using a network): 10 / 100 MIP
- Modem (if using a modem): 56 Kbs+

- Video card: SVGA 16 bit

Optimum Configuration

- CPU: Pentium Class 3GHz or equivalent+
- RAM: 512Mb+
- Hard Disk: ATA, SATA, Ultra2 SCSI+ or equivalent
- Operating System: Windows XP / 2000 / 003 Server
- Web Tools: Internet Explorer v5, Netscape Navigator v4.7+, FireFox Mozilla 1.5.0.1 or older
- Network Card (if using a network): 100 / 1 Gb MIP
- Modem (if using a modem): v.90, ISDN, DSL, Cable Modem
- Video Card: On-board OpenGL hardware acceleration

Oracle JInitiator Java plug-in version 1.1.8.16 or higher if viewing models published as attachments in Oracle E-Business Suite using Forms.

Note: You will be prompted to install JInitiator automatically when you first connect to E-Business Suite with your Web browser.

Using CADView-3D DeskTop, you can attach models to certain business objects in the following Oracle E-Business Suite applications:

- Oracle Product Lifecycle Management
- Oracle Product Information Manager Data Librarian
- Oracle Enterprise Asset Management
- Oracle Manufacturing family of applications
- Oracle Project Collaboration
- Oracle Project Management
- Oracle Property Manager
- Oracle Service
- Oracle Sourcing

DeskTop Installation

CADView-3D DeskTop is provided in a separate Windows-based installer on your product CD.

Alternatively, log in to E-Business Suite with a responsibility that allows you to view the CADView-3D application. On the Applications page, choose CADView-3D, click View Test Models & CADView-3D Components, and then click Install CADView-3D Components. On the Installers page, click CADView-3D DeskTop Installer to install the CADView-3D DeskTop plug-in.

You are also prompted to install or upgrade DeskTop when you click View Test Model in the CADView-3D application.

To install CADVIEW-3D DeskTop:

1. Navigate to the CADView-3DDeskTopSetup.exe file and double-click it.
2. Note: The DeskTop installer downloaded or launched from E-Business Suite is named ddddstin.exe.
3. In the Welcome screen, click Next to continue.
4. In the Destination Folder screen, accept the default directory or click Change to browse to a different location. Click Next to continue.
5. In the Setup Type screen, accept Default Complete or choose Custom and click Next to choose a specific module to install. Click Next to continue.
6. In the Ready to Install Program screen, click the Install button to begin installation or click Back to review or change settings.
7. In the Installing CADView-3D DeskTop screen, the progress bar advances as DeskTop is installed by default to the destination folder
\\Orant\CADView-3D\DeskTop\ where Orant is your Oracle Home directory.
8. In the Setup Completed screen, you can choose to view the "readme" file and click Finish to exit setup. The readme.txt file is stored in the installation directory.

See also: "Notes About Installation and Auto-Upgrade"

Notes About Installation and Auto-Upgrade

Note: If you are a Netscape user installing the DeskTop plug-in for the first time or you are receiving an auto-upgrade, you will need to click a "puzzle piece" plug-in icon in the Web browser to download the

"ddddstin.exe" installer to a local drive. You can then double-click this file to install CADView-3D DeskTop.

Note: In the Netscape version 7.0 Web browser, first disable the Netscape Plug-in Finder Service in order to download the CADView-3D DeskTop plug-in installer. Select Edit/Preferences/Navigator/Helper Applications and uncheck "Always use the Netscape Plug-in Finder Service (PFS) to get plug-ins."

Launching CADView-3D Models

This chapter covers the following topics:

- Overview of Launching CADView-3D Models
- Launching a CADView-3D Model (stand-alone)

Overview of Launching CADView-3D Models

Once a 3D model has been translated and published from a CADView-3D Translator and CADView-3D Studio, you can view it in a Web browser with the CADView-3D DeskTop viewer plug-in.

Before using CADView-3D DeskTop for the first time you may want to check the color depth and resolution of your display.

To check the color depth and resolution:

1. Click the Windows Start button, go to Settings, and choose Control Panel.
2. Double-click the Display icon and go to the Settings tab.
3. Verify that your monitor is set to High Color (16 bit) mode (65536 colors) or higher and Screen Area is set to 800x600 or higher.
4. Click OK.

Demonstrations

To Demonstrate CADView-3D do the following steps:

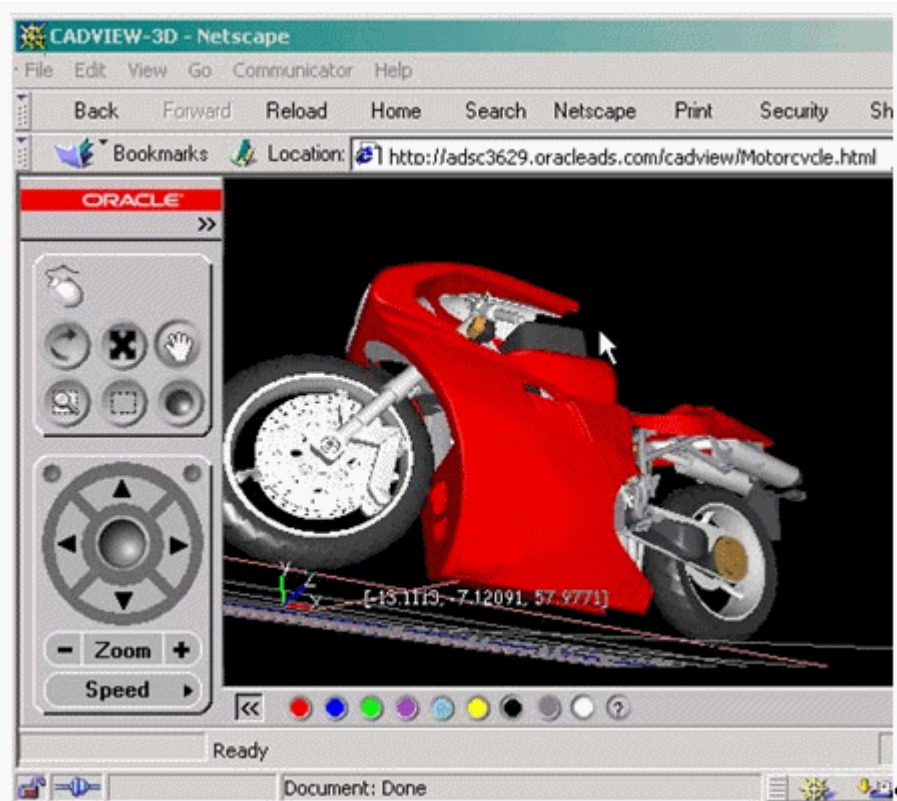
Document	Formats
1. Download & Read DemoScript (MCAD)	Adobe Acrobat .pdf
2. Download & Install CADView-3D plug in	Plug-In(.zip)
3. Connect to CADView-3D server	Headset Ducati Motorcycle Partial Plant with Crane Process Plant (StatOil)

- See: Launching a CADView-3D Model (stand-alone)
- See: Launching a CADView-3D Model from Oracle E-Business Suite

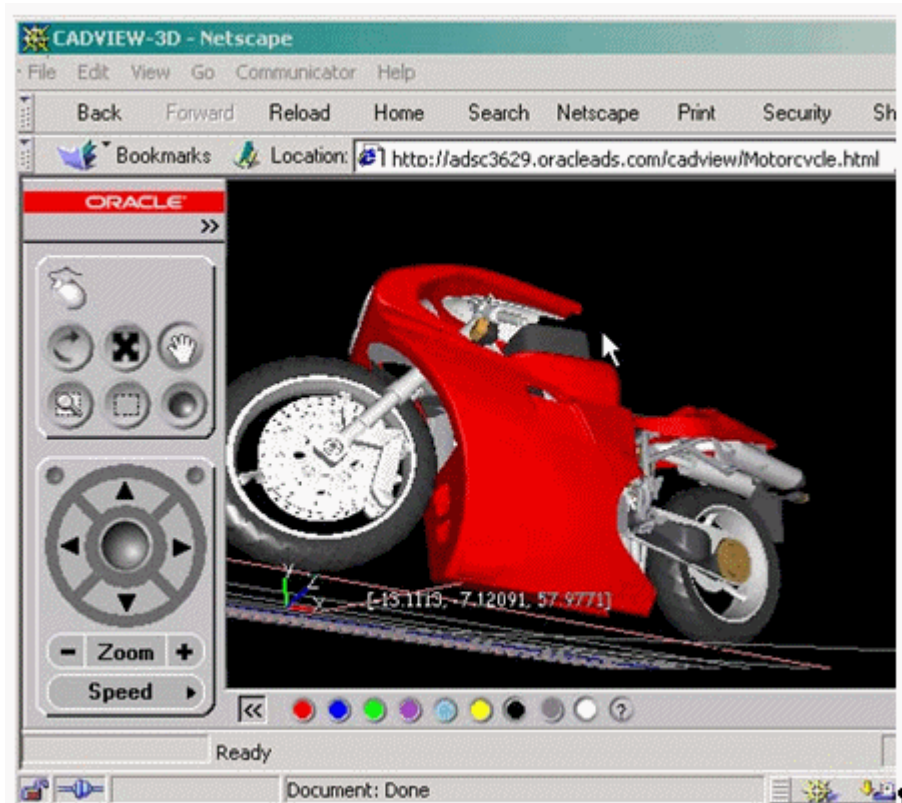
Launching a CADView-3D Model (stand-alone)

To view a model published to a stand-alone CADView-3D Server and Web server:

1. Once the CADView-3D DeskTop software is installed, open the Web page that contains the link to the published CADView-3D model.
2. Click the descriptive link for the model on a Web page created by the person who published the CADView-3D models.



The CADView-3D plug-in is launched and the model is rendered in a separate Web browser window. You will typically see the model's name at the end of the URL as in Motorcycle.html below.



To Launch a CADView-3D Model from Oracle E-Business Suite:

For example, to view a model published to a CADView-3D Server and attached to a business object in Oracle E-Business Suite:

Open a Web browser and navigate to the login page for E-Business Suite.

1. Log in with a username and password that allows you to view the CADView-3D application.
2. Choose the application containing the business object to which the CADView-3D model is attached.
3. For example after choosing Items, click Basic Search.

ORACLE® Self Service Framework

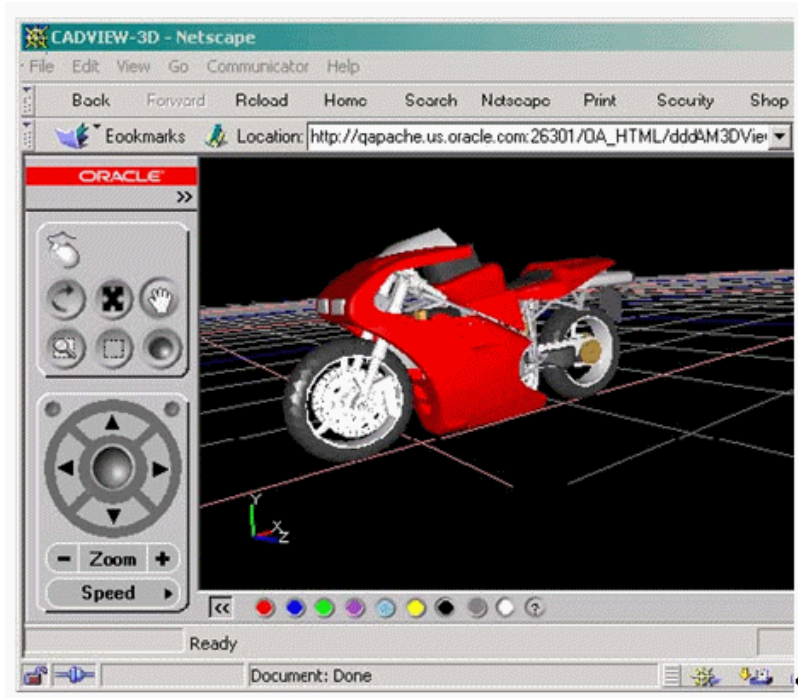
Applications



On the Simple Search page, enter an item name (or partial) and click Search.

4. In the search results, select the item to which the model is attached.
5. On the Summary page, click the Attachments tab.
6. In the Attachment page, read the descriptions and click the corresponding link under Name to open the CADView-3D model. A separate Web browser is launched with the model loaded in the CADView-3D DeskTop viewer.

Note: The model's name is not displayed in the URL when you launch DeskTop from E-Business Suite. Instead, find it in the Server/Model Information window.



Note: Depending on how the person who created the attachment set up the initial view of the model, you may see an animation in the model, a path navigating through the model, an isolated part or group of parts, or a markup image.

See also: Notes About Installation and Auto-Upgrade.

DeskTop Interface

This chapter covers the following topics:

- DeskTop Interface
- DeskTop Menus
- Mouse Action Toolbar
- Navigation Bar
- DeskTop Windows
- Pop-up Menu
- Tooltips
- Background Color
- Server/Model Information
- Help Content
- Keyboard Shortcuts

DeskTop Interface

The CADView-3D DeskTop interface has been designed for ease of use so that the first time user can quickly become productive. All the features are organized in a menu system, and can be accessed using icons on the left pane of the window.

The DeskTop includes support for creating and viewing Change Management objects that originate from the E-Business Suite, Product Lifecycle Management, and the Product Information Management Data Librarian applications.

You can view the following for an overview of the new DeskTop interface. Follow the links in each section for more detailed information.

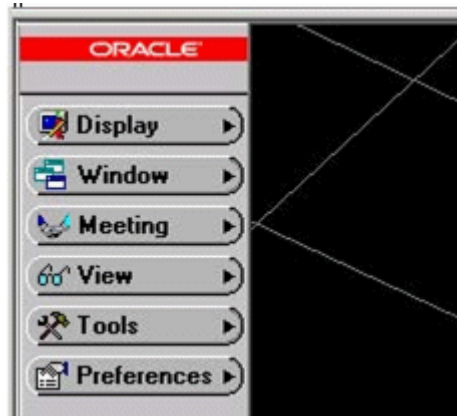
- DeskTop Menus

- Mouse Action Toolbar
- Navigation Bar
- DeskTop Windows
- Pop-Up Menu
- Tooltips
- Background Color
- Preferences
- Help
- Keyboard Shortcuts

DeskTop Menus

New menus have been defined for the icons in the toolbars but their functionality remains the same.

- Display menu
- Window menu
- Meeting menu
- View menu
- Tools menu
- Preferences men
- Meeting menu



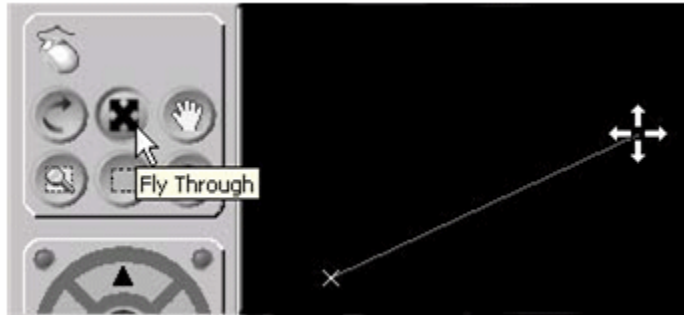
When you change the size of the Web browser window, menus on the left side of the window will appear/disappear to fill the space available. These menus can also be found in the right-click, pop-up menu and by clicking the double-arrow ">>" icon under the Oracle logo at the top of the screen.



Mouse Action Toolbar

The mouse action toolbar provides tools to move through the model and select objects to view.

The top row contains icons used to rotate around, fly through, and pan your view across the model. The bottom row contains icons used to zoom into an area of interest, to pick objects by dragging a rectangle, and to pick by dragging sphere. To see the name of a tool, hover the mouse pointer over the tool to see the tooltip.



Note: In Fly-through and Pan mode, you can drag the cursor a short distance and then stop and hold left mouse button to continue moving in that direction.

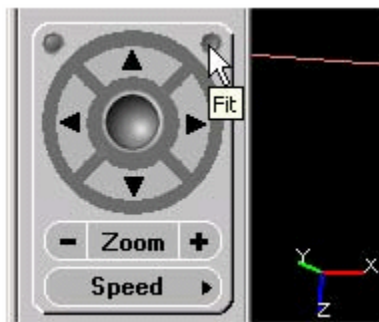
See: Zooming Into a Window

See: Rotating Your View Around the Model

See: Selecting and Deselecting Objects

Navigation Bar

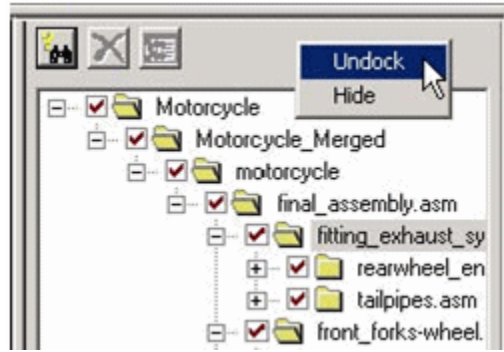
The Navigation bar contains arrow icons and other controls to move your view in the scene.



For more information, see: Moving Around in the Model

DeskTop Windows

In the main window the various CADView-3D DeskTop windows are docked at the edge by default. To undock right click inside the window and choose Undock. To see the name of a window in the title bar, undock it.



To Dock a window, right click inside the window and choose Dock



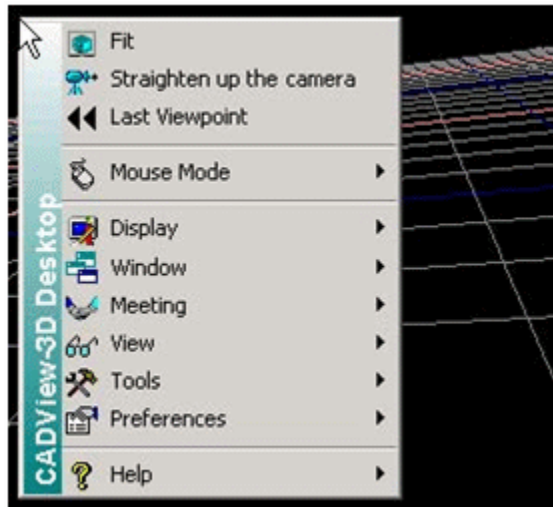
See: Using the Window Menu Features

See also: Creating Markups

Pop-up Menu

To access the pop-up menu, right click anywhere in the viewing window to open the menu and then left click to make a selection.

This menu provides a shortcut to access frequently used features, such opening tools/windows, straightening the camera and fitting the model to view.



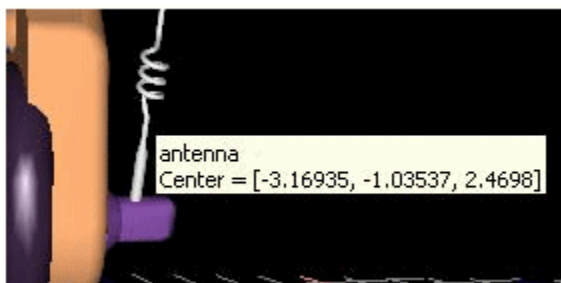
Tooltips

Tooltips are text labels that appear when you place the mouse pointer over certain areas in DeskTop without clicking.

Tooltips identify each icon on the mouse action toolbar and other toolbars found in DeskTop tools and windows.

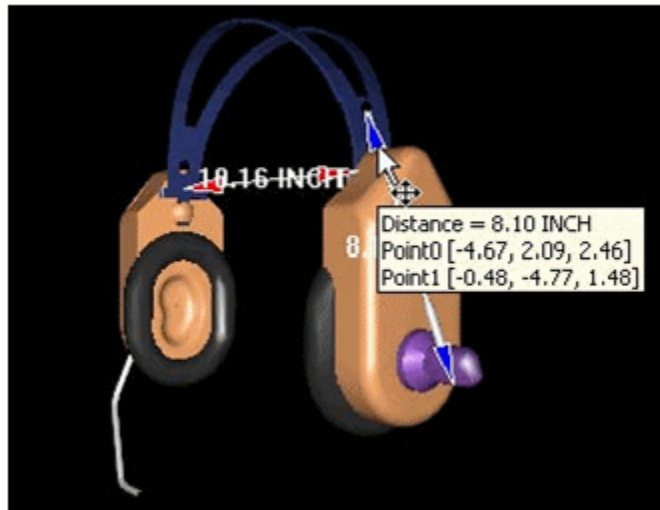


Tooltips reveal the part name and centerpoint location of each object.



When the Dimensioning window is open, tooltips show the distance between the

currently selected points in the model.

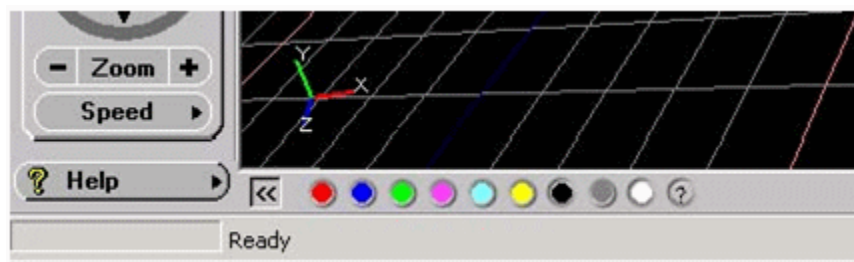


Note: You can set Tooltip attributes in the General Preference settings tab.

Background Color

Depending on the color of your model, you may want to change the background to a contrasting color in the viewing window.

Click any one of the colored circles at the bottom of the screen to change background color in the scene. Click the circle with the question mark to open the color palette to create a custom color.



Server/Model Information

Choose Server/Model Information in the Window menu to open the Server/Model Information window. The model name is listed first followed by information about the CADView-3D Server and Oracle database.

Note: The model name also appears as the top node in the hierarchy in the Structure window.

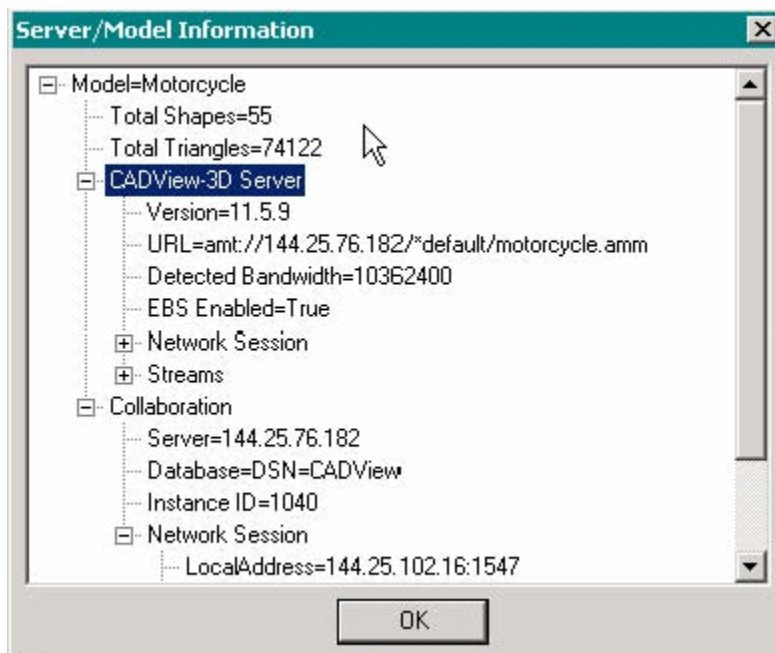
The model name is created in the CADView-3D Translator. By default, it is a unique name generated by the Translator at the time of publishing based on the CAD source file prefix, the user login name, and a timestamp (year:month:day:hour:minute:second).

For example, a model named "engine_blocktjones020315182500" was published from a CAD source file "engine_block.xxx" by "tjones" March 15, 2002 at 6:25pm.

Note: Models published from CAD applications with 2D support will have "_2D" or "_3D" appended to the CADView-3D model name as in "engine_blocktjones020315182500_3D"

However, the CADView-3D model name can also be a unique, user-defined name entered in the CADView-3D Translator "CADView-3D Model Name" setting during publishing (e.g., "57ChevyEngine" or "Headset").

(chap4_12)



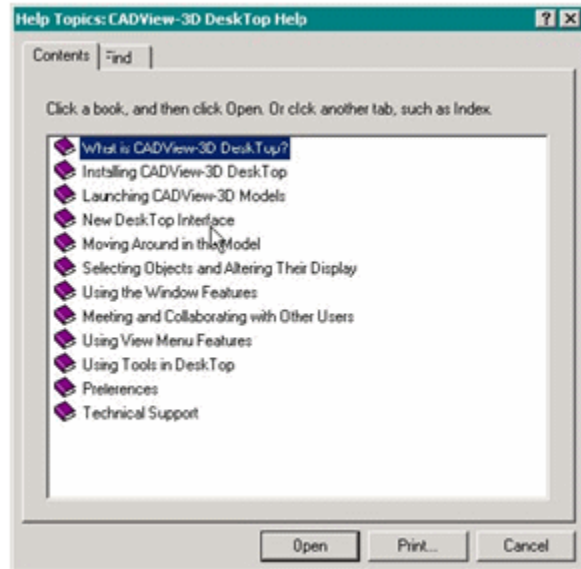
Note: If the model was created using the Attachment window, the model name may be appended with an additional string as in "Headset_Initial-path" to show that an initial path begins to play when the model opens.

Help Content

Click Help Topics in the Help menu to open Windows-based Help system in a separate window.

Use the Contents tab to navigate in the topic hierarchy. Double click a topic to display the help text in a separate window.

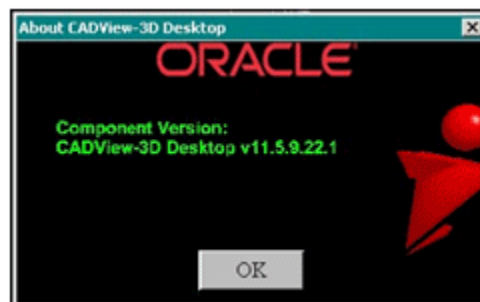
Use the Find tab to do a keyword search to obtain a list of topics containing that word.



See also: About Box Version Number

About Box Version Number

To find the version number of your CADView-3D DeskTop client, choose About CADView-3D DeskTop in the Help menu to open the About box.



Note: You can also see the version number by choosing Show Statistics

in the Preferences menu.

Keyboard Shortcuts

You can use the following keyboard shortcuts to perform commonly used commands found in DeskTop menus.

Note: Make sure to first click inside the viewing window before using the keyboard command; clicking the browser title bar is not sufficient.

Action	Key
Fit object in view	F
Hide selected objects	H
Show last object hidden	S
Show all hidden object	A
Isolate selected objects	I
Unisolate all objects	U
Clear all selections	C
Cycle between Rotate Around, Fly Through and Pan model	E
Toggle between last and current viewpoint	B
Pick by rectangle	CTRL+SHIFT while clicking and dragging mouse pointer
Pick by sphere	ALT while clicking and dragging mouse pointer
Straighten up	Spacebar
Zoom in	CTRL+ALT while clicking and dragging mouse pointer

Action	Key
Exit Full Screen Mode	ESC (escape)
Increase navigation speed	+ (plus)
Decrease navigation speed	- (minus)

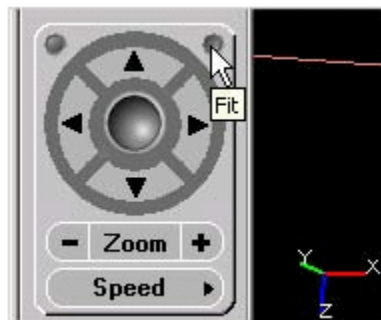
Moving Around the Model

This chapter covers the following topics:

- Overview of Moving Around in the Model
- Zooming Into a Window
- Rotating Your View Around the Model

Overview of Moving Around in the Model

You can use the direction arrow icons on the navigation bar to move your viewpoint through the model or you can use the mouse action toolbar and click and drag your mouse pointer in the window to move in that direction.



- Click the Straighten Up icon (circle in upper left corner) to level your view. You can also press the spacebar on the keyboard to straighten up.
- Click the Fit icon (circle in upper right corner) to fit the entire model in the viewing window.
- The direction arrow icons "pan" or move your view in one plane like moving along a conveyor belt left and right or on an elevator up and down.
- By dragging the sphere around in the middle you can rotate the model about its

centerpoint.

- Click the Zoom + (plus) and - (minus) buttons to move toward or away from the model respectively.
- You can change the movement speed choosing from Very Fast to Very Slow in the Speed menu. You can also click Select to open the Set Speed dialog and drag the Speed slider to the right (faster) or to the left (slower).

See: Zooming Into a Window

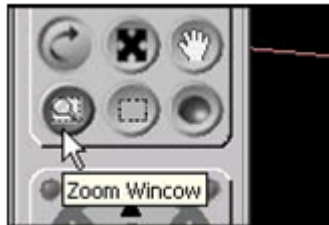
See also: Rotating Your View Around the Model

Zooming Into a Window

You can use the Zoom Window feature to see a closer view of an area in the model.

To zoom into a window:

1. Click the Zoom Window icon in the mouse action toolbar.



2. Click the upper left corner of the area you want to zoom in to then drag a rectangle diagonally downward.

Objects seen in the selection rectangle will then fill the screen.



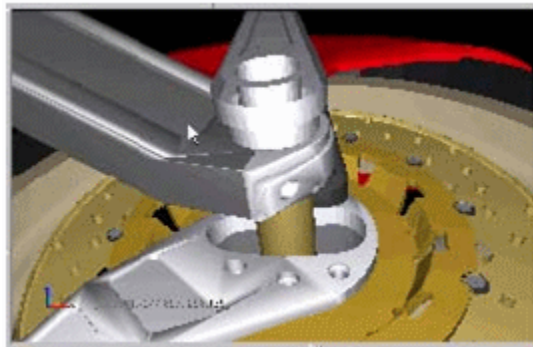
Note: When you are in another mode, such as Examine or Fly

Through, you can also press and hold the Ctrl and Alt keys and drag a Zoom Window.

To view a larger area of the model again, click the minus Zoom minus - button or clear any selected objects and click the Fit icon or press the F key to see the entire model.

Rotating Your View Around the Model

In normal Fly-Through navigation mode, you can move your viewpoint in any direction as you move around the model.



In Rotate Around navigation mode, the target of your viewpoint is fixed at the center of model (or selected objects) as you rotate around or zoom in and out. You typically use Rotate Around to examine selected objects from all angles while automatically keeping them within your view.

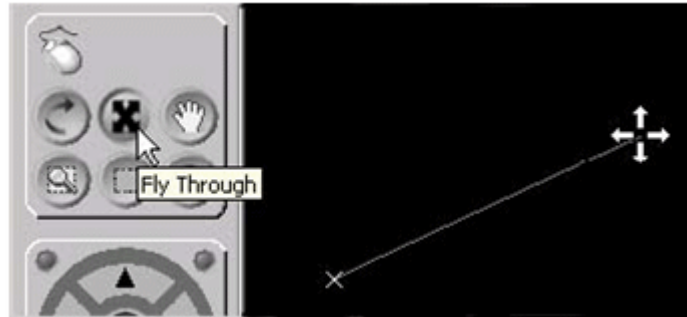
Rotating Around the Model:

To rotate around the model

1. Select the objects you want to rotate around.

Note: If no objects are selected initially, you will rotate around the entire model.

2. Click the Rotate Around icon on the mouse action toolbar or press the E key. Selected objects are automatically isolated in wireframe and fit to the center of your view.



3. Drag the mouse to rotate your view about the centerpoint of the objects.



Note: With only one object selected, it appears that the object is rotating about its own axis and you are stationary.

4. When rotating around the model is done, click the Fly Through icon to return to normal Fly Through navigation mode.

Note: You can modify the appearance of selected objects by setting Pick and Navigation Preference settings. For example, you may want objects to appear isolated and not in wireframe.

See: Moving Around in the Model; See also: Moving Your Viewpoint While Rotating Around; See also: Adding and Subtracting Objects While Rotating Around

Moving Your Viewpoint While Rotating Around

5. Click the Straighten Up icon or press the keyboard spacebar to return your view to the CADView-3D standard orientation of Y-axis up and Z-axis toward you.

Additionally, you can use the following mouse and keyboard commands to move your viewpoint when examining objects:

Key Command	Movement
Click and drag the mouse pointer.	Rotates your view dynamically about the center of the objects.
Shift-click and drag the mouse pointer <i>up</i> and <i>down</i> .	Moves your view toward or away from the objects.
Control-click and drag the mouse pointer.	Pans your view across the objects.
Alt-click and drag the mouse pointer.	Moves the center of rotation off axis in proportion to the amount of movement.
F11 (holding)	Rotates your view continuously about the model when in Rotate Around mode.
F12 (holding)	

Note: If movement appears too fast or too slow, adjust the speed slider accordingly. You can also drag the mouse pointer a *short* distance and then press F11 or F12 to *slow* the rotation and, conversely, drag it a longer distance to increase the speed.

Adding and Subtracting Objects While Rotating Around

Without rotating around objects, you can add or subtract objects from the group you are examining.

6. In Preference settings, clear the Navigation option Automatically isolate when rotating objects.
7. Click the Rotate Around icon or press the E key.
8. Control-click the objects you want to add to or subtract from the isolation set.
9. Click the Fit icon or press the F key to adjust your navigation centerpoint to match the center of the new group of objects.
10. When finished rotating around the objects, click the Fly Through icon to return to normal navigation mode.

Selecting and Altering Objects

This chapter covers the following topics:

- Selecting Objects and Altering Their Display
- Selecting and Deselecting Objects
- Tool Mouse Action
- Fitting Objects to View
- Hiding and Showing Objects
- Isolating Objects
- Using the Sectioning Plane
- Using Extended Object View with Large Models
- Displaying the Model in Wireframe
- Displaying the Model with High Quality Lighting

Selecting Objects and Altering Their Display

You can select objects in the viewing window and then use the Display menu features to alter their appearance. For more information see the following topics:

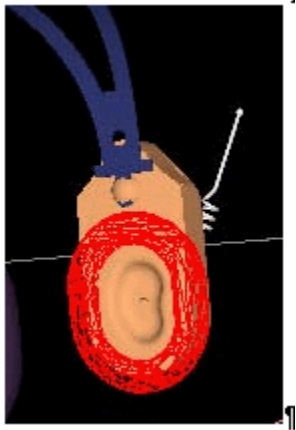
- See: Selecting and Deselecting Objects
- See: Fitting Objects to View
- See: Hiding and Showing Objects
- See: Isolating Objects
- See: Using the Sectioning Plane
- See: Using Extended Object View with Large Models

- See: Displaying the Model in Wireframe
- See: Displaying the Model with High Quality Lighting

Selecting and Deselecting Objects

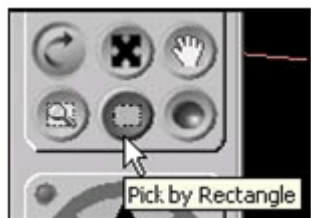
Select or pick a single object by clicking it in the viewing window. To add subsequent objects to the selected group, press the Shift or Ctrl key while selecting the objects.

When you select an object, it appears by default in red triangular wireframe.



Note: Modify the appearance of selected objects in Pick Preference settings.

- To deselect all selected objects, you can simply click empty space around the model, choose the Clear Selection icon on the Display menu, or press the C key.
- To deselect a single object within a group, press the Ctrl key and click the object.
- You can also drag the mouse pointer to select groups of objects in the following manner:

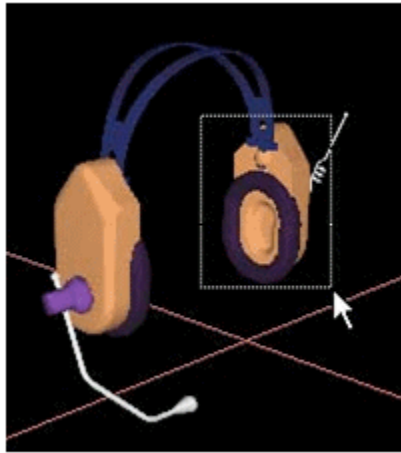


Tool Mouse Action

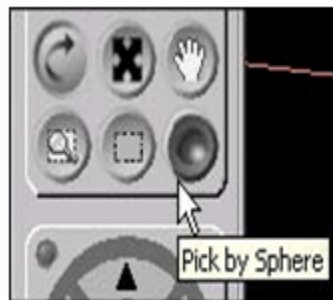
To use the tool mouse:

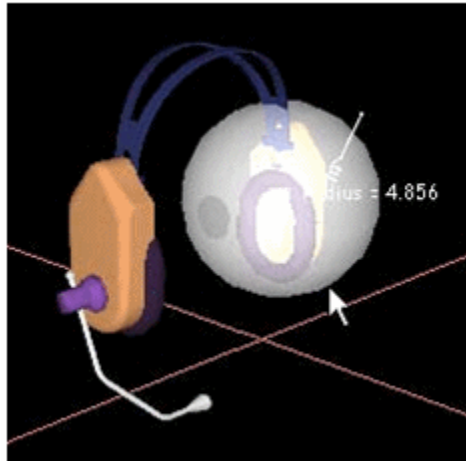
- Click and drag a selection rectangle around a group of objects.
- Pick by Rectangle icon

Only objects that fall within the rectangle and are in view (and not behind other objects) are selected, or hold Ctrl+Shift keys while dragging mouse pointer.



- Pick by Sphere icon Click and drag a sphere from the object's center point.
- Every object within or touching the sphere is selected when you release the mouse button.

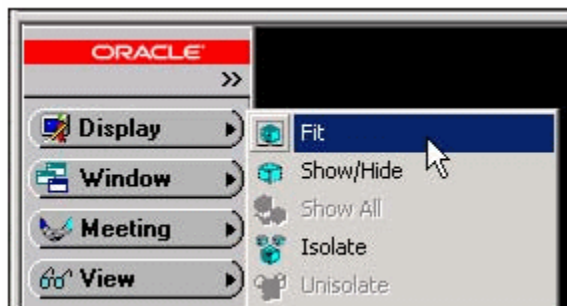




Note: There are other tools you can use to select and display objects in the model based on attribute values, see Parts List.

Fitting Objects to View

You can use Fit to change your eyepoint so selected objects are centered in the viewing window.



Select the objects and choose Fit in the Display menu. You can also click the Fit icon on the Navigation bar or press the F key.

If you are zoomed in too far in the model you can click Fit to quickly zoom out again. If no objects are selected, the entire model is centered.

Hiding and Showing Objects

You can selectively hide and show certain objects to better see objects in the interior of the model, for example.

- To hide an object, select it and choose Show/Hide in the Display menu or press the

H key.

- To display the last hidden object again, select Show/Hide.
- To display all hidden objects, select Show All in the Display menu or press the A key.



Related Topics

Using the Sectioning Plane

Isolating Objects

You can select and isolate objects in a model so adjacent objects will not block your view.

- To isolate an object, select it and choose Isolate in the Display menu or press the I key.
- To isolate an object already within a set of isolated objects, select the object and choose Isolate in the Display menu again.
- To unisolate an object, select it and choose Unisolate in the Display menu or press the U key.

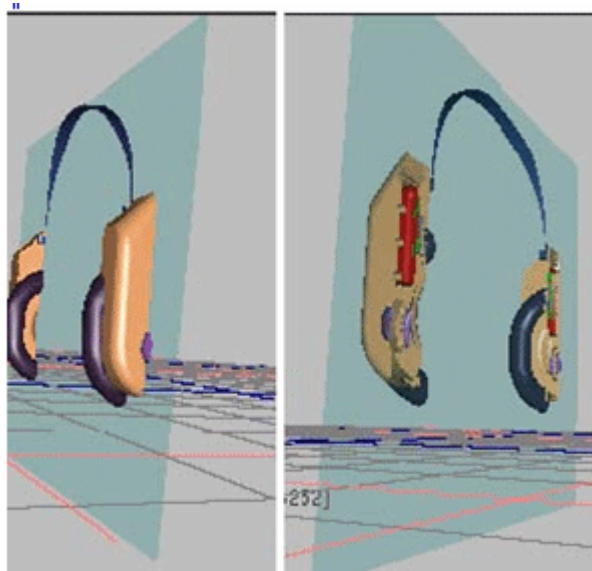


Using the Sectioning Plane

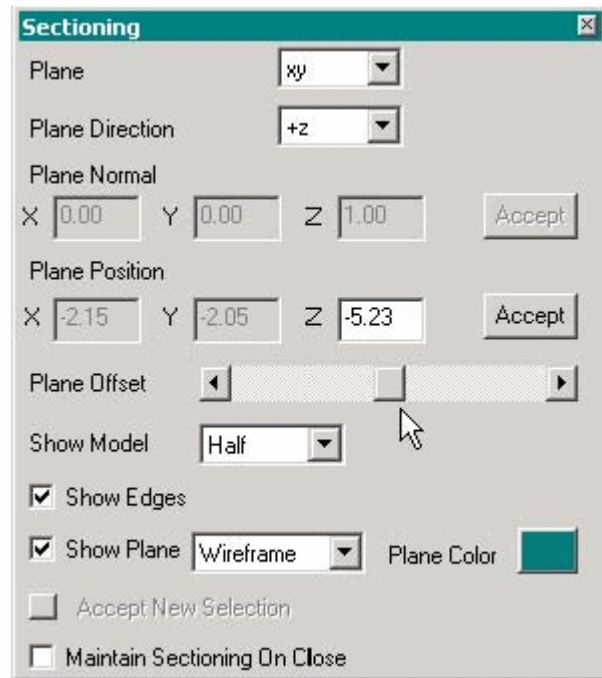
You can drag a sectioning plane across the 3D model to dynamically cut away slices of the model to view cross-sections of interior parts.

To drag a sectioning plane across a model:

1. If desired, select and isolate a group of objects in the scene.
2. Navigate to the desired view of the model.
3. Set a lighter background color if necessary.
4. Choose Sectioning in the Display menu. The Sectioning screen appears and a plane cuts the objects into two sections, creating a visible and an invisible half.



5. Use the Plane Offset slider on the Sectioning screen to dynamically drag the plane across the objects.



The following features are available in the Sectioning screen:

Parameter	Description
Plane	Specify the axes on which to position the plane (xy, yz, zx, General)
Plane Direction	Choose the side of the plane on which the objects are visible.
Plane Normal	Tilt the plane from perpendicular to major axes. Try whole unit increments. Click Accept to enter values (use with General Plane setting)
Plane Position	Enter numeric values to move the plane along the X Y Z axes from default center position . Click Accept enter the values (use with General Plane setting).
Plane Normal	Tilt the plane from perpendicular to major axes. Try whole unit increments. Click Accept to enter the values.

Parameter	Description
Plane Offset	Slide the PLane Offset slider to move the sectioning lane through the model.
Show Model	Set Half, All, or None to determine how much of the model is displayed as the sectioning plane is moved through it.
Show Edges	Define the edges of the objects at the cross-section in a yellow outline.
Show Plane	Set Wireframe to see only the plane outline. Set Transparent to make the plane transparent using Plane Color.
Plane Color	Set the color used for plane outline or transparency.
Accept New Selection	To add parts to the cross section, select the parts in the model and then click Accept New Selection.
Maintain Settings on Close	Close the Sectioning dialog but keep the sectioning plane visible. You may want to section the model before using the Dimensioning tools or Markups.

Using Extended Object View with Large Models

The Extended Object View feature enables you to quickly navigate very large models by allowing you to pull in the far clip plane and simplify the display of geometry beyond it. You can then navigate at a high frame rate before the model is done loading.

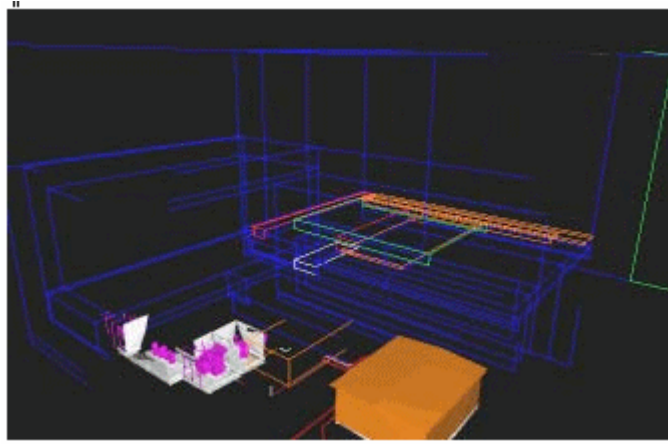
To navigate at a high frame rate:

1. First fit the entire model in the viewing window.
2. Choose Extended Object View in the Display menu.
3. Adjust the Far clip plane slider in Graphics Preference settings to reduce the amount of geometry to be rendered.

The model geometry between the near and far clip planes appears as usual.

However, the model beyond the far clip plane is displayed as a set of outline boxes.

4. Navigate to the desired position in the model and turn off Extended Object View and adjust clip planes if necessary.



You can perform the following actions in the Extended Object View toolbar or with the corresponding keyboard shortcuts.

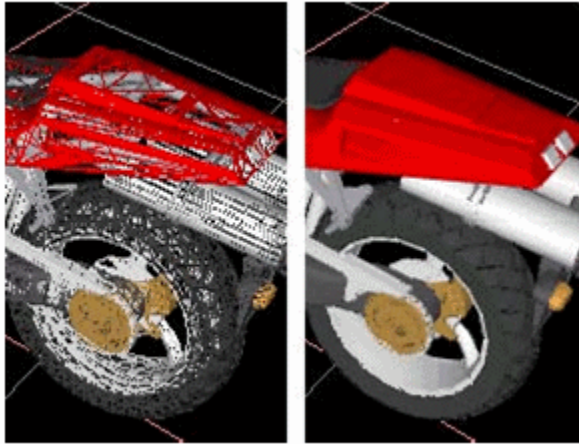


Action	Key
Increase far clip plane (by 1/10th)	Right arrow
Decrease far clip plane (by 1/10th)	Left arrow
Increase resolution	Up arrow
Decrease resolution	Down arrow

Displaying the Model in Wireframe

By default, CADView-3D DeskTop displays models with Gouraud shading which interpolates a smooth surface in place of the underlying triangular wireframe. You can also choose to display the wireframe view of the model.

Choose Wireframe in the Display menu to view the model in wireframe.



Displaying the Model with High Quality Lighting

DeskTop automatically detects whether your graphics card has OpenGL acceleration. If so, the High Quality Lighting icon on the Display menu is enabled automatically.

Example with High Quality Lighting turned off:



Example with High Quality Lighting turned on:



Related Topics

Lighting tab in Preference settings

Window Menu Features

This chapter covers the following topics:

- Using the Window Menu Features
- Structure Window
- Querying Attributes to Display Parts
- Parts List Window
- Attributes Window
- URLs Window
- Attachment Window
- Change Management Window
- Top and Front View Windows

Using the Window Menu Features

CADView-3D DeskTop contains the following features in the Window menu.

- Structure Window
- Parts List Window
- Querying Attributes to Display Parts
- Attributes Window
- URLs Window
- Attachment Window
- Change Management Window

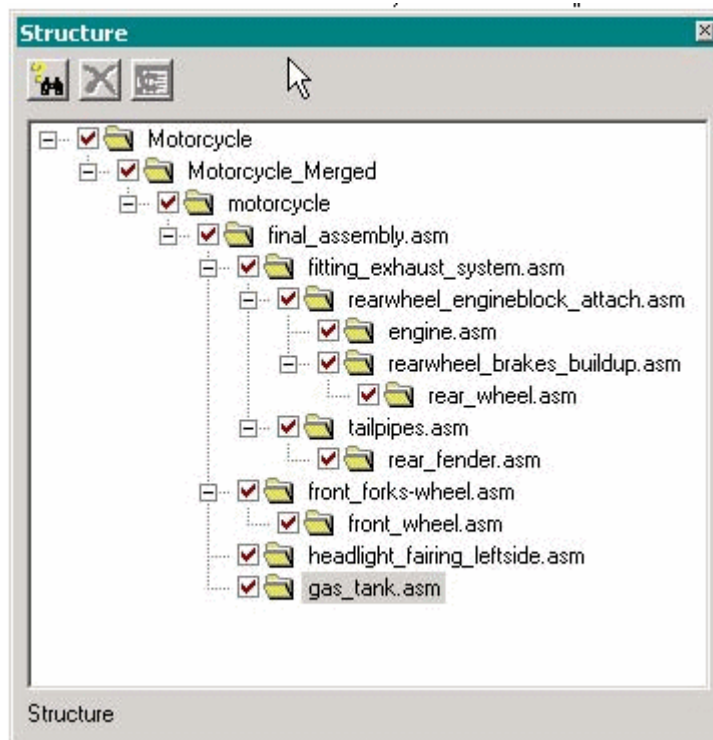
- Top and Front View Windows

Structure Window

The Structure window displays tree structure of parts (objects) and assemblies (hierarchical groups of objects) that were defined in the CAD source model. You can use the Structure window to select parts and structures to view, isolate, select, and rotate around in the main viewing window. You can also query model attributes and isolate specific parts in the model with certain attribute values.

To display or hide a structure node:

1. Select Structure in the Window menu to display a list of structures (or assemblies) in the model.



Click the + (plus) sign next to a node in the structure to expand the hierarchy. The parts belonging to that node appear in the Parts List window if it is open.

2. Select the checkbox next to a structure node to turn off the display of those parts in the viewing window.
3. To locate a picked part in the structure, select an object in the model.
4. Click the Locate Picked Part in Structure button to highlight the part(s) in the

structure.



To change the way an assembly is displayed:

5. Right-click a node in the structure.
6. In the menu that appears, select an action such as Rotate Around, Fit, Isolate, Change/Revert Color, or Select/Deselect.

The change will be reflected in the viewing window.

Querying Attributes to Display Parts

You can perform an attribute query to find and display a group of related parts in the model. Each query can have a default action such as isolate or change color. The query node is saved in the structure where you can view it again and share it with other users.

Note: You can also open the Create /Edit Query dialog by double-clicking any attribute in the Attributes window.

To create a query node in the structure:

1. Open the Structure window.
2. Select a node in the structure.gh



3. Click the Query Database button in the Structure window to open the Insert Query at Current Location dialog.

Note: If no queries have been created previously, you will open the Create/Edit Query dialog directly.

4. Click New Query to open the Create/Edit Query dialog.
5. To build your query, choose an attribute from the list of all attributes in the model.
6. Click an operator button, such as = equal to, < less than, > greater than, or <> not equal to.

7. Enter a value for the search. Queries to the Oracle database are case-sensitive.
8. Specify the default query action such as Isolate, Rotate Around, Fit, or Change Color.
9. Enter a Query Name and select the Share Query checkbox if you want other users to view your query.
10. To perform the query click OK. A node containing the objects that match the query appears in the structure. The objects found in the query are displayed in the viewing window.

Note: You cannot edit or delete a query in the Other People's Public Queries area; however, you can copy it to your list of queries by selecting it and inserting it in the structure.

Note: If you are using E-Business Suite, you can also use the Attachment window to set a query as the initial view when the model is first opened.

Reusing Queries in the Structure: Once a query has been created, you can reuse it by inserting it in another node in the structure.

To insert an existing query

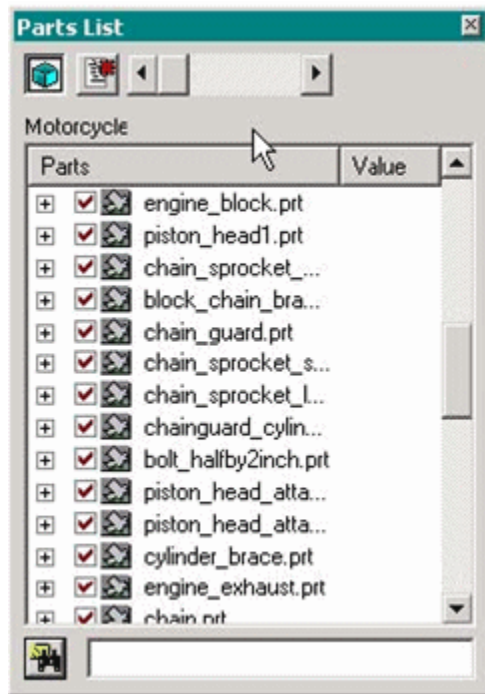
11. Open the Structure window.
12. Select a node in the structure.
13. Click the Query Database button to open the Insert Query at Current Location dialog.
14. Select an existing query and click Insert Query.

A node containing the objects that match each query appears in the structure, and the objects found in the query are displayed in the viewing window. Queries are automatically stored with the model.

Note: You can select multiple queries by holding the Shift or Control key during selection. However, you can only select queries of one type - either public or private but not both at once.

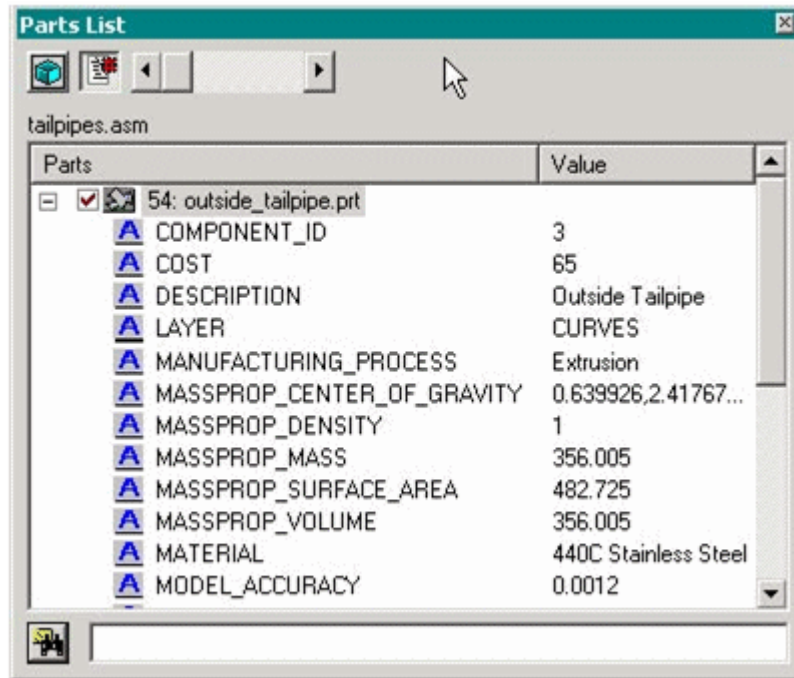
Parts List Window

Choose Parts List in the Window menu to display a list of parts with their attributes for the currently selected node in the Structure window.



To view the Part List window:

1. Click the + (plus) sign next to a part to display a list of attributes and values.
2. Right-click a part name and in the menu that appears choose an action such as Isolate or Unhighlight to change the display of the object.



If the Fit Part on Selection button is set (default), the part is automatically centered in your view when chosen.

3. Click the Toggle ID's button to display part name of ID number.



4. To search for an object by name, enter the name in the blank field and click the Search for a Part button next to it.

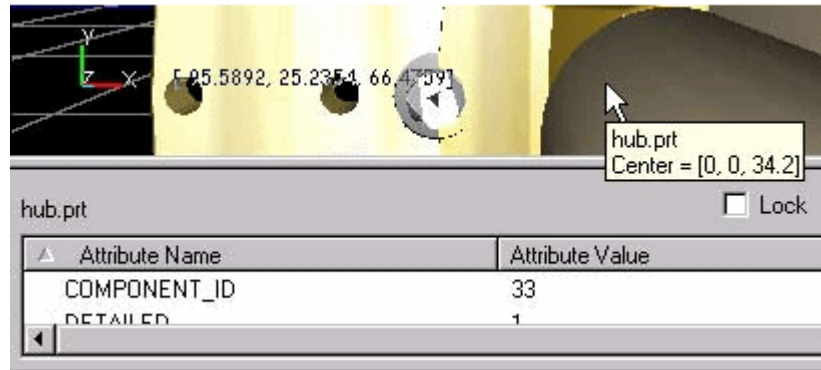


Attributes Window

If parts in the CAD source model contained attributes or parameters such as mass, color, or height when translated to CADView-3D format, they were extracted and saved with the model. You can use the Attributes window to check the attribute values of an object or to search for objects with particular attribute values.

To view the attributes of a part:

1. Select Attributes in the Window menu to open the Attributes window.
2. Put the mouse pointer over an object (you do not need to select it). A list of attributes and values for that object appears in the Attributes window.



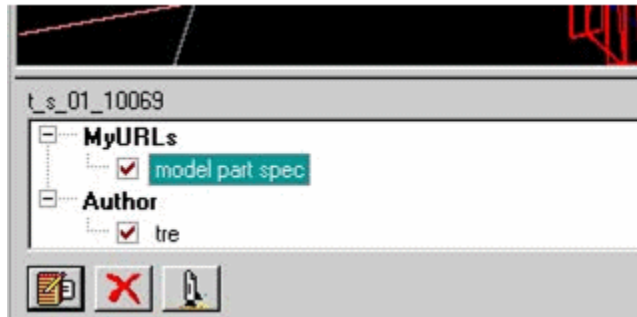
To query the model for a list of objects with certain attribute values:

3. Double-click the name of an attribute in the list. The Create/Edit Query screen appears with the attribute chosen added to the query.
4. Follow the procedure after Click New Query in the Structure Window topic Querying Attributes. This screen can be opened from either location.

Note: You can also display an object's attributes and values and perform other actions in the Parts List.

URLs Window

Using the URLs window, you can link a web address (URL) for a document or other information online to a selected part or to the model as a whole. Linked URLs can be *shared* (public) or *unshared* (private).



To link a URL with a model or part:

1. To link a URL to a part, you must first select it. If no part is selected, the URL will be available no matter what object is picked in the model.
2. Select URLs in the Window menu. The URLs window appears and MyURLs is selected.
3. Click the Add URL icon.
4. Enter a URL (with or without http:// prefix) and an alias name (required). Users will see this name in the URLs window and also under URLs in the View menu.
5. Click either Public or Private. Public URLs are shared with all users. Private URLs are available only to you.
6. Click OK to save the URL with the model.

To view a linked URL from URLs in the Window menu:

7. Select URLs in the Window menu to open the URL window.
8. Select the desired part in the model, if necessary.
9. Double-click the web address in the URLs window list or highlight the URL and click Launch URL. The URL is launched in a separate Web browser window.

URLs listed under My URLs or under another user's name are linked to a particular part. That part must be selected in order for the URL to appear in the list.

Note: Alternatively, pick a part or use the Parts List to locate a part, and use URLs in the View menu to launch the URL.

Attachment Window

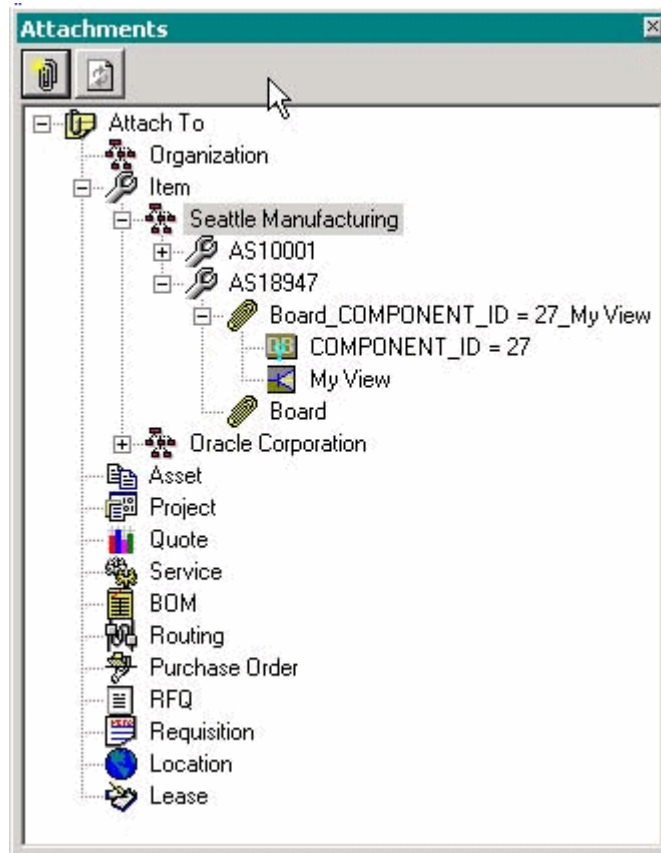
When a model is published to a CADView-3D Server connected to Oracle E-Business Suite, Attachments is available in the Window menu. You can attach the model from CADView-3D DeskTop to the following business objects in supported Oracle applications:

- Organization
- Item - item or item revision
- Asset
- Project - project or task
- Quote - quote or quote line
- Service
- BOM - primary or alternate
- Routing - primary, alternate, revision, or sequence
- Purchase Order
- RFQ
- Requisition
- Location
- Lease

Restrictions

To attach the model to an E-Business Suite object:

1. In CADView-3D DeskTop, choose Attachments in the Window menu.
2. In the Attachments window, double-click the type of object to which you want the model attached (e.g., Item, Asset, Project, etc.).

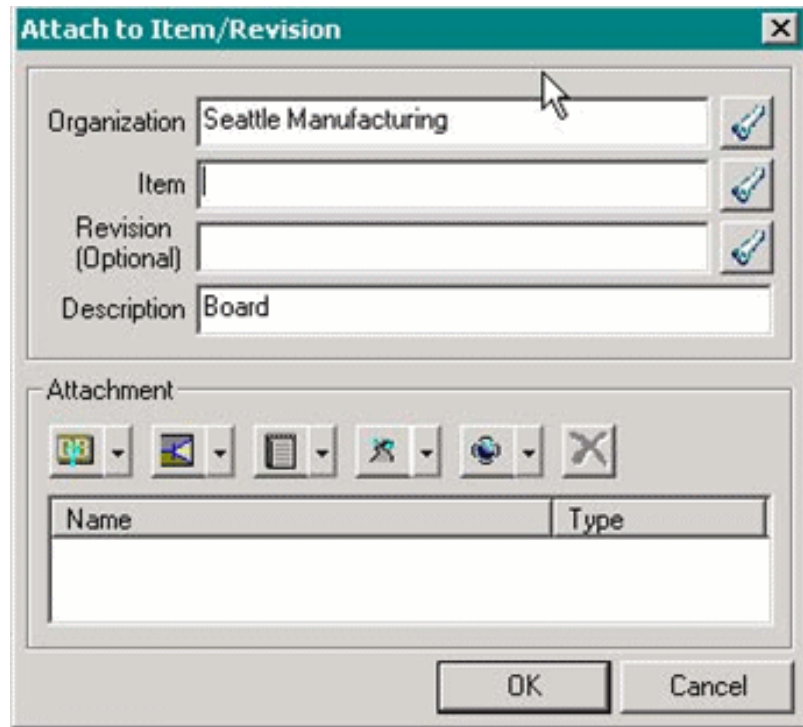


3. In the Attach To screen, accept the default Description or enter a descriptive name for the model.

Note: This name will become the model name in DeskTop's Server/Model Information screen. It will also appear on the Attachment page in E-Business Suite as the description users view to select the model.

4. Enter the required information for the business object you want to attach the model to. You can enter a partial name and use the Search button to query the database to select a value.

Note: All queries to the Oracle database are case-sensitive.



Attach to Item/Revision

Organization: Seattle Manufacturing

Item:

Revision (Optional):

Description: Board

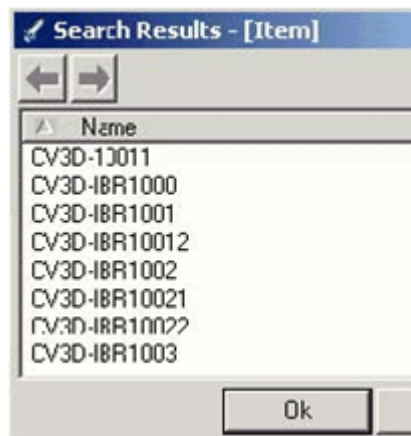
Attachment:

Icons: [Query] [Image] [Table] [Link] [Globe] [Close]

Name	Type

OK Cancel

5. In the Search Results screen, make a selection and click OK.



Search Results - [Item]

Navigation: [Previous] [Next]

Name
CV3D-13011
CV3D-IBR1000
CV3D-IBR1001
CV3D-IBR10012
CV3D-IBR1002
CV3D-IBR10021
CV3D-IBR10022
CV3D-IBR1003

Ok

6. You can use the attachment icons to select any of the following to occur when the model is opened (optional):



Query - open the model with an object or set of isolated objects



- Viewpoint - open the model and view it from a particular viewpoint
- Markup- open the model with a markup image visible
- Path - open the model and immediately play a path
- Animation - open the model with an animation playing in a loop
- Query +
- Viewpoint - open the model with a particular view of isolated object(s) (chap7_20)



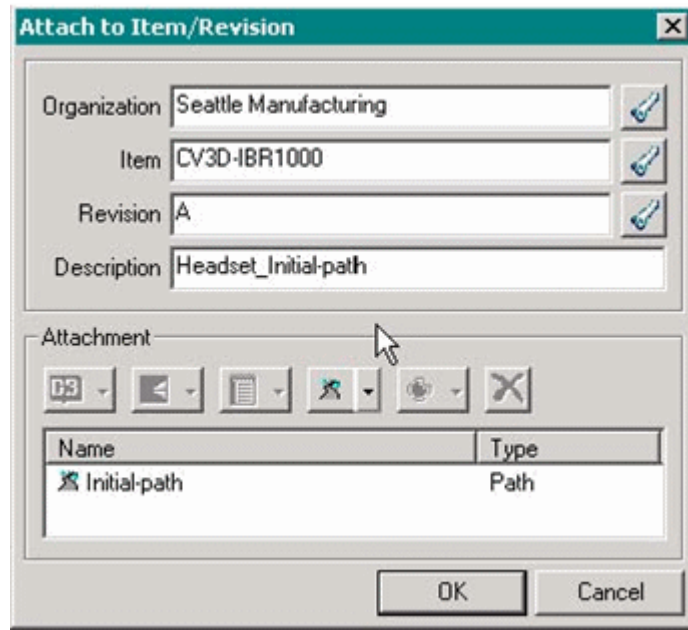
Viewpoint - open the model with a particular view of an animation playing



Note: When any of the above are selected, text is appended to the model name in the Description field. For example, model_name becomes model_name_ inspection route.

Animation + 7. Click OK to attach the model to the object in the database in E-Business Suite.

Launching a CADView-3D Model from Oracle E-Business Suite



Note: You can delete an attached model from the Oracle application interface; however, the attachment will still appear in DeskTop's Attachment window. You cannot delete an attachment from the CADView-3D DeskTop viewer interface.

However, if you are logged into E-Business Suite with a responsibility that allows you to view and administer the CADView-3D application, you can delete models in the Administer CADView-3D Models page.

Change Management Window

Using CADView-3D DeskTop you can create a Change Management object (e.g., a change request, change order, or issue) in the Oracle Advanced Product Catalog application in E-Business Suite.

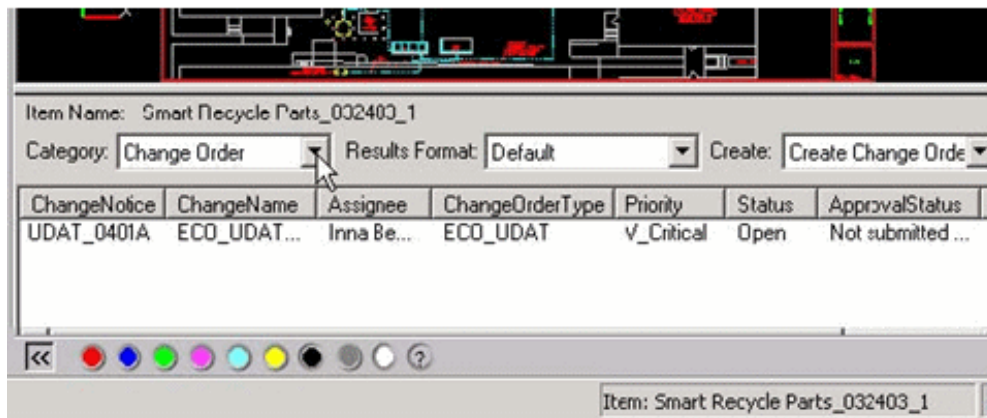
To view a Change Management object:

1. Launch CADView-3D DeskTop by opening a model that is attached to an item.
2. In the Window menu, select Change Management.



Note: This menu item is visible only when you launch CADView-3D DeskTop from an item in Oracle Advanced Product Catalog.

3. Select a Change Management category and double-click an entry in the list to display a page for that change object inside Advanced Product Catalog.



Note: All change objects that are associated with an item and that you have permission to view are displayed.

To create a Change Management object:

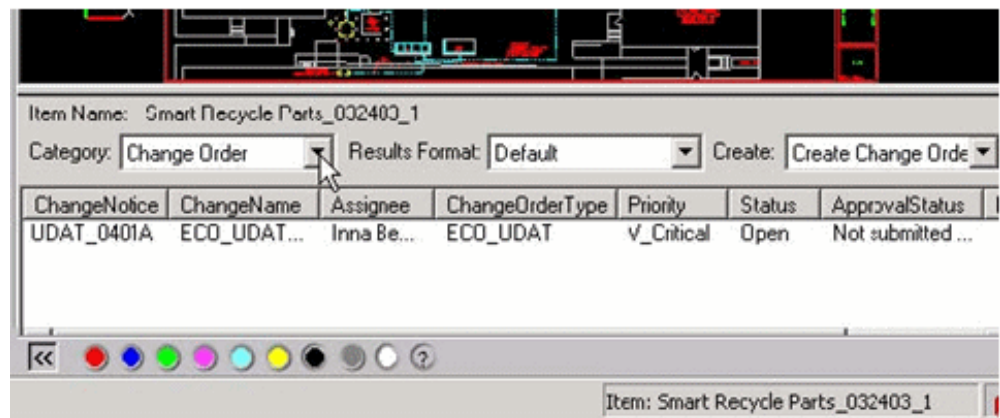
Open CADView-3D DeskTop by launching a model that has been attached to an item.

4. In the Window menu, select Change Management.
5. In the Change Management window, select the change object in the Create list and click Go.
6. A corresponding page in Oracle Advanced Product Catalog is opened in a separate Web browser window.
7. Follow the prompts to create the change object. The corresponding change object appears in the Change Management window in CADView-3D DeskTop.

Top and Front View Windows

You can use the Top View and Front View windows to arrange top and front views of the model with specific clip plane settings.

- Select Top View or Front View in the Window menu to open a small window in which the model is seen from above or from the side.



- To center a part of the model, right-click and drag the view.
- To zoom in or out, drag the zoom slider.
- To move your view, left-click to position the white triangle. The view in the main viewing window moves accordingly.
- To rotate your view, hold the Ctrl key while you left-click and drag the triangle (view frustum). The view in the main viewing window rotates accordingly.
- To move the near and far clip planes, put the mouse pointer over the white triangle and drag the red lines (clip planes).
- To update the near and far clip planes and save them with the model, click the

Change Near/Far Clip button to modify them in Graphics Preference settings.

Communicating with Other Users

This chapter covers the following topics:

- Meeting and Collaborating with Other Users
- Conducting a Collaboration Meeting
- Following as Passenger in a Collaboration Meeting
- Joining a Meeting Already in Progress
- Transferring Control from Driver to Passenger
- Leaving a Collaboration Meeting
- Creating a Group Markup
- Viewing Location of Other Users with Avatars
- Chatting with Other Users
- Viewing the Journal

Meeting and Collaborating with Other Users

You can also interact with a model in a collaboration meeting in which there is one driver and multiple passengers. While in a meeting, the passengers see what the driver sees as the driver uses the DeskTop features. Participants in a meeting can stop to create a group markup adding markups in realtime on a shared desktop that is visible to everyone in the group.

Any number of collaboration meetings can be active in the model at a given time. You choose which meeting you want to join and you will only interact with others in that meeting.

Note: To assure complete interoperability of all features within the DeskTop during multiuser collaboration, Oracle recommends that all users be on the same release level. R12 users may be able to collaborate

with DeskTop users of previous release on certain functions, but such type of mixed environment is not certified.

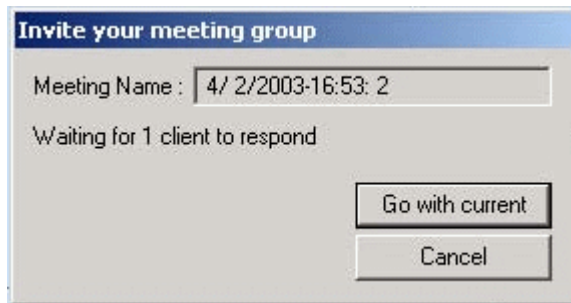
Conducting a Collaboration Meeting

In a collaboration meeting, the person who starts the meeting acts as driver moving the viewpoint and using DeskTop tools, controlling what the passengers see. The driver can transfer control to a passenger at any time.

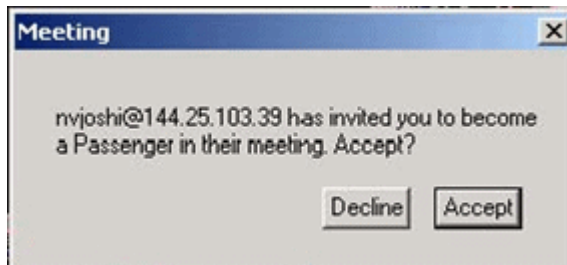
To start a collaboration meeting:

1. Choose Start Meeting in the Meeting menu.

The Invite your meeting group screen appears showing the meeting name how many other users have been invited. You can change the default name if desired.



Other users receive an invitation screen asking if they would like join the meeting and become a passenger.

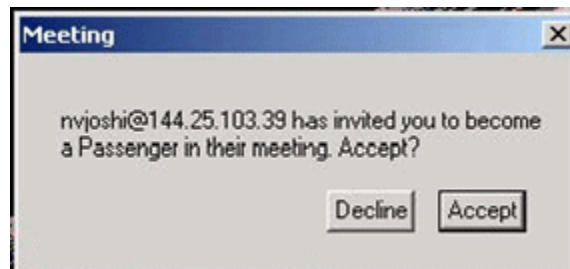


If there are users who have not yet accepted or declined, you can click Go with current to start the meeting without them. Once the meeting begins, the driver can navigate the model as usual and work with the DeskTop tools.

Following as Passenger in a Collaboration Meeting

After accepting an invitation from a driver to join a meeting, your DeskTop interface changes to that of a passenger. As a passenger, you follow what the driver sees while

navigating the model.



For passengers, a Meeting toolbar appears, and all other interface controls disappear when the driver takes control.



Joining a Meeting Already in Progress

To join a meeting already in progress:

1. Choose Join Meeting in the Meeting menu to notify the driver that you would like join a meeting already in progress.
2. The driver will accept or deny your request.



Note: If a group markup is in progress, you will not be able to join the meeting until the driver ends the group markup.

Transferring Control from Driver to Passenger

The driver can transfer control to a passenger at any time during the meeting.

To transfer control from Driver to Passenger:

1. Choose Transfer Control in the Meeting menu to pass control from driver to a designated passenger.



The passenger will be prompted that control has been transferred to them.

2. The new driver can in turn pass control to a passenger if another person wants to drive the meeting.

Leaving a Collaboration Meeting

You can leave a collaboration meeting at any time.

To leave a Collaboration meeting:

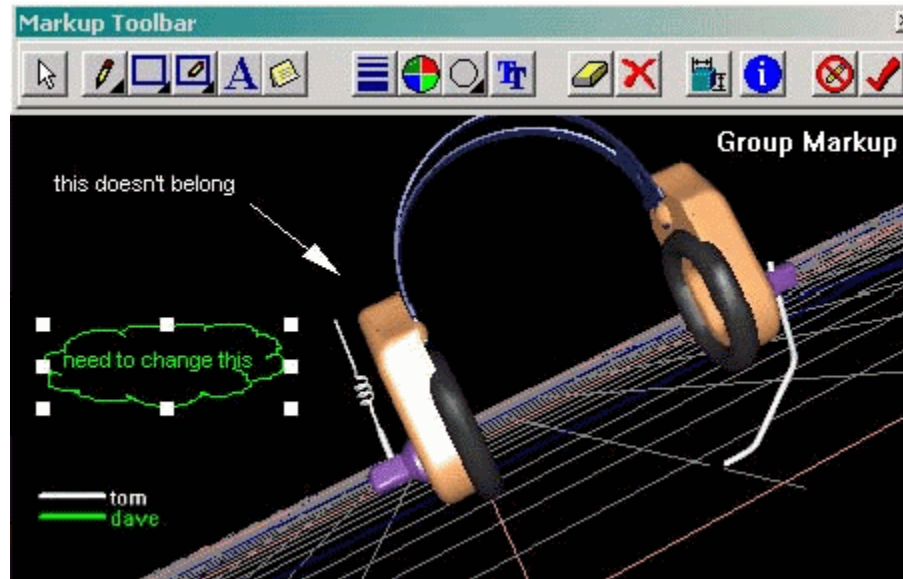
1. Click the Leave Meeting icon on the Meeting toolbar to leave the meeting and return to regular navigation of the model.



Creating a Group Markup

Markups created during a collaboration meeting are called group markups. By choosing

Markup in the Tools menu, the driver can start a group markup meeting that includes all passengers in the collaboration meeting.



Group markups differ from individual markups in the following ways:

- A color-coded legend lists all participants in the collaboration.
- Since each user is assigned a unique color, you cannot change the color of drawing and text.
- Each user can create and delete their own edits; however, only the driver can discard all edits or cancel or save the markup.
- You should not resize the Web browser window when in a group markup meeting.

Note: Because of differences in bandwidth and processor speed, at times passengers see the model with a slight delay during a group markup meeting. For example, the driver may start adding markup to an object that is not yet visible to some passengers.

Viewing Location of Other Users with Avatars

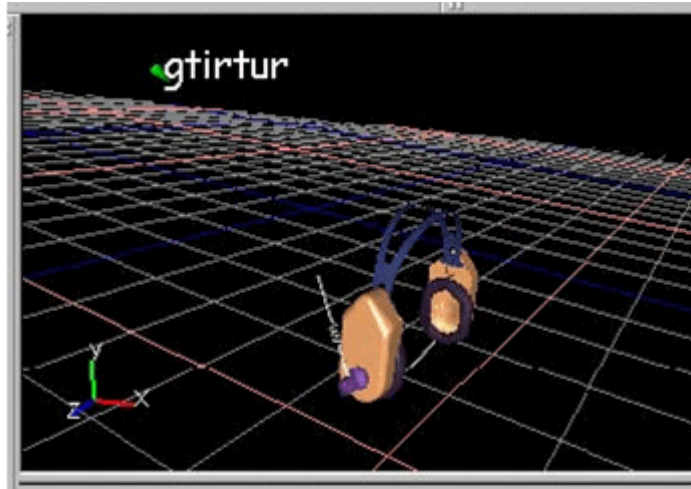
In collaboration meeting, you can view the instantaneous location of other users in the model and then jump directly to their viewpoints.

To view locations:

1. Choose Avatars in the Meeting menu (or on the Meeting toolbar during a meeting)

and click in the viewing area to view the location of the other users.

Note: Each user viewing a model is represented by a colored cone and a user name. The cone is pointed in the direction the user is viewing.

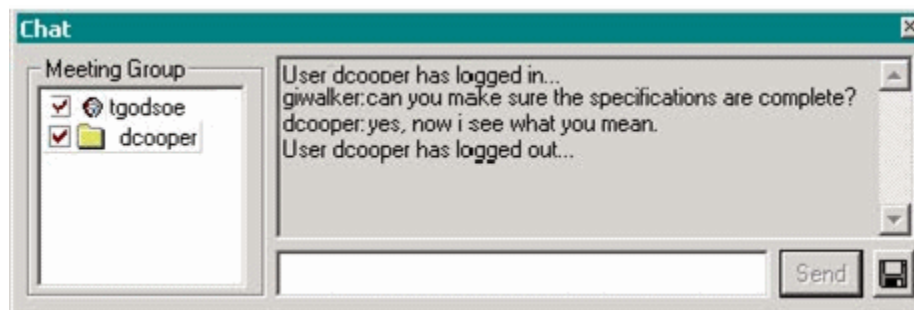


2. To jump to the viewpoint of another user, choose Jump to Viewpoint in the View menu and select the viewpoint of another user.

Note: During a collaboration meeting, user names appear along with predefined viewpoints. When you choose a name in the list, you are transported to the viewpoint of that person.

Chatting with Other Users

Using the chat area of the Meeting window, each user viewing the model can broadcast text messages to others in their meeting. The text for each meeting is recorded in the Journal and stored with the model.



To chat with others:

1. Choose Chat in the Meeting menu.
2. Type a message in the text box that appears and click the Send button.
3. Other users in the model will see your message appear in their chat window and can reply to you in the same manner.
4. To save the chat text for your meeting, click the floppy disk icon and save as a .txt file to your local drive.

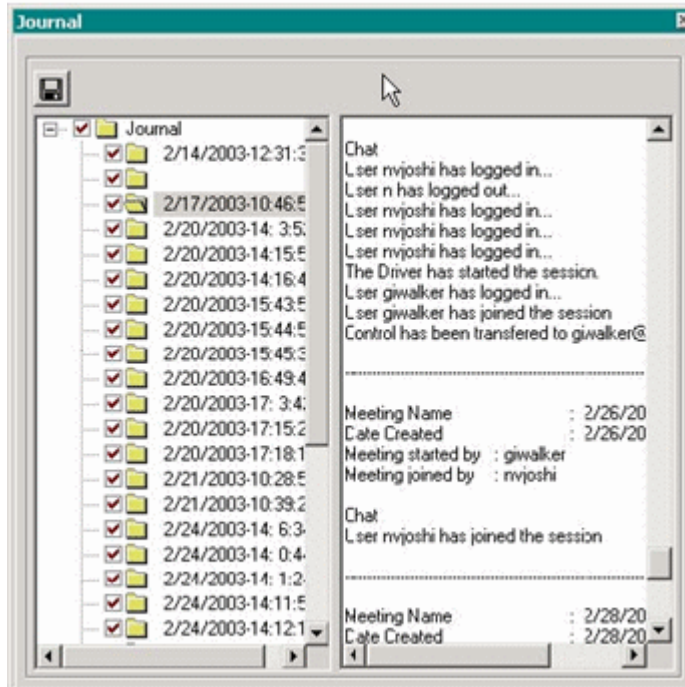
Viewing the Journal

The Journal displays the start time/date for all collaboration meetings in the model along with the driver and passenger user names. It also contains a text archive of the meeting for each collaboration meeting. This information is available at all times to any user viewing the model.

The Journal is saved automatically in the database with the model when you close DeskTop. You can also select a portion of the journal and save it on your local drive in a text (.WRI) file.

To view the Journal:

1. Choose Journal in the Meeting menu to see a list of all meetings previously logged for the model.
2. Check or uncheck boxes next to dates/times in the left column to see the text contents of the meetings on the right.
3. To save the selected meeting contents in a text (.WRI) file on your local drive, click the floppy disk icon.
4. In the Save As dialog, enter a location and name for the file and click OK to save the selected portions of the journal to your local drive.



View Menu

This chapter covers the following topics:

- Using View Menu Features
- Viewing Markups
- Replying to a Markup
- Showing Location of All Markups in Scene
- Playing Animations
- Playing Multiple Animations
- Playing a Path
- Jumping to a Viewpoint
- Showing Location of All Viewpoints in Scene
- Opening a URL for Additional Information

Using View Menu Features

You can view markups, animations, paths, viewpoints, and URLs that you and other users create with the corresponding DeskTop tools.

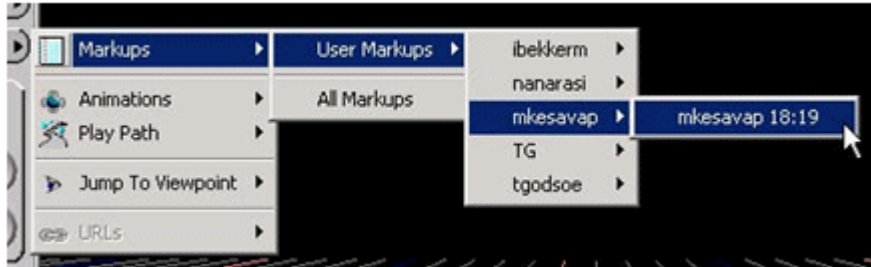
Viewing Markups

Markups are bitmapped images that provide visual notes about the model that are saved with the model to share with other users.

To view markups from the View menu:

1. In the View menu, choose Markups and then choose the desired markup to display the image.

2. In the Markup toolbar you can click buttons such as Reply to Markup, Print Markup, or Email Markup to open a markup with the markup toolbar.
3. Click Save and Close Markup to close the image and return to the normal viewing window.



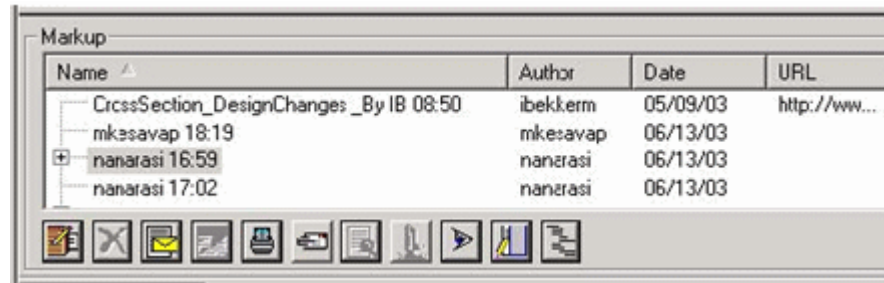
Note: Do not use the Web browser's back button to return to the previous screen.

To view markups from the Markup tool

4. In the Tools menu, choose Markups and then choose the desired markup to display the image.

Note: To see more markups in the list, click and drag to raise the top border. Scroll through the list using the scroll bar.

5. Click a heading such as Name or Author to sort by that characteristic.
6. Click a name in the list to display the markup.



Note: URLs found in markups are not associated with specific objects. Use the URLs window if you want to link a URL to a specific art of the model.

Replying to a Markup

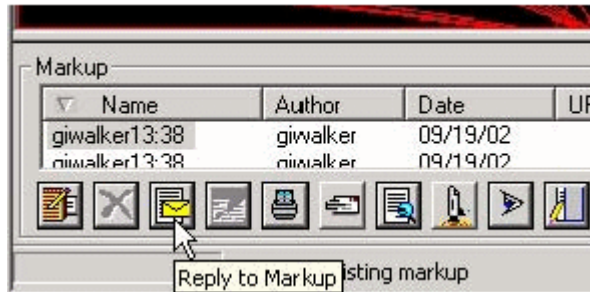
You can click the Reply to Existing Markup button to add or delete your own markup in a copy of an existing markup.

To reply to a markup from the View menu:

1. Choose Markups in the Views menu.
2. In the Markup toolbar, choose Reply to Existing Markup to open the markup tools.
3. Use the tools provided in the Markup Toolbar to add or delete markups.
4. When done, click the Save and Close Markup button to save the markup in the database with the model.

To reply to a markup from the Markup window

5. Choose Markups in the Tools menu.
6. Select (highlight) the markup you want to respond to from the list in the Markups window.
7. Click the Reply to Markup button.



8. Use the tools provided in the Markup Toolbar to add or delete markups.
9. When done, click the Save and Close Markup button to save the markup in the database with the model.



A new markup is created with the Re: prefix followed by the existing markup name, for example, Re: michaelv13:45.

Note: If multiple replies exist for one markup, refer to the Author field in the list to differentiate them. If a reply is based on an existing reply, a prefix number is added, for example, Re(2): michaelv13:45.

Showing Location of All Markups in Scene

If you set the Show All Markups in Scene option in the General Preference tab, labels appear in the viewing window for all markups saved with the model. Each label contains the name of the author and the time it was created.

Use this method to display all markups. If you want to create or modify individual markups, use the Markups feature in the Tools menu.

To open a markup from the main window:

1. Click a label to open the markup in the same Web browser.



2. To close the markup, right-click the image and return to the main viewing window.

Note: Do not use the Web browser's Back button; this will return you to the web page from which you launched the model.

Playing Animations

Animations are created to show assembly sequencing or moving parts of a model, for example. Using the View menu, you can play back animations previously created with the Animation Tool.

To play an animation:

1. In the View menu, choose Animations, then Play, and then choose an animation from a user's list. The animation plays until the end of its timeline. Looped animations play continuously.
2. Choose Track in the Animations menu to keep the animation centered in your view.
3. Choose Reset Timeline to reset animation timeline to the beginning. Choose Skip to Next Event to skip ahead to next event in timeline.
4. Choose Stop to stop playing the animation and return to the initial view of the model or turn Continuous Play off to stop playing looped animations when all timelines have ended.

Playing Multiple Animations

Any number of animations can be selected (made active) and played back together. Selected animations are played simultaneously rather than back-to-back.

To play multiple animations from the View menu:

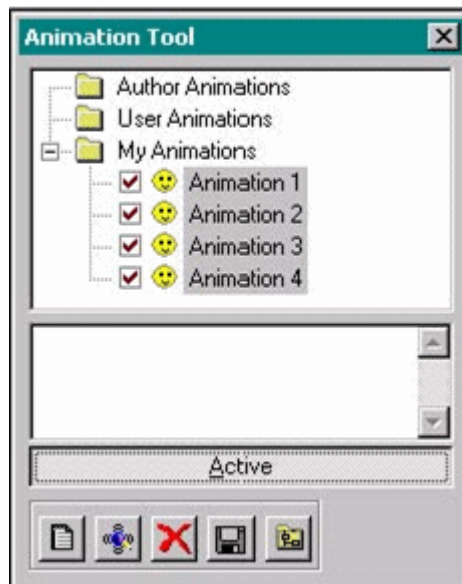
1. In the View menu, choose Animations, then Play, and then choose an animation

from a user's list.

2. Repeat to add as many animations as you would like to play at one time.
3. Click OK in a message that appears asking you to confirm that you want to play multiple animations.
4. Click Stop to stop the playback and return to the initial view of the model.

To play multiple animations from the Animation Tool window

5. In the Animation Tool window, select multiple animations in the list. Active animations have a happy face icon.
6. Click the Active button to play all selected animations together. (chap9_7)



7. Click the Play Timeline icon. All animations play from time zero until the end. Looped animations play continuously.
8. Click Stop to stop the playback and return to the initial view of the model.

Playing a Path

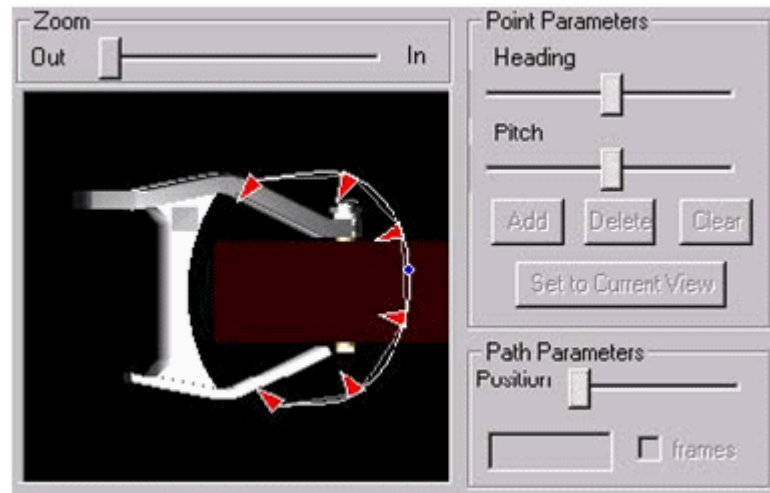
Paths are predefined routes through the model created with the Path tool. When you play a path, you travel along this route through the model and your point of view is directed to different areas.

To play a path:

1. Choose Play Paths in the View menu and choose a path from the list.
2. To pause anywhere along the path, click the Stop Path icon. To stop and view while playing a path, open the Path Tool window and click the double right-arrow icon; a top view of the model appears with an outline of the path.

The blue dot on the path shows the current position and the red arrows show the direction of view.

3. Drag the Position slider to move your view along the path. When you release the slider, the view in the main window changes accordingly.



Jumping to a Viewpoint

Viewpoints are particular locations you define in the model to which other users can jump to get a better view.

To jump to a previously created viewpoint

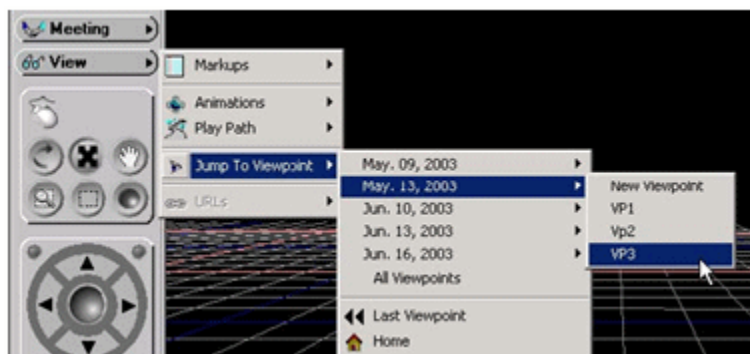
In the View menu, choose Jump to Viewpoint, and then choose one of the following:

- Choose My Viewpoints and then choose a viewpoint to go to a viewpoint you have created.
- Choose User Viewpoints and then choose another user's name to go to a viewpoint that user has created.
- Choose Last Viewpoint to return to the previous viewpoint from up to 20 viewpoints you have visited.

- Choose Position to enter coordinates for a specific location in the scene.
- Choose Home to return to the initial view when the model is first opened.

Note: The Jump to Viewpoint menu uses the Sort setting found in the Viewpoint Tool to display submenus under which viewpoints are listed.

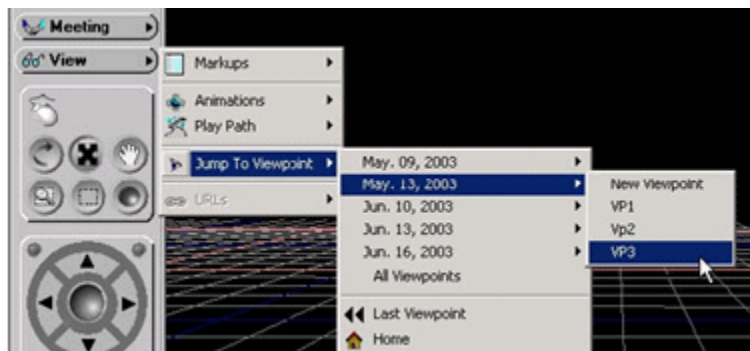
For example, if the Sort setting is Author, the submenus display viewpoints under My Viewpoints and other user names. If the sort setting is Date, the submenus display the dates on which the viewpoints were created. If the sort setting is Viewpoint, the submenus display all viewpoints alphabetically by name.

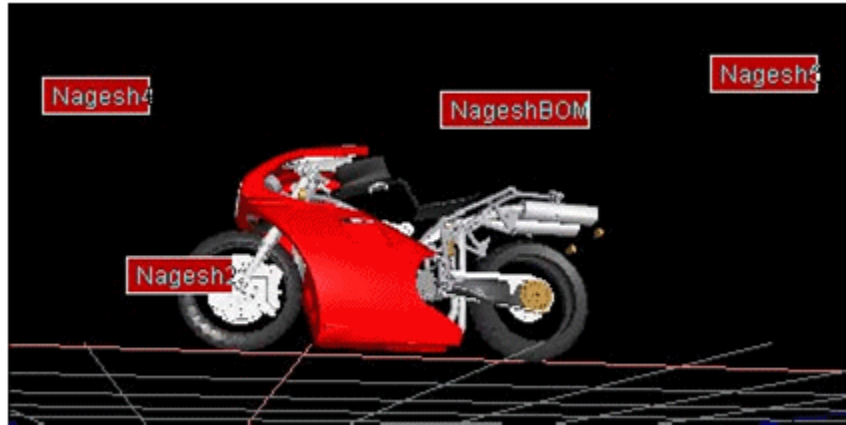


Showing Location of All Viewpoints in Scene

In the View menu choose Jump to a Viewpoint and then choose All Viewpoints to see labels appear in the viewing window for all viewpoints saved with the model.

Click a label to jump to that viewpoint from its displayed location in the main viewing window.





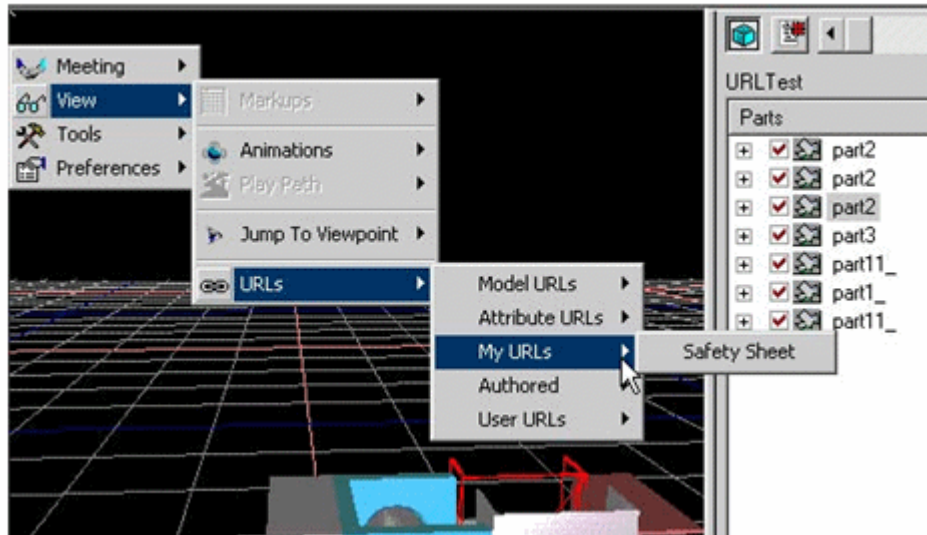
Note: You can also set the Show All Viewpoints in Scene option in the General Preference Settings.

Opening a URL for Additional Information

You can open URLs named and saved with the model or attached to specific parts to get additional information located at any Web address (URL). To add URLs using DeskTop, use the URLs tool.

To open a URL:

1. Select the part with which the URL is connected or leave all parts unselected if the URL is available for the whole model.
2. In the View menu, choose URLs, choose the creator or the method by which the URL was created, and then choose the URL alias. A Web page is opened in a separate browser window.



You can create URLs using the CADView-3D DeskTop client as follows:

- Using the URLs window - connected to a part (you must select the part to add the URL and users must select the part to view the URL)
- Using the URL window - connected to the whole model (you do not need to select a part and users can choose to view the URL at any time with or without parts selected)
- You can create URLs using the CADView-3D Studio application as follows:
- Using the Authored URLs feature
- Using the URL Template feature Note: Refer to the CADView-3D Studio help file for more information. You can automatically create Attribute URLs from CAD source part attributes as follows:

DeskTop Tools

This chapter covers the following topics:

- Using Tools in DeskTop
- Creating Markups
- Editing Your Markup
- Deleting and Printing Markups
- Measuring Distance and Angles
- Using Minimum Distance
- Using Cardinal Points
- Creating Animations
- Creating an Animation Hierarchy
- Moving Animation Nodes
- Recording a Path
- Refining a Recorded Path
- Creating Viewpoints
- Sorting Viewpoints
- Saving, Copying, and Printing Images
- Sending the Model or Markup by Email
- Describing Display Sets
- Creating Display Sets

Using Tools in DeskTop

DeskTop provides tools you can use to create markups, dimensions, animations, paths, and viewpoints. Once created, they are saved in the database with the model. Users can

view them in the corresponding areas in the View menu.

Note: Dimensions are saved when created inside of a markup.

Desktop provides tools for the following:

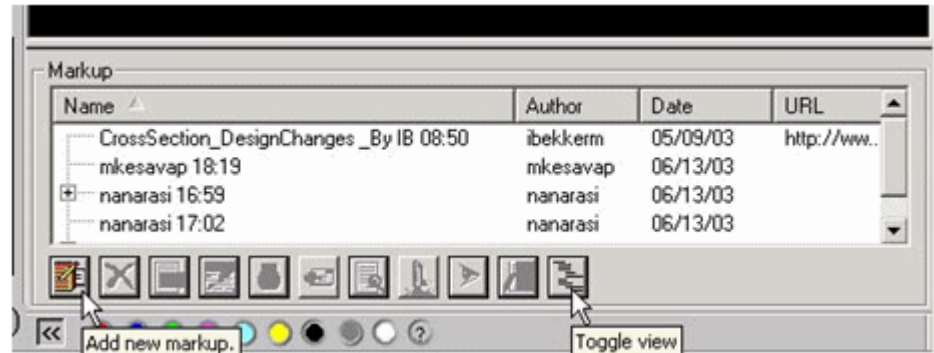
- Creating Markups
- Measuring Distance and Angles
- Creating Animations
- Recording a Path
- Creating Viewpoints
- Saving, Copying, and Printing Images
- Sending the Model or Markup by Email

Creating Markups

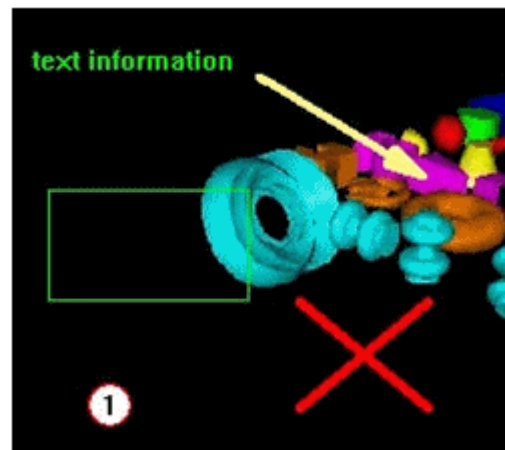
A markup is an image or snapshot of the model in which you can add 2D elements including text, notes, and URLs. You can create markups to record your comments for yourself or for other users to see. The markups are stored in the database with the model and can be made available for other users to view.

To create a markup:

1. Navigate to the view of the model you want to see in the markup.
2. Select Markups in the Tools menu to open the Markup window at the bottom of the screen.
3. By default, the markup list is displayed in a tree structure or *threaded* view where replies to markups are indented. Click the Toggle View button to switch between flat and threaded view.
4. Click the Add Markup icon to open the Markup toolbar.



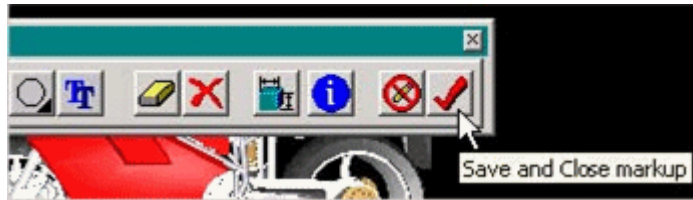
5. Use the markup tools to draw lines with arrows or outline shapes, for example, to highlight areas in the image.
6. Use the text tool to create text labels or use the note tool to create longer descriptions.
7. While your markup is open, you can pick items, drag them around, and modify line colors, line weights, and fill.



8. To make a measurement, click the Dimensioning icon to open a Dimensioning toolbar (See also: Measuring the Model for details).
9. Use the Markup Details button in the toolbar to change the name, add a URL, or

type a description for the markup.

10. Save and Close Markup button to exit and save the markup.



By default, the name format is AliasTime in which Alias is your username and Time is the time of day you saved the markup.

Individuals viewing the model at different times can annotate the model to communicate their observations. If the markup is shared, other users can view the markup and create a reply with their own markup added, creating a threaded series of replies in a tree structure. You can perform the following with markups.

- Editing Your Markup
- Replying to a Markup
- Showing Location of All Markups in Scene
- Saving, Copying, and Printing Images

Note: In a collaboration meeting, a group of users can collectively view the model and make group markups in realtime containing color-coded comments from each user.

Editing Your Markup

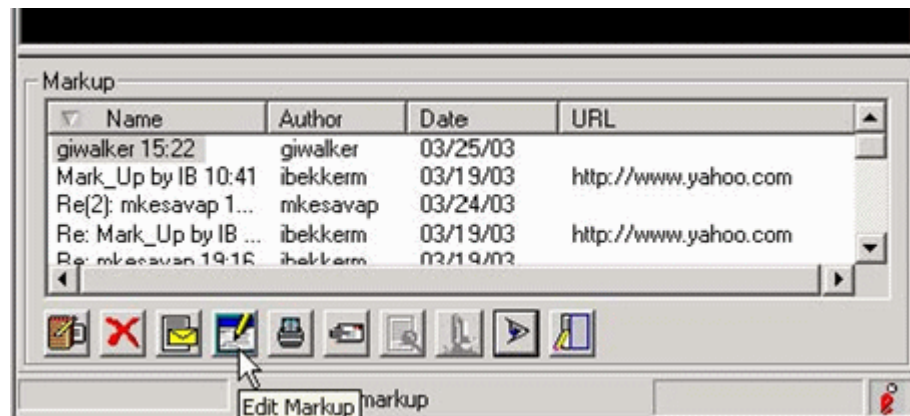
You can edit any markup you have created previously.

Note: If you are using E-Business Suite, you can also use the Attachment window to set a markup as the initial view when the model is first launched.

To edit a markup:

1. Choose Markups in the View menu and select a markup from My Markups.
2. Click Edit Markup to open your markup.

3. Use the markup tools to modify or delete existing markups or to add new ones.
4. When done, click the Save and Close Markups button on the toolbar.



Deleting and Printing Markups

You can select multiple markups to delete or to print by holding the Control key while selecting individual markups or holding the Shift key while selecting continuous markups.

- Click the red "x" Delete Markup button to delete the selected markups.
- Click Print Markup button to print the selected markups.

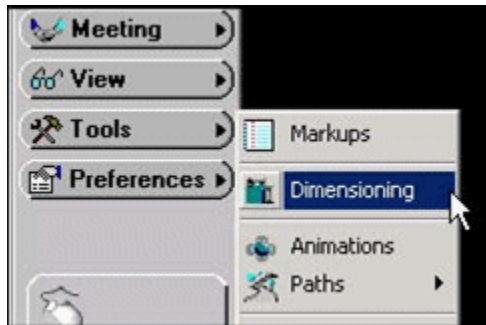
Note: If a markup with replies is selected in threaded view, any replies to that markup will be printed or deleted recursively. Conversely, if the markup is selected in flat view, only the selected markup will be printed or deleted.

Note: Therefore, the only way to print or delete a single markup without including any of its replies is to click the Toggle View button to change to flat view first. When you toggle back to threaded view after deleting a markup, any replies will be displayed as top level nodes in the hierarchy.

Measuring Distance and Angles

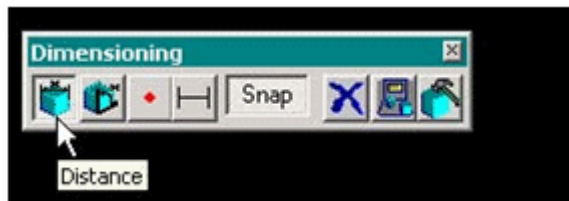
Use the Dimensioning tools to measure and display the distance between object vertices and surfaces and between angles formed by objects. Measurements are displayed in the unit system of the original CAD model.

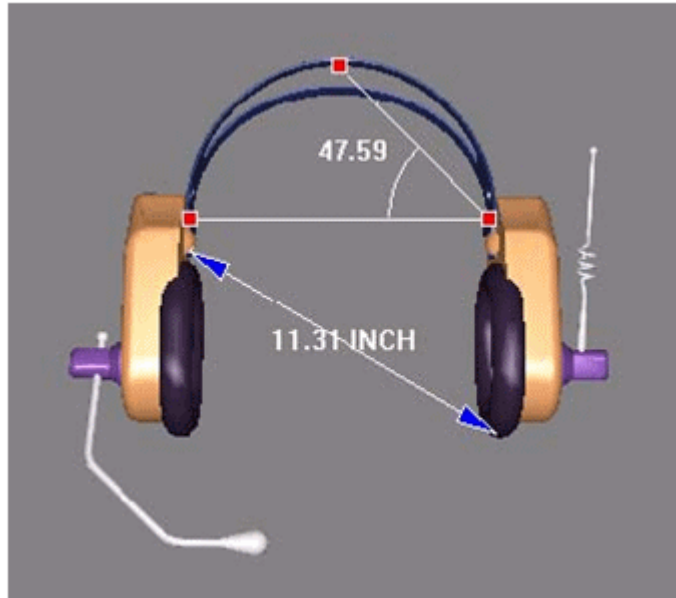
Note: If you want to save an image of the measurement with the model, use the dimensioning tools found in the Markup tools.



To measure distance and angles:

1. Navigate to a view of the model that contains all of the objects you want to measure.
2. Choose Dimensioning in the Tools menu. The Dimensioning toolbar appears and the normal Desktop user interface disappears.
3. Click the Distance button.
4. Click a point on an object and drag the mouse pointer to a point on another object and release. The dimension appears in model units between the arrows defining the two endpoints.





5. To reposition a dimension, click the endpoint and drag the blue arrow to a new location.
6. Click the Angle button to measure an angle formed by three points.
7. Click to create an angle midpoint. Then click the midpoint and drag the mouse pointer to create two arrows defining the angle.
8. To delete a dimension, click an endpoint and click the Delete button.
9. Click the close "x" icon on the Dimensioning toolbar to return to normal navigation mode.

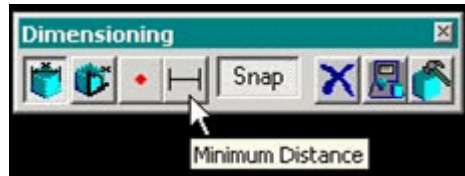


Using Minimum Distance

Using Minimum Distance, you can select whole objects instead of vertices and have DeskTop calculate the minimum distance between objects automatically. This provides a more accurate measurement in areas that lack vertices.

To measure with Minimum Distance:

1. Choose Dimensioning in the Tools menu.
2. Click the Minimum Distance button.
3. Pick a point anywhere on the first object and then pick a point anywhere on the second object. The two objects are selected in wireframe by default.



Two arrows appear at the closest points between the two objects, and a dimension is displayed in model units.



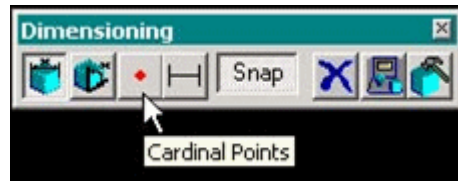
Using Cardinal Points

You can display additional cardinal points on geometric primitive objects (e.g., cubes, cones, cylinders) to use as endpoints when measuring distance and angles.

To use cardinal points:

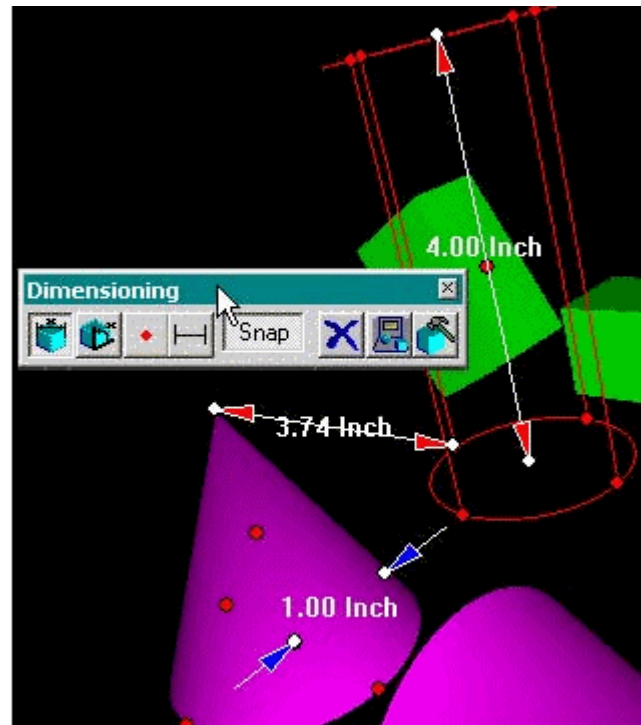
1. Turn on Simplified Wireframe in Graphics Preferences. The simplified, non-triangular outline appears for all geometric primitives present in your model.
2. Choose Dimensioning in the Tools menu.
3. Click the Cardinal Points button on the Dimensioning toolbar.
4. Click any geometric primitive object to display its cardinal points.
5. Click the Distance or Angle button, click a point on an object and drag the mouse

pointer to another point on an object and release.



When the mouse pointer is directly over a cardinal point, it turns white and the arrow snaps to that point.

The dimension appears in model units between the arrows defining the endpoints.



Creating Animations

Using DeskTop's animation tool, you can animate objects in a model and save the animation for others to view. Using the editor, you move a collection of objects relative to the scene or relative to each other. Animations can be shared (public) or unshared (private) and are saved in the database with the model.

Like a movie, an animation is actually a series of frames or pictures played in sequence. If the frames are played back rapidly (near 30 frames/sec.), the motion appears smooth; if played back more slowly (15 frames/sec.), motion appears jerky; and if played back at 5 frames/sec., you will see a series of separate images. Therefore, it is important that update rate is kept above 15 frames/sec. as specified in Preference settings in the

Performance tab.

You need to do the following to create an animation:

- Group objects in parent and child nodes
- Move and position objects in the scene
- Take snapshots of the objects in different positions
- Adjust the time interval between the key frames

Note: If you are using E-Business Suite, you can also use the Attachment window to set an animation as the initial view when the model is first opened.

Creating an Animation Hierarchy

Parts of the model are grouped in parent and child nodes in a transformation hierarchy. Then, each node can be transformed (translated and rotated) independently. Parts in a child node can be animated as a group while moving along with the parent node.

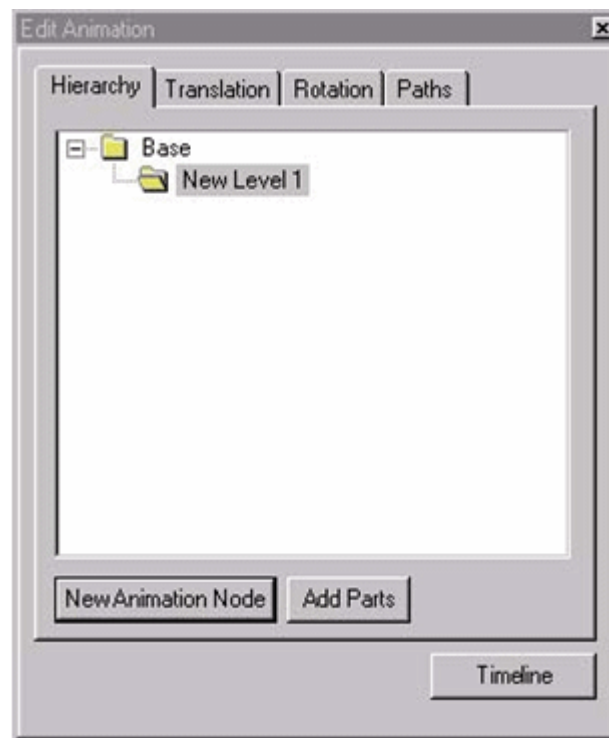
For example, if you are animating a car, you may want a window to roll up and down in a door as the door opens and closes in the car body.

To create an animation :

1. Choose Animation in the Tools menu. The Animation Tools window appears.



2. Click the Create New Animation button and press Enter. The Edit Animation window appears.

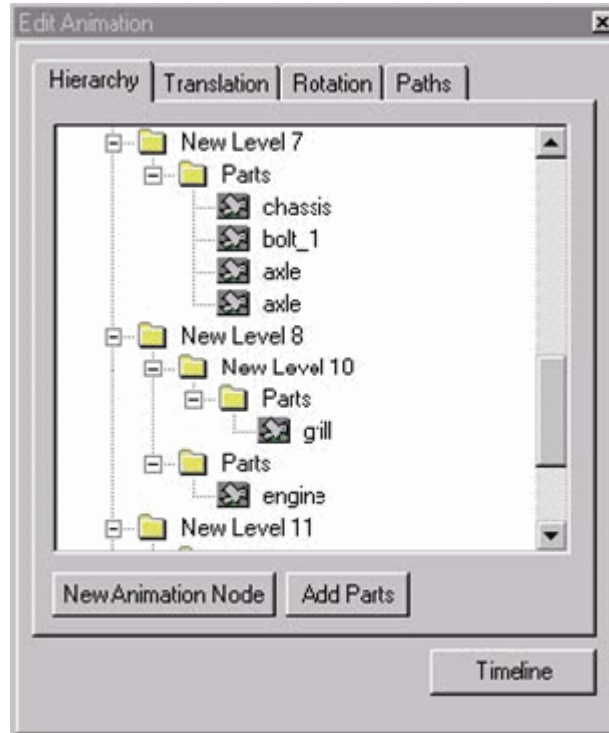


3. Click the New Animation Node button. A "New Level n" animation node appears in the hierarchy.
4. Right-click the node, choose Rename in the menu that appears and type a descriptive name for it if desired.
5. Select (highlight) the node if it is not already selected.

Note: Parts are added to the selected node. If a part already exists in another node, you are asked if you want to move that part to the node selected. A single part can't be listed twice in the hierarchy.

6. Select model parts from the main viewing window and click Add Parts. A Parts node is created with the selected parts listed by name under the selected node.
The Parts folder and model part names are not editable and you cannot drag and drop them in the hierarchy. Set up your Animation Nodes first and then add parts.
7. To add a child node, select a parent node, and click New Animation Node.
8. Right-click the node, choose Rename in the menu that appears, and type a descriptive name for the node.
9. Select part(s) in the model and click Add Parts. The parts are listed by name under the selected (child) node.

An example hierarchy for a car may look like this:



Moving Animation Nodes

Once the parts in your model are set up in nodes in the animation hierarchy, you can move or transform each node (translate or rotate) to position it for each snapshot.

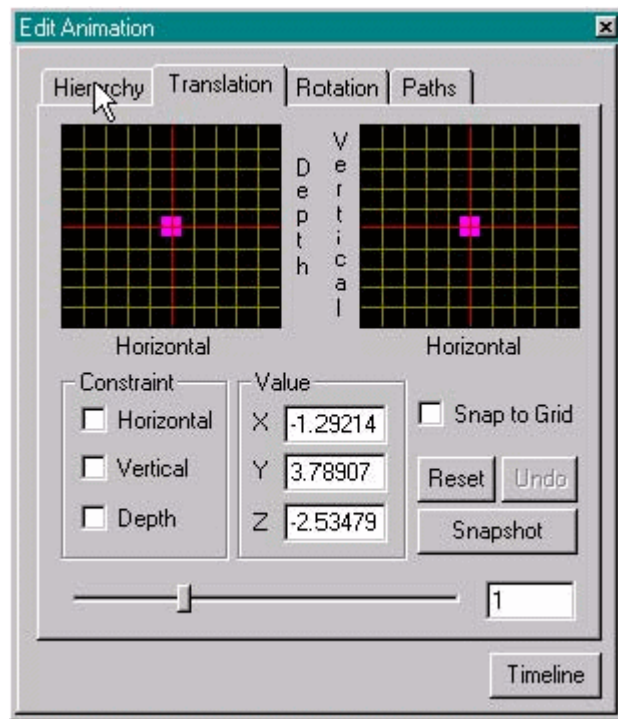
Key framing is the process used to set up objects at key points along a path. Once these positions are set, the animation tool will work out or interpolate the necessary in-between positions over the designated time interval. The longer the time interval between snapshots/positions, the more in-between frames will be captured.

To move an animation node (using translate and rotate) to set up a key frame shot:

1. Select (highlight) an Animation Node in the hierarchy.
2. Click the Translation or Rotation tab to begin.
3. Click the Snapshot button to take a snapshot of the initial position of the model. A red event icon appears at the start (left) in the Timeline.
4. Use the tools in the Translation and Rotation tabs to move the part(s) in the selected node to set up a key frame.

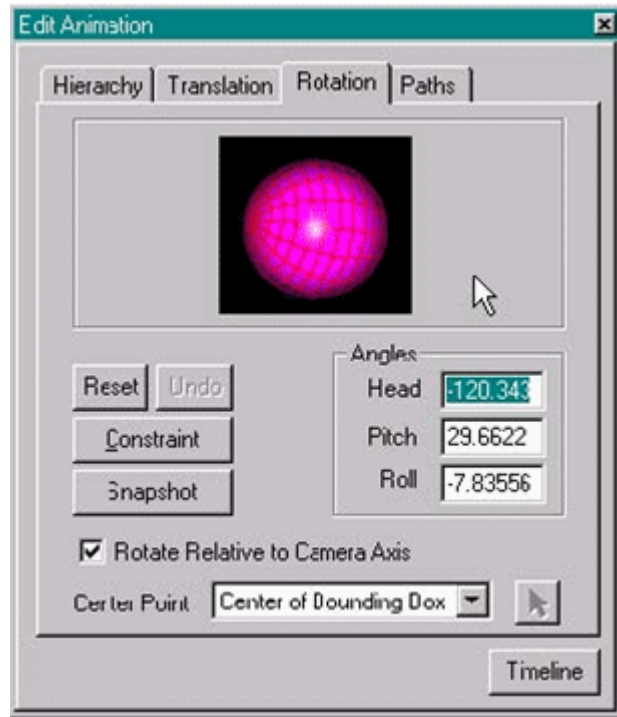
Translating Animation Nodes

5. In the Translation tab, type in an offset value in the X, Y, or Z direction and press Enter. The parts move the designated number of units along the selected axis.
6. Alternatively, click the center square in the grid and drag a vector to move the selected parts dynamically in the main viewing window.

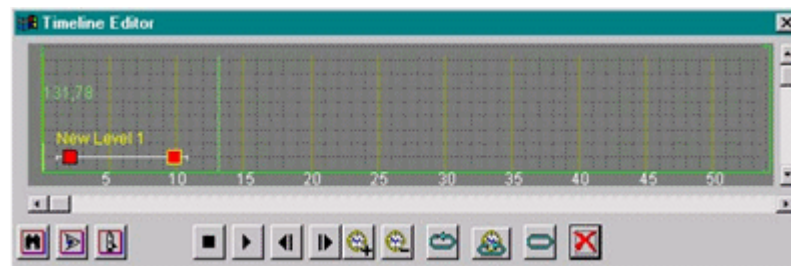


Rotating Animation Nodes

7. In the Rotation tab, click and drag the trackball to rotate the group of parts dynamically about a center point.
8. Alternatively, type separate values for heading, pitch, or roll and press Enter in each field. The part(s) move the designated number of degrees.

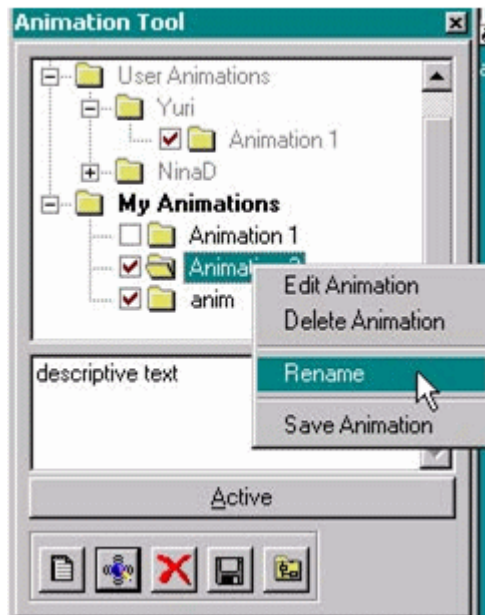
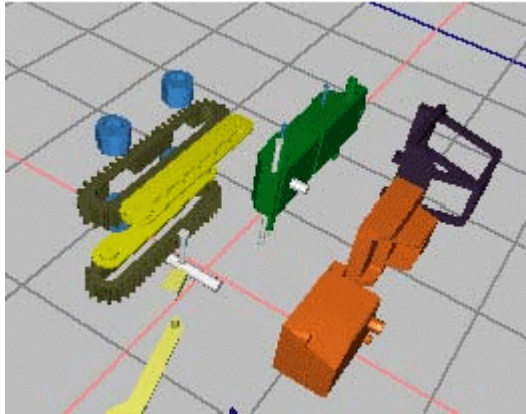


9. When you have moved the parts to the desired key frame position, click the Snapshot button again in either Translation or Rotation tab.
10. A red event icon appears in the timeline. The event icon represents the position/orientation of the objects when the snapshot was taken.
11. Drag the red event icon left or right to create a longer or shorter time interval between key frames, as desired.



12. Click the Play button in the Timeline Editor to play back the animation. The parts will move in the main viewing window.
13. This example is one frame from an exploded view of the model.
14. Repeat the steps above to create as many key frame snapshots as desired.

15. Click the "x" close button at top to save your animation, close the Edit Animation dialog, and return to the Animation Tool.
16. In the Animation Tool window, you can explicitly save your animation to a file (*.van) on your local drive using the Save Animation to Disk button.
17. You can rename your animation by right-clicking and choosing Rename. You can also type a text description below for each animation.



By default your animation is shared. Other users can play your animation from the main Animation Tool window (see Playing an Animation). If you do not want to share your animation with other users viewing the model, deselect the box next to it.

Recording a Path

Paths are routes saved in a model that you and other users can walk through at any time. You can play paths, loop them, and stop along them to look in different directions.

Restrictions

To create a path by recording your movements:

1. Choose Paths in the Tools menu.
2. Navigate a route through the model by dragging the mouse pointer in the viewing window
3. Alternatively, click the double-arrow (>>) icon for Advanced options to display the Movement icons and use them to navigate through the model.
4. Click the Stop icon. A dialog asks you to resample the path.
5. Click OK to simplify the path, eliminating unnecessary points.
6. The Path Tools window appears. The new path appears as the last item under My Paths in the dialog.
7. Type a name for the path and press Enter; type a description if desired.

By default the new path is shared. Deselect it if you do not want it available to other users.

Your paths are stored in the My Paths folder. You can also drag a path from another user's shared folder to copy it into My Paths.

Note: Your paths are automatically saved in the database with the model when you exit DeskTop. If you want to save them *all* in a single .PATH file on your local drive as well, use the Save button to copy all paths currently listed under My Paths. You can upload saved paths from your local drive using the Load button.

If saving the path fails for some reason, you are prompted to save the .PATH file locally. You can also use the Save button to save your file to your local drive.

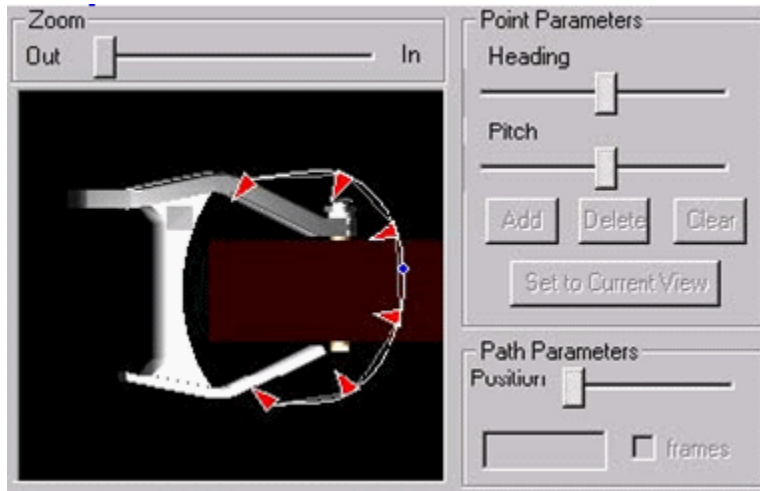
8. In the View menu choose Play Paths and select the path to play it in the main viewing window.

Note: If you're using E-Business Suite, you can also use the Attachment window to set a path to play in a loop as the initial

view when the model is first launched.

Refining a Recorded Path

Highlight the path name in Path Tool window and click the double right-arrow button to display the path in a top view window.



- To add a viewpoint, hover the mouse pointer on the path line between two arrows. When the cursor changes to a cross, you can click to add a new point.
- To select a viewpoint, first hover the mouse pointer over the arrow. When the cursor changes to a cross with four arrows, click to select the arrow beneath.
- To move a viewpoint, select the point and drag it.
- To change your viewing direction at any point along the path, select the point, then adjust the Heading and Pitch sliders.
- To add a point at the end of the path, click a point in space to continue the path in that direction.
- To delete a point, select the point and click the Delete button.

Creating Viewpoints

Using the Viewpoint Tool you can create viewpoints that you can easily return to later. Once you find an interesting viewpoint, you can save it with the model. You can then use Jump to a Viewpoint to select it.

You can also jump to viewpoints created by other users.

Restrictions

To create a viewpoint

1. Navigate to the desired view of the model.
2. Choose Viewpoints in the Tools menu.
3. In the Viewpoint Tool window, click the New button.
The viewpoint appears under My Views as New Viewpoint.
4. Type a new name and press Enter.

Note: By default the new viewpoint is shared. Deselect it if you do not want it available to other users.

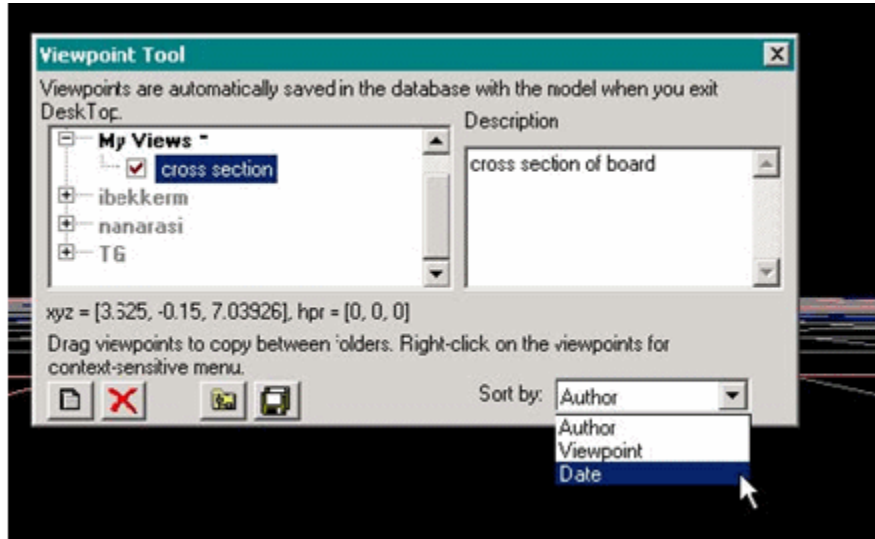
Your viewpoints are stored in the My Views folder. You can also drag a viewpoint from another user's shared folder to copy it into My Views.

Your views are automatically saved with the model when you exit DeskTop. If you want to save them *all* in a single .VIEW file on your local drive as well, use the Save button to copy all viewpoints currently listed under My Views. You can upload saved viewpoints from your local drive using the Load button.

Sorting Viewpoints

Use the Sort by drop-down box in the Viewpoint Tool to choose the way in which viewpoints are sorted. Sort by Author, the default, sorts viewpoints under the creator's name. You can also sort by "Date and sort alphabetically by Viewpoint name". This sort order setting is also used in the Jump to Viewpoint menu.

Using date sort, you can only rename, delete, or share/unshare viewpoints. Using Viewpoint, you can only share/unshare them.



Saving, Copying, and Printing Images

While you are working with the model, you may want to save a snapshot of an image to your local drive instead of saving it in a database with the model as a viewpoint or markup.

Choose Save in the Tools menu to save the image in the viewing area in the selected format, such as .GIF, .BMP, .TGA, or .TIF.

Alternatively, choose Copy in the Tools menu to copy an image to the Windows clipboard which you can then use to paste the image in an external document.

To print an image of the current screen choose Print in the Tools menu, choose the resolution and click OK.

Sending the Model or Markup by Email

To send the location of the model or a markup image of the model to someone via email, choose Send CADView-3D Model by Email or Send Markups by Email in the Tools menu.

Describing Display Sets

Display sets enable you to select sub-sets of a visual part or item within a CADView-3D model, store them together, retrieve them quickly, and view them from a particular perspective.

You can perform any number of part queries, manual hiding, selection, and maneuvering around the model, and then store the view in its entirety for review later as a display set.

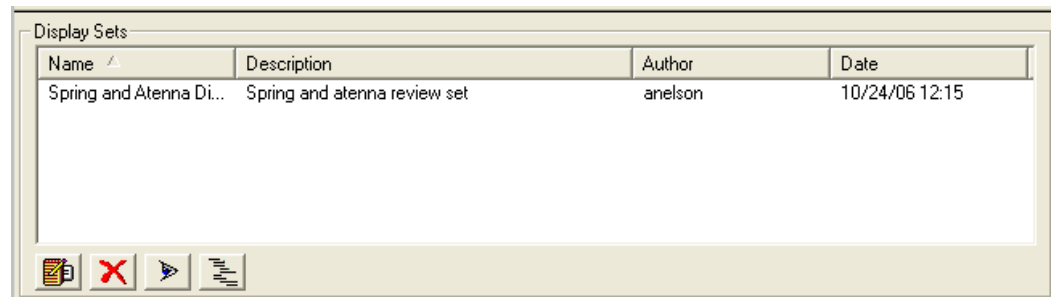
Creating Display Sets

You set up and activate display sets using the Display Sets region, which you can access by selecting the Display Sets option from the Tools menu.

The Display Sets region contains the details about your display sets. This region includes the display set name and descriptions, as well as options (icons) that enable you to manage your display sets.

The following graphics depict the Display Sets region, as well as a description of the display set management icons.

Display Sets Region

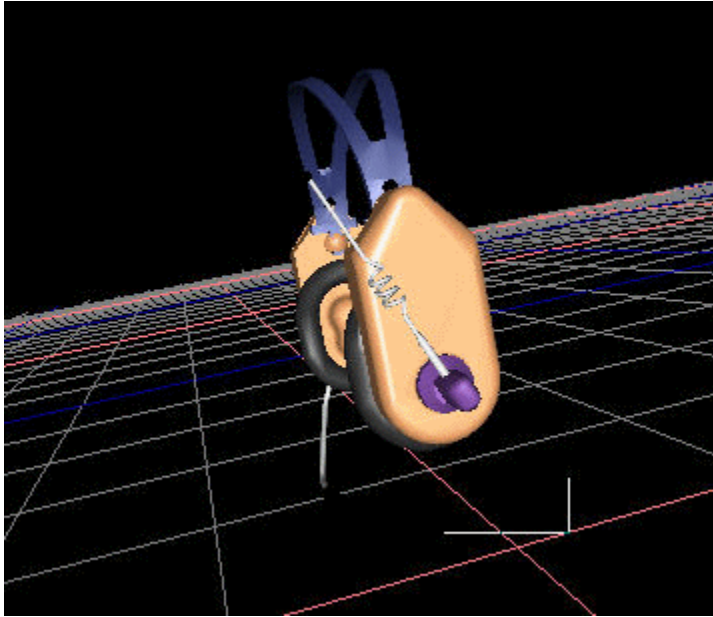


Display Sets Icon Descriptions

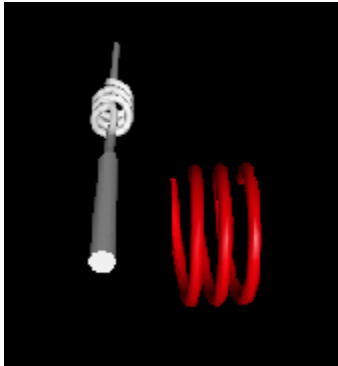


Think of display sets as subsets of complete items. The following examples illustrate a complete item (a standard headset), versus a display set (the headset antenna and spring), which are components of the item.

Example of Complete Item



Example of Item Display Set

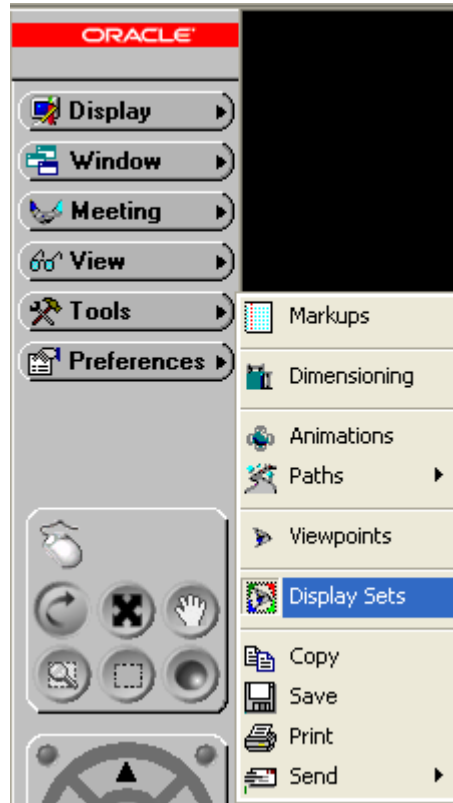


You can share display sets within a mutltiuser, real-time collaboration session. To share display sets, the collaboration leader selects the display set to share, and then the selected set appears automatically for all session attendees.

To Create a Display Set:

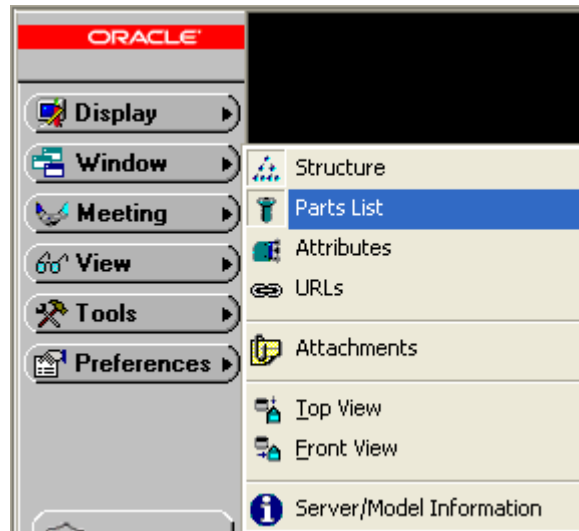
This procedure assumes that you are creating a display set from the Parts list.

1. From the Tools menu, select Display Sets.

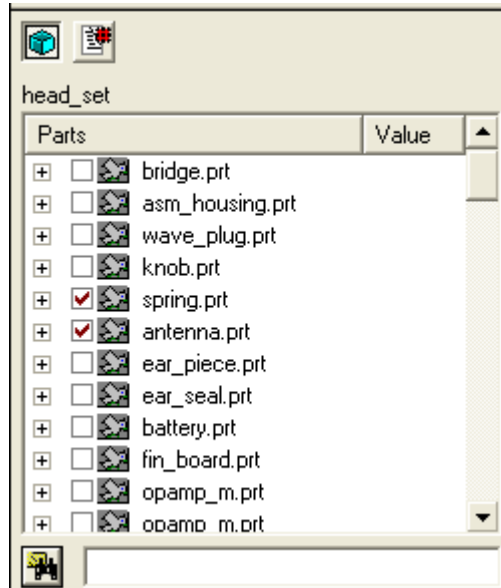


The Display Sets region appears.

2. If not already visible, select the Parts List from the Window menu.



3. From the Parts list, select the parts that you want to include in your display set.



Important: Make sure to clear the check boxes of the parts that you do not want to appear in the display set.

4. Optionally, select a viewpoint from which to view the display set.
5. In the Display Sets region, click the Add to Display set icon to create the display set.
The Add Display Set window opens.

Note: The parts selected when the Add Display Set window opens are the parts that will appear in your display set.

6. Enter a name and an optional description for your display set.

The new display set now appears in the Display Sets panel.

You can create additional display sets by repeating this procedure.

Note: Users can create display sets on both single-stream and multistream models. Further, for either single-stream and multi-stream models, re-publication of the models containing display sets will keep the display sets visible within the re-published model. However, should a user add or delete a stream from a model that previously had display sets associated with it, those display sets will be lost.

To View Display Sets:

1. If not already visible, select Display Sets from the Tools menu.

The Display Sets region appears.

2. To view a specific display set, select the display set, and then click the Activate Display Set icon.

Alternatively, double-click the selected display set.

The selected display set appears in the CADView-3D window.

3. To view or return to the complete item or part, click the View All and Reset Colors icon.

Alternatively, from the View menu, select Display Sets > View All and Reset Colors.

To Delete a Display Set:

1. Click the Delete Display Set icon.

Preferences

This chapter covers the following topics:

- Overview
- Modifying Preference Settings
- Backface Culling
- Building Maximum Level of Detail
- Pausing Streaming
- Changing Object Colors
- Showing Statistics

Overview

You can use the Preferences menu to modify your view and appearance of the model. The Preferences menu offers the following features:

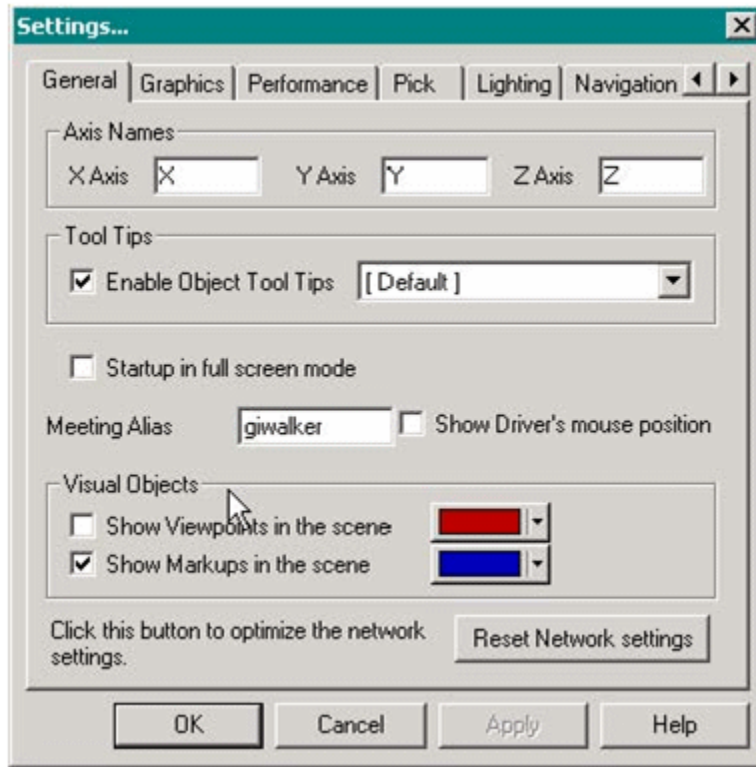
- Modifying Preference Settings
- Backface Culling
- Building Maximum Level of Detail
- Pausing Streaming
- Changing Object Colors
- Showing Statistics

Modifying Preference Settings

Using the preference settings you can set various parameters to modify your view of

and interaction with a 3D model. Choose Settings in the Preferences menu or right-click in the viewing window and choose Preferences in the menu that opens.

You can customize settings in the following tabs: General, Graphics, Performance, Pick, Lighting, Navigation, and Sounds



Note: User-specified settings are stored in the Windows Registry and remain the same for any model you view. However, some model-specific settings, such as those for the near and far clip plane, are stored with and may be different for each model.

Backface Culling

CADView-3D by default, does not draw the back faces of objects to minimize the time it takes to load and render the model.

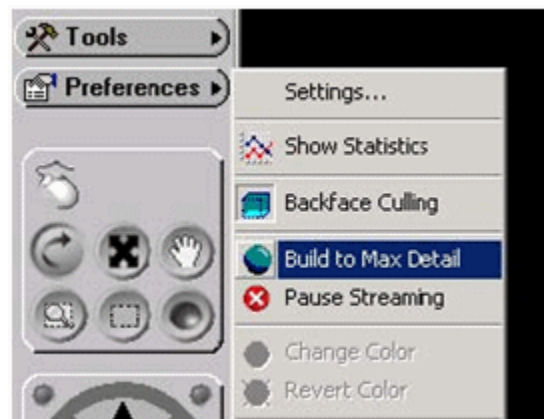
Choose Backface Culling in the Preferences menu to turn on and off the Backface Culling.



Building Maximum Level of Detail

CADView-3D DeskTop streams data to load only portions of the model that are required for rendering your current view. If necessary, the entire model can be loaded into memory in full detail.

Choose Maximum Level of Detail in the Preferences menu to begin loading the maximum level of detail of all objects in the model or in currently isolated objects.



Note: This process can take several minutes on a complex model, and it will slow down or halt navigation. When complete, you can navigate and view the entire model without interim reloading.

Pausing Streaming

CADView-3D uses patented streaming technology to load only what is needed to render the current view. However, you may need to pause the streaming and rendering process if you need to use your network connection and local CPU for another purpose.

To pause network traffic and locate CPU:

1. Choose Pause/Resume Streaming in the Preferences menu.



The viewing window turns white and a message box appears stating that all streaming has stopped.

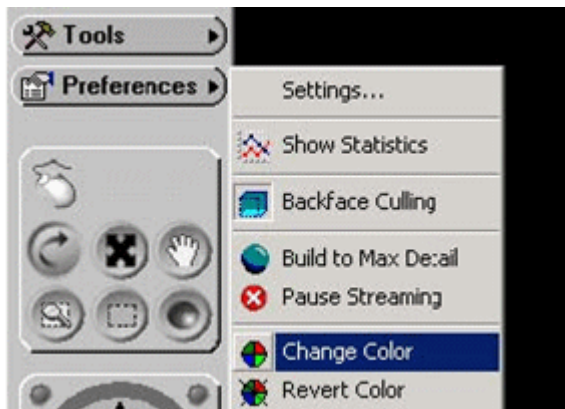
2. Click OK to resume streaming and return to interacting with the model.

Changing Object Colors

You can manually pick a new color to identify certain objects.

To manually pick a new color:

1. Select an object and choose Change Color in the Preferences menu.



2. Choose a new color from the color palette and click OK.

The new color remains until you choose Revert Color or until you exit DeskTop. It is not saved with the model.

See also: Querying Attributes to learn how to display objects in certain colors according to attribute values and save them with the model.

Showing Statistics

You can display real-time statistics about the model as it is being rendered as well as information about CADView-3D DeskTop and your PC system.

Choose Show Statistics in the Preferences menu.



The statistics text appears in the corner of the viewing window.



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