



Preview Guide

Autodesk® Raster Design 2004 software is the leading raster application for design professionals in any industry who need to use or reuse scanned paper drawings or maps, satellite images, aerial photos, and similar digital design data with their design projects. It is the Autodesk® solution for managing, converting, and editing all types of raster images in AutoCAD® software and AutoCAD® software-based products.

Autodesk Raster Design 2004 is designed for compatibility with AutoCAD® 2004 and the specialized, industry-specific products based on AutoCAD, including Autodesk® Map 2004, Autodesk® Land Desktop 2004, Autodesk® Architectural Desktop 2004, AutoCAD® Mechanical 2004 and Autodesk® Mechanical Desktop® 2004 software.

The key features in Autodesk Raster Design software include

- **Enhanced Optical Character Recognition (OCR)**—Save manual data entry time and improve accuracy when converting drawings with lots of text.
- **Tonal Adjustment**—Improve the appearance of scanned imagery by bringing detail out of dark areas without affecting highlights.
- **Palette Manager**—Standardize the use of color images, improve efficiency and consistency of color usage in images, and improve control of transparency color selection.
- **Rubbersheeting**—Improve accuracy and get more predictable results from rubbersheeting.
- **Installation and Configuration**—Save time with common, simplified administration tools.

This Preview Guide presents details of each of these features.

Optical Character Recognition (OCR)

With the enhanced OCR feature in Autodesk Raster Design, you can select areas of text or tables that need to be converted from a scanned drawing or map. The OCR enhancements in Autodesk Raster Design enable a more faithful carry-over of formatting from the original drawing to AutoCAD. You want the resulting AutoCAD text to be accurate, so verification and editing of the recognition results are necessary.

Using the Recognize Text command, you can select raster text in your drawing and convert it to AutoCAD text or AutoCAD multiline text (mtext). You can control the process with settings in the Text Recognition Setup dialog box to determine the search parameters for the text recognition engine. The results are displayed in the Edit pane of the OCR Verification dialog box, which also displays the original raster text you selected. You can make changes directly in the Edit pane, or you can use the Find Next button to highlight the suspect words or rejected characters found by the recognition engine. You can choose to match the results against a user dictionary and your AutoCAD custom dictionary.

To get to the OCR command, use the Image menu, Text Recognition flyout.

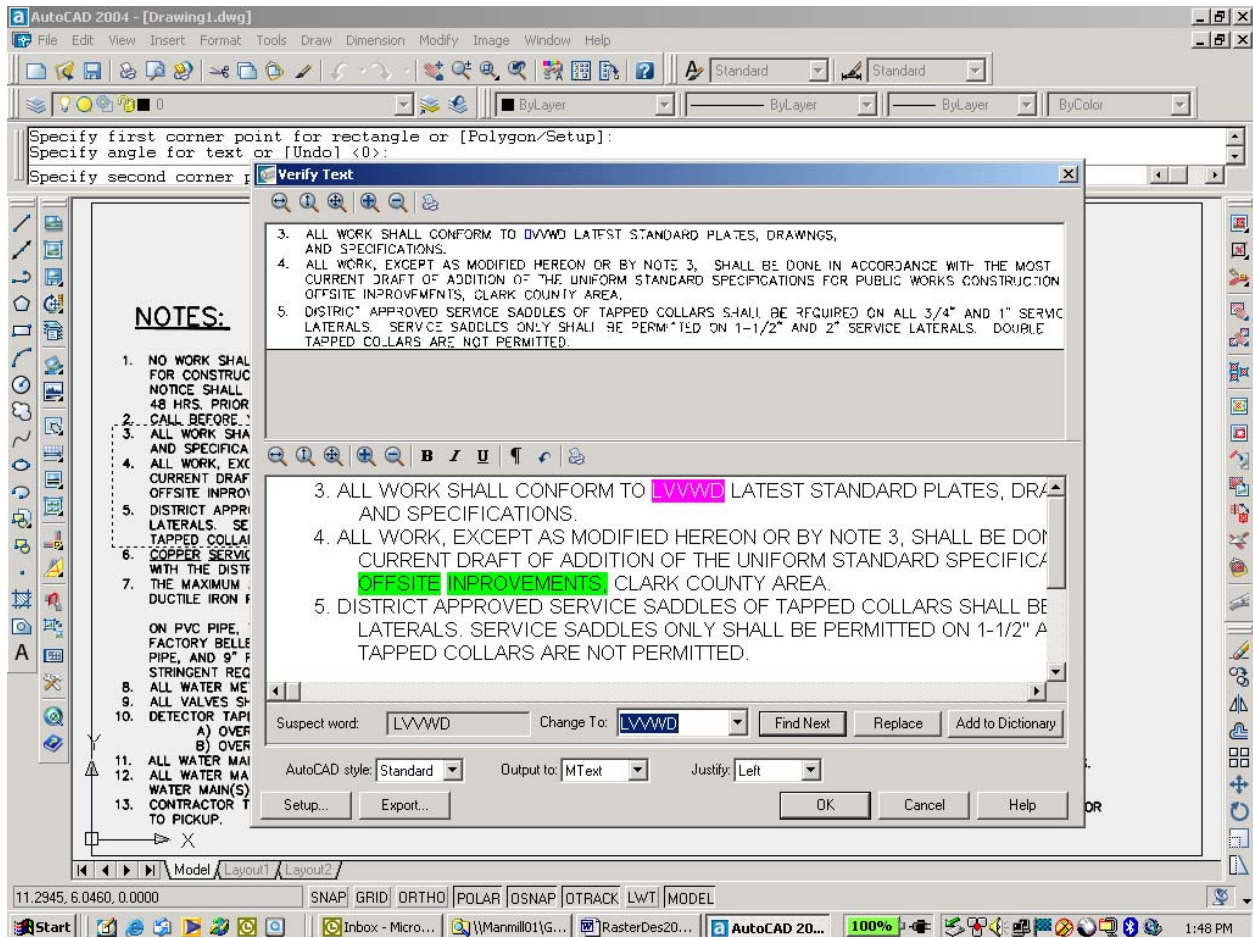


Figure 1. Raster Design's Optical Character Recognition Review Window

Tonal Adjustment

The Tonal Adjustment tab in the Histogram dialog box enables you to adjust the image contrast in a nonlinear fashion by using a curve.

The human eye is generally more sensitive to dark shades than to light shades. However, many digital images, particularly those produced on a scanner, display less detail in darker or shadowed regions of the image. Using existing tools to adjust brightness and contrast can improve the level of detail in the darker regions but usually does so at the expense of the midtones and lighter colors. Controls on the Tonal Adjustment tab can adjust the contrast using a curve—enabling you to increase the contrast in the darker tones, while maintaining the current level of contrast among midtones and lighter colors.

The contrast curve can be represented in three ways:

- **Gamma correction** curves result in an exponential curve. It is defined by either specifying the single exponent (gamma) value or using an interactive slider that in turn determines the gamma value.
- **Fitted** curves are drawn smoothly through points you specify. Points can be added or removed from the curve, or dragged to modify the shape of the curve.
- **Piecewise linear** curves are constructed of points you add or modify, like a fitted curve, but each segment between points is a straight line instead of a curve.

To get to the Tonal Adjustment tab, use the Image menu, Image Processing flyout; click Histogram and then click the Tonal Adjustment tab.

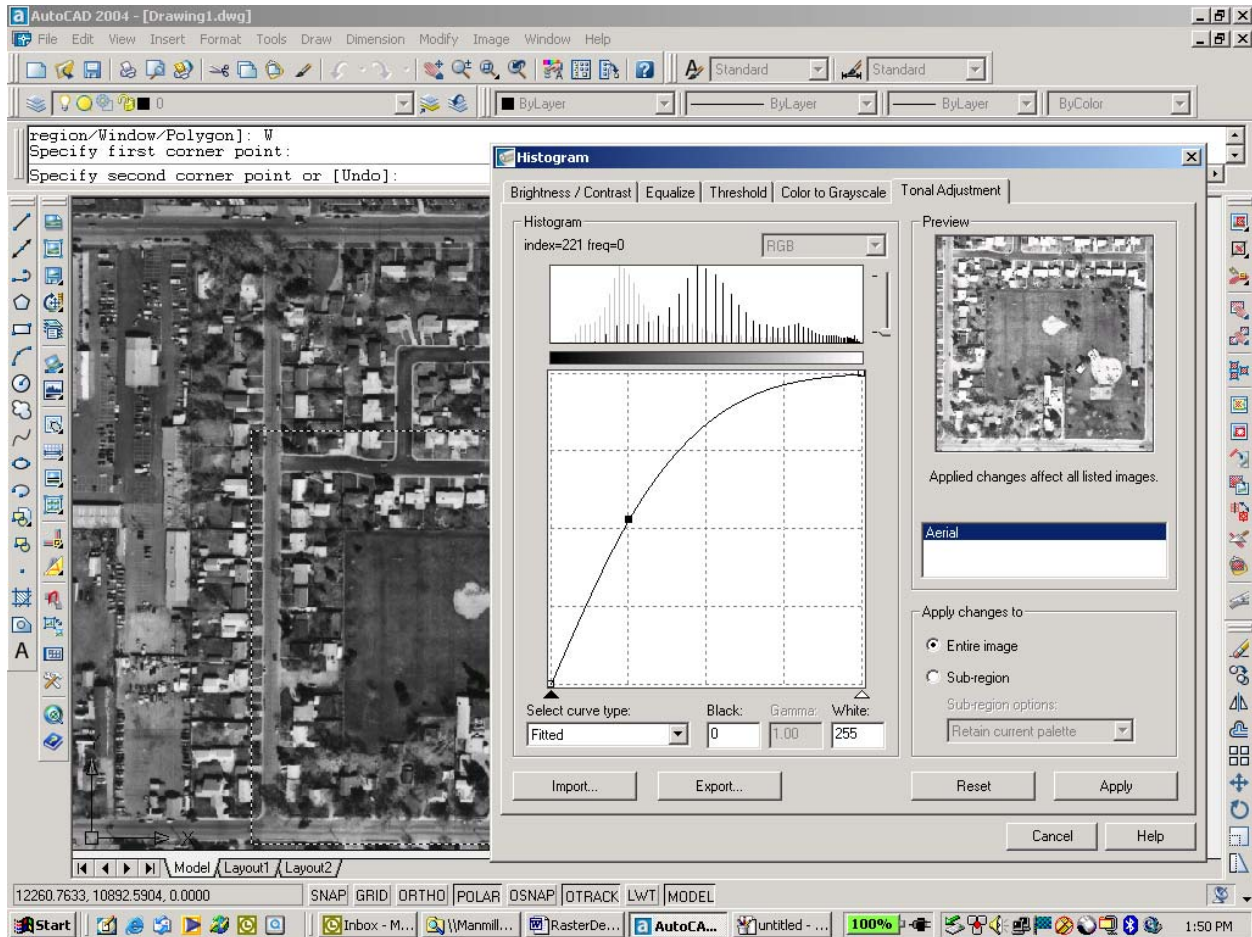


Figure 2. The Tonal Adjustment Dialog Box

Palette Manager

The Palette Manager feature enables you to manipulate individual colors and entire palettes for indexed color images. You can determine which colors are actually used, change an existing color to a different color, combine several color indexes into a single mapped color, assign and set transparency, compress the palette, and even import and export palettes.

The Palette Manager dialog box displays color tables representing the values in the image palette. These color tables are displayed both as an array of color buttons and as a list window. You can select individual colors in the color table to get information on their color values, frequency, and index values. By selecting one or more colors from the color table, you can also change color values, combine colors, assign transparency, and delete colors from the palette.

To get to the Palette Manager, use the Image menu, Image Processing flyout and click Palette Manager.

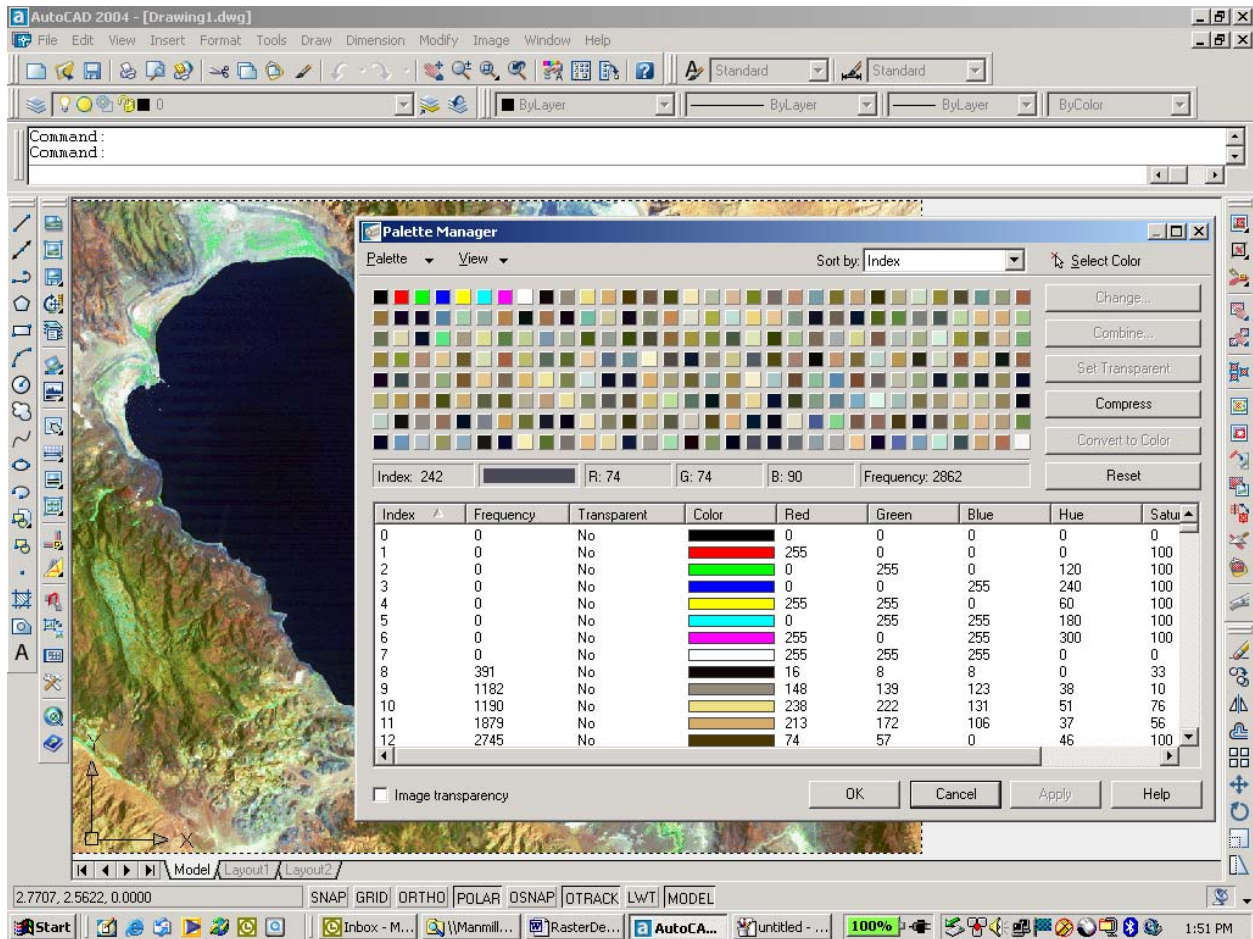


Figure 3. The Palette Manager Dialog Box

Rubbersheeting

The enhanced Rubbersheeting feature enables you to transform an image so that points you specify in the image match corresponding points in the drawing or map as closely as possible.

Image distortions can sometimes prevent you from aligning an image in your drawing. For example, correlation by scanning or matching may not work on aerial photographs that have not been corrected for distortions related to parallax, unevenness of terrain, or lens distortion. In these cases, you can use rubbersheeting to permanently correct most of the distortions in an image.

The Triangular method uses the control points you enter to triangulate the image, and then performs a series of small, error-free transformations on those areas. New grid selection techniques improve the efficiency of selecting control points by enabling you to create a custom grid of destination points.

To get to the Rubbersheet dialog box, use the Image menu, Correlate flyout and click Rubbersheet.

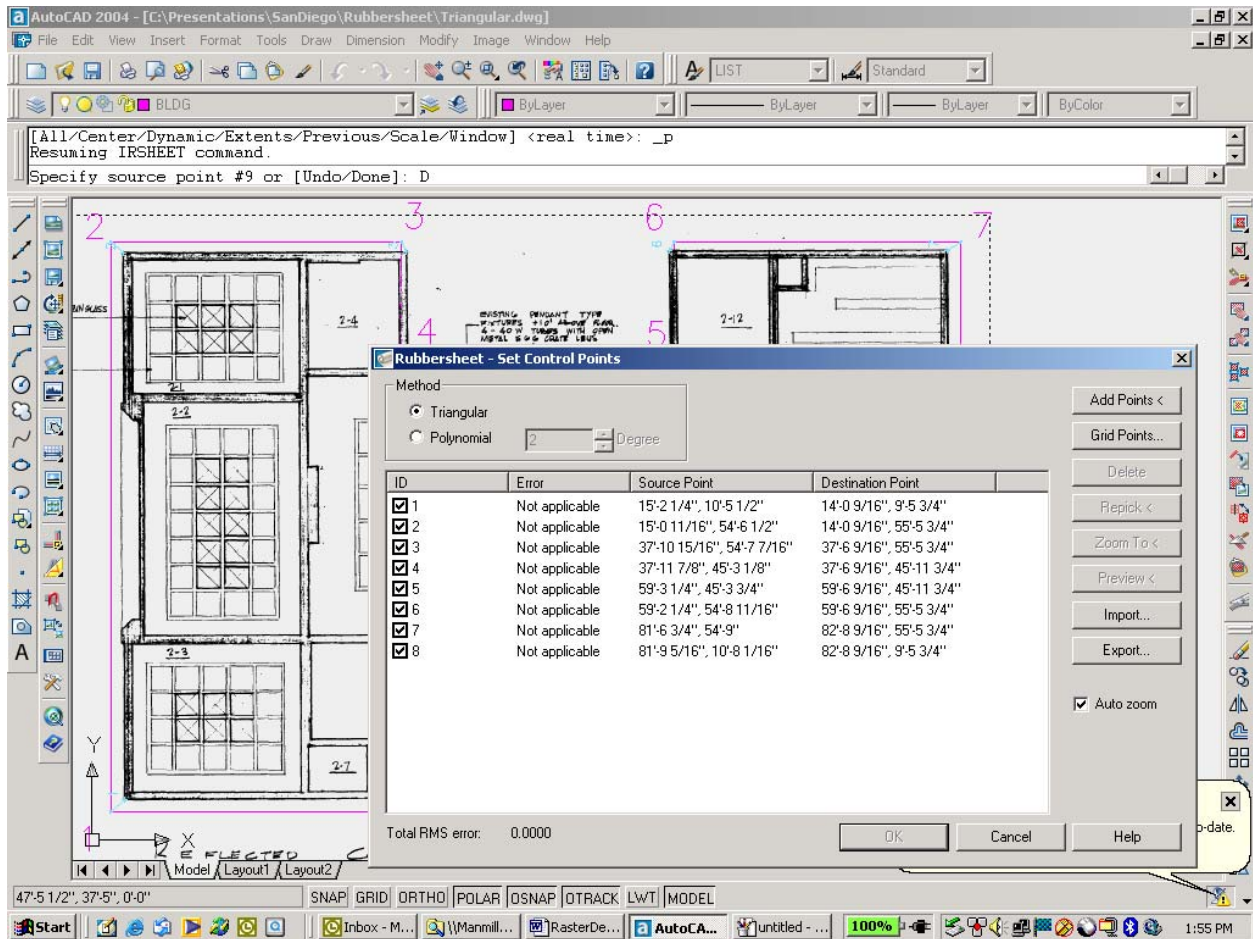


Figure 4. The Rubbersheet Control Points Dialog Box

Installation and Configuration

Improved installation technology gives you more control over the installation process. For instance, you can now simultaneously install Autodesk Raster Design to multiple installations of AutoCAD or AutoCAD-based products.

The CD Browser is displayed when you insert the product CD or run setup. From the CD Browser, you can view all of the included documentation, check out the latest information in the readme, or peruse the bonus images included with Autodesk Raster Design. You can perform single-user installations and network deployments, as well as maintain, repair or uninstall Autodesk Raster Design by using the Install link in the CD Browser.

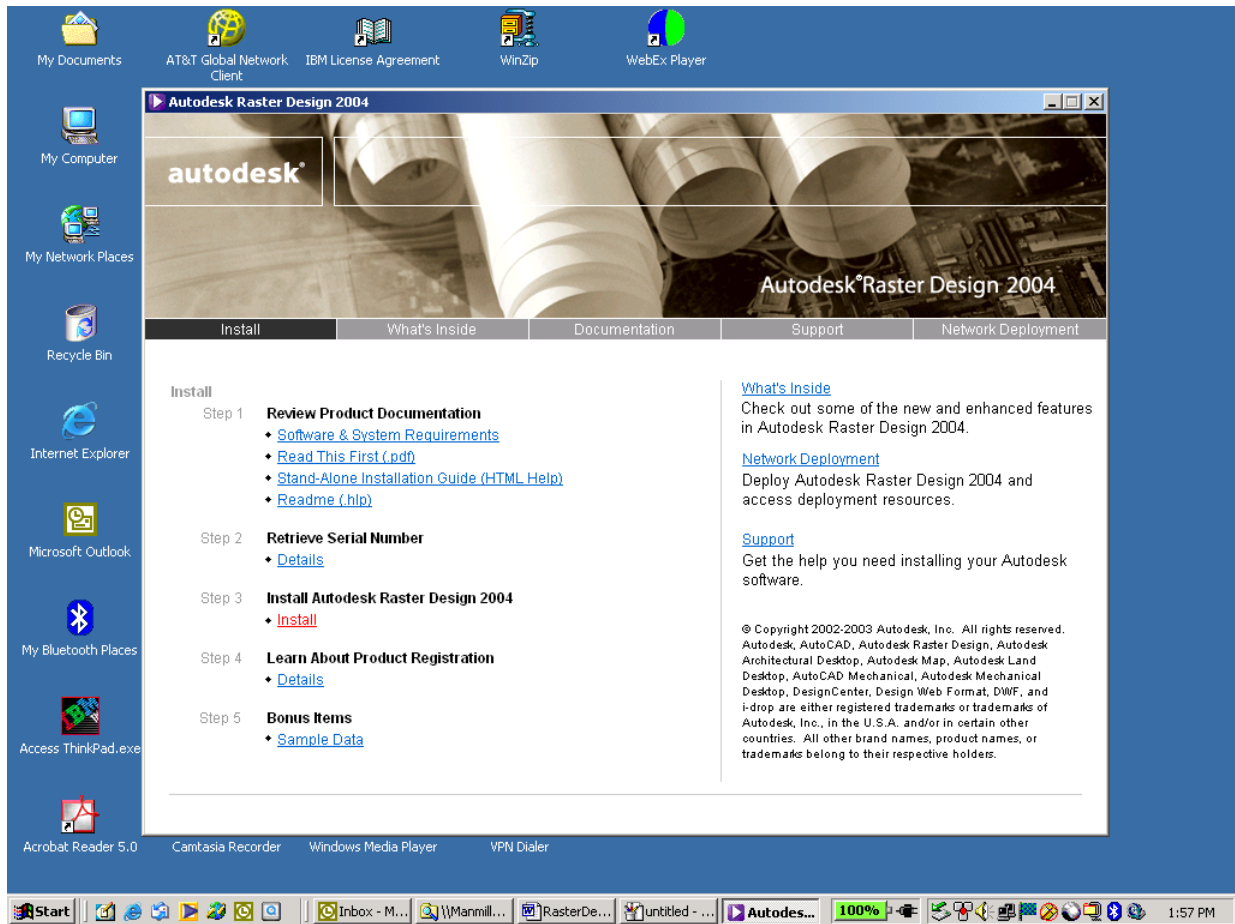


Figure 5. The Installation Introductory Dialog Box

During installation, you are prompted to select the features to be installed.

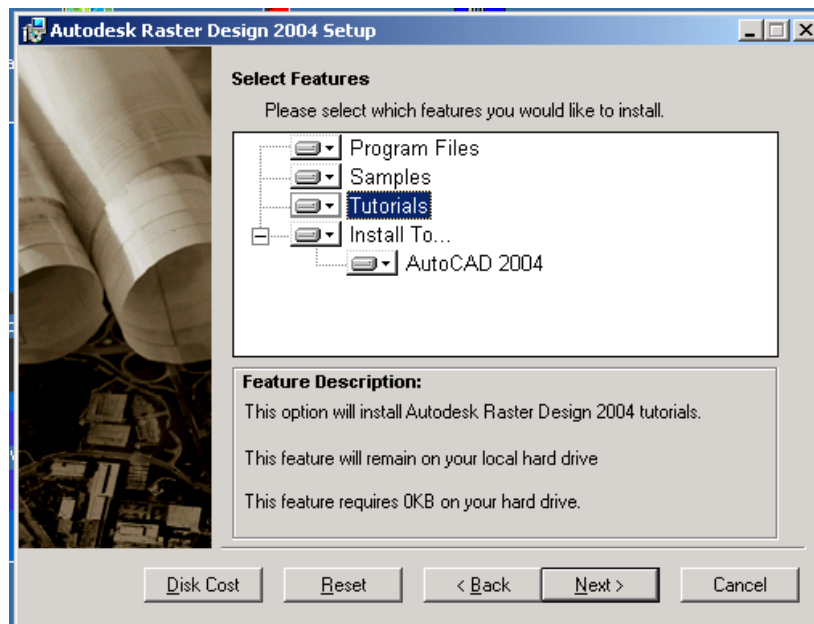


Figure 6. The Feature Installation Dialog Box

Conclusion

Autodesk Raster Design 2004 software adds important new functionality that enables you to take better advantage of existing archives of scanned drawings, maps, and photos. For any business whose success depends on the efficient exchange of design information, Autodesk integrates this advanced raster conversion and revision technology with important platforms. The result is an unparalleled one-vendor design solution that improves productivity, accuracy, and ease of use.

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