

# Working with other programs

BtoCAD offers great flexibility in its capability to be used with other programs. You can include an BtoCAD drawing in a Microsoft® Word document or insert a Microsoft® Excel spreadsheet containing a parts list into an BtoCAD drawing. To include BtoCAD drawings in other programs and documents from other programs

in BtoCAD drawings, you either link or embed them. You can also save BtoCAD drawings in other file formats that can be used directly with other programs or send BtoCAD drawings to coworkers via e-mail.

This section explains how to:

- Save and view snapshots.
- Use images in your drawings.
- Use objects linking and embedding.
- Export BtoCAD drawings to other file formats.
- Send drawing files via e-mail.
- Use BtoCAD with the Internet.

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## Saving and viewing snapshots

You can save snapshots of a drawing to view later. A snapshot saves the current drawing in either \*.emf, \*.wmf, or \*.sld format exactly as it appears on the screen. A snapshot is not a drawing file. You cannot edit or print the snapshot; you can only view it.


You can use snapshots in the following ways:

- Make presentations by showing snapshots of your drawings.
- Reference a snapshot of a drawing while working on a different drawing.
- Present a number of snapshots as a slide show by using scripts.

When you view a snapshot, it temporarily replaces the current drawing. When you refresh the display of the current drawing (by redrawing, panning, zooming, minimizing, maximizing, or tiling), the snapshot image disappears, and you are returned to the current drawing.

You create a snapshot by saving the current view as a snapshot. A snapshot does not include any entities on layers that are not currently visible. The contents of the snapshot also depend on the current drawing space. In model space, the snapshot shows only the current view port. In paper space, the snapshot contains all visible view ports.


### To create a snapshot

- 1 Display the drawing exactly as you want to capture it as a snapshot.
  - Choose Tools > Make Snapshot.
  - On the Tools toolbar, click the Make Snapshot tool 
  - Type *msnapshot* and then press Enter.
- 2 In the Create Snapshot dialog box, specify the name of the snapshot file you want to create.
- 3 From the Files Of Types list, choose either \*.emf, \*.wmf, or \*.sld.
- 4 Click Save.

The current drawing remains on the screen, and the snapshot is saved to the directory that you specify. You can view previously saved snapshots, and you can also view snapshots created using AutoCAD.

### To view a snapshot

- 1 Do one of the following:

- Choose Tools > View Snapshot.
- On the Tools toolbar, click the View Snapshot tool 
- Type *vsnapshot* and then press Enter.

2 In the View Snapshot dialog box, specify the name of the snapshot file you want to view.

3 Click Open.

BtoCAD displays the snapshot in the current drawing window.

## Using images in a drawing

You can modify and view raster images directly inside of BtoCAD. You can load, edit, and modify multiple images as overlays or underlays to your BtoCAD drawings. The images can be selected for use with BtoCAD commands by selecting the image frame, if it is visible.

### Attaching images

When you attach an image to a drawing, the image displays in the drawing but is not saved in the drawing. The image file remains saved in its original location on your computer, network, or other media.

When you open a drawing that contains an image, the original image file must be accessible for the image to display in the drawing.

#### To attach an image

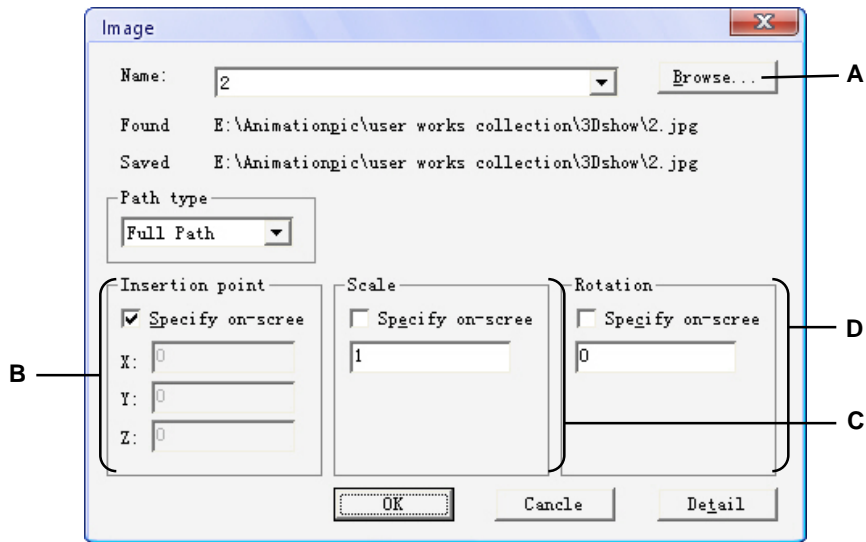
- 1 Do one of the following:
  - Choose Insert > Attach Raster Image.
  - Type *imageattach* and then press Enter.
- 2 Specify a file to attach, and then click Open.
- 3 In Image Path will be Saved As, enter a different image file location, if necessary. You can click > to choose how you want to save the image path:
  - Full Path — The image is referenced using its full path, for example, c:\My Pictures\MyImage.jpg. Use this option if the image is saved in a folder unrelated to the current drawing folder.
  - Relative Path — The image is referenced using a path relative to the current drawing folder, for example, ..\My Pictures\MyImage.jpg. Use this option if the image is stored in a subfolder of the current drawing folder.
  - No Path — The image is referenced using its file name in the current drawing folder, for example,

MyImage.jpg. Use this option if the image is saved in the same folder as the current drawing.

- 4 In the Attach Image dialog box, specify the position, scale, rotation, transparency, and clipping options, and then click OK.

**NOTE** *Transparency works for images that support alpha transparency, that is, images that have at least one color that can be viewed as a transparent color.*

- 5 In the drawing, specify an insertion point, scale, and rotation if you chose to specify those on the screen.



- A Choose to place of the image and click “open” to select it.
- B Choose to specify the insertion point in the drawing upon insertion, or enter coordinates.
- C Choose to specify the size of the image in the drawing upon insertion, or enter the size values.
- D Choose to specify rotation in the drawing upon insertion, or enter how many degrees to rotate the image to the left.

**TIP** *You can also attach images using the Image Manager. Choose Image > Image Manager, and then click Attach to specify an image and then attach it, or if you want to quickly add another occurrence of an image already located in the drawing, select the image in the Image Manager and then click Add.*

## Deleting images

Once an image is no longer required in the drawing, you can delete it from the drawing. Deleting an image removes it from the drawing, and from the Image Manager dialog box.

**To delete an image**

- 1 Do one of the following:
  - Choose Insert > Image Management.
  - Type *image* and then press Enter.
- 2 Select the image you want to remove, and then click Detach.

## Using data from other programs in BtoCAD drawings

You can include data from other programs in BtoCAD drawings by using either embedding or linking. The method you choose depends on the type of object or file you want to include in your BtoCAD drawing and what you want to do with it after it is there.

### Embedding objects into drawings


Embed an object into your BtoCAD drawing when you want to keep all the data you work with in one file or if you want to transfer the file to other computers. You can embed data from programs that support object linking and embedding.

For example, if you want to distribute data about a department's computer equipment along with an BtoCAD drawing of the department's floor plan, you can embed a Microsoft® Excel spreadsheet into the floor plan.

When you embed data from another program, BtoCAD becomes the container for that data. The object embedded in the BtoCAD drawing becomes part of the BtoCAD file. When you edit the data, you open its program from within the BtoCAD drawing.

Any changes you make to the embedded data exist only in the BtoCAD drawing, so it is not necessary to keep that data in a separate file. If the data does exist in a separate file, the original file does not change when you modify the embedded object in BtoCAD. Also, changes to the original file do not affect the embedded object in the BtoCAD drawing.

**To embed another program's object into an BtoCAD drawing**

- 1 Open the file that contains the data you want.
- 2 In the file, select the data you want to embed in the BtoCAD drawing.
- 3 Choose that program's command to place data on the Clipboard. Usually, you choose Edit > Copy.
- 4 In the BtoCAD window, display the drawing in which you want to embed the object.
- 5 Choose Edit > Paste, or click the Paste tool () on the Standard toolbar.

The data on the Clipboard is pasted into the drawing as an embedded object. The object appears in the

center of the view, but you can select and move it by moving the cursor.

**To embed an object from an existing file within BtoCAD**

- 1 Do one of the following:
  - Choose Insert > Object.
  - Type *insertobj* and then press Enter.
- 2 In the Insert Object dialog box, click Create From File.
- 3 Specify the file by doing one of the following:
  - Type a path and file name in the File box.
  - Click Browse to select a file.
- 4 Select Display As Icon if you want that program's icon to appear in the drawing instead of the data.
- 5 Click OK.

The first page of the file appears in the BtoCAD drawing, unless you chose to display it as an icon. You can select the object and drag to reposition it.

**To create a new embedded object from within BtoCAD**

- 1 Do one of the following:
  - Choose Insert > Object.
  - Type *insertobj* and then press Enter.
- 2 In the Insert Object dialog box, click Create New.
- 3 From the Object Type list, select the type of object you want to create, and then click OK.

The program for creating that object opens within BtoCAD. If the program is compatible with ActiveX, it opens in place (within the other program) in the BtoCAD drawing; otherwise, the program opens in its full window.

- 4 Create the object in the other program.
- 5 If the program is running within the other document (in place), click anywhere outside the embedded object to close the program.

If the program is running in its full window, choose File > Exit.

## Linking objects to drawings

If another program supports ActiveX, you can link its data to BtoCAD drawings. Use linking when you want to include the same data in many files. When you update the data, all links to other files reflect the changes.

For example, if you created your company logo in an ActiveX-compatible drawing program, and you want to include it in the title block of every drawing you create with BtoCAD, you can link it to each BtoCAD drawing. When you change the original logo in the drawing program, the BtoCAD drawing updates automatically.

When you link data from another program, the BtoCAD drawing stores only a reference to the location of the file in which you created the data. You link data from a saved file, so BtoCAD can find the data and display it.

Because linking adds only a reference to a file, the data does not significantly increase the file size of the BtoCAD drawing. However, links require some maintenance. If you move any of the linked files, you need to update the links. In addition, if you want to transport linked data, you must include all linked files.

You can update a linked object automatically every time you open the drawing, or you can do so only when you specify. Anytime a link is updated, changes made to the object in its original file also appear in the BtoCAD drawing, and the changes also appear in the original file if they were made through BtoCAD.

#### **To link a file to an BtoCAD drawing**

- 1 Save the original file.

Because a link consists of a reference to the original file, you must save the file before you can link to it.

- 2 In the original file, select the data you want in the BtoCAD drawing.
- 3 Choose that program's command to place data on the Clipboard. Usually, you choose Edit > Copy.
- 4 Display the BtoCAD drawing to which you want to link the file.
- 5 In BtoCAD, choose Edit > Paste Special.
- 6 In the Paste Special dialog box, select Paste Link.
- 7 Click OK.

#### **To create a linked object from within BtoCAD**

- 1 Display the BtoCAD drawing in which you want to display the linked object.
  - Choose Insert > Object
  - Type *insertobj* and then press Enter.
- 2 In the Insert Object dialog box, click Create From File.
- 3 Specify the file by doing one of the following:
  - Type a path and file name in the File box.
  - Click Browse to select the file using a file dialog box.
- 4 Select the Link check box.
- 5 Select Display As Icon if you want that program's icon to appear in the drawing instead of the data.
- 6 Click OK.

The first page appears in the BtoCAD drawing, unless you chose to display it as an icon. To reposition the object, select and drag it.

## Editing an embedded or linked object from within BtoCAD

You can modify an embedded or linked object in its original program from within BtoCAD. When you modify an embedded object, you change the object only in BtoCAD, not its original file (if you pasted the object from an existing file). When you modify a linked file, however, you open and change the original file.

Most programs include a submenu of actions you can perform on an embedded or linked ActiveX object. Usually, the commands for editing ActiveX objects are Edit and Open. If the object is embedded and its program supports in-place editing, the Edit command opens the object in place. The Open command opens the object in the full program window. In BtoCAD, this command appears at the bottom of the Edit menu.

### To edit an embedded or linked object

- In the BtoCAD drawing, double-click the object.

If the object is embedded and the program in which you created the object supports in-place editing, the object opens in place.

If the object is linked, or if its program does not support in-place editing, the other program opens in its full window and displays the object.

## Importing files created in other formats

You can import the following files:


- Drawing Exchange Format files with a .dxf file extension. This file type is an ASCII or binary description of a drawing file.
- Design Web Format files with a .dwf file extension. DWF™ files are used to distribute a drawing for others to view in a Web browser, review, and edit using free Autodesk® software and tools.
- Drawing templates with a .dwt file extension. This file type contains predefined settings that you can reuse when you create new drawings.
- Three-dimensional entities saved with an .sat file extension. This file type contains three-dimensional ACIS solids saved as an .sat file.

### *Importing a DXF, DWF, or DWT file*

Importing DXF files, two-dimensional DWF files, and DWT files is similar to opening a standard drawing file.

### To import a DXF, DWF, or DWT file

- 1 Use one of the following methods:

- Choose File > Open.
- On the Standard toolbar, click the Open tool 
- Type *open* and then press Enter.



- 2 Choose the folder that contains the drawing.
- 3 In Files of Type, choose the type of drawing you want to import.
- 4 Choose the file you want to open.
- 5 Click Open.

## Using BtoCAD data in other programs

You can use any of the following methods to include BtoCAD data in a document created in another program:

- Embedding
- Linking
- Dragging
- Exporting
- E-mailing

The method you choose depends on the capabilities of the other program and how you want to work with the BtoCAD data after you've placed it in the other document.

**NOTE** *Each method except exporting uses ActiveX to integrate data from different programs. With ActiveX, you can open BtoCAD drawings from within the other program to modify the BtoCAD drawings.*

### Embedding drawings

When you embed an BtoCAD drawing, it becomes part of the other program's document file. When you edit the drawing, you edit only the version that is embedded in the other document.

Embedding is useful when you don't want to maintain a link to the BtoCAD drawing for the data you include in the other document. Edits made to the new drawing do not affect the original drawing. To transfer the file to other computers, you can transfer all the data in one file, but embedded objects increase the file size.

From within a document in a program that supports ActiveX, such as Microsoft® Word, you can either create a new embedded BtoCAD drawing or embed an existing BtoCAD drawing.

#### To create an BtoCAD drawing in another document

- 1 In the document, choose Insert > Object (or the equivalent command for that program).
- 2 In the dialog box, click the options for creating a new file.
- 3 Under Object Type, choose BtoCAD Drawing, and then click OK.

- 4 Create the BtoCAD drawing.
- 5 If BtoCAD is running in its own window, choose File > Exit.

If BtoCAD is running within the other document (in place), click somewhere in the document outside the BtoCAD drawing to close BtoCAD.

- 6 To edit the BtoCAD drawing from within the document, double-click the drawing.

**TIP** *You can also embed an existing BtoCAD drawing from within another document. Follow step 1 in the preceding procedure, and then click the option for creating an object from an existing file.*

#### **To embed selected BtoCAD entities**

- 1 In BtoCAD, select the entities you want to embed.
- 2 Choose Edit > Copy (or press Ctrl+C).
- 3 Open the document in which you want to embed the entities.
- 4 Choose Edit > Paste (or the equivalent command).

#### **To embed an entire BtoCAD drawing**

- 1 Open the document in which you want to embed the drawing.
- 2 Choose Insert > Object.
- 3 Click Create From File.
- 4 Click Browse, and then choose the file you want to embed.
- 5 Click Insert, and then click OK.

### **Editing an embedded BtoCAD object in place**

In many ActiveX-compatible programs you can edit an embedded BtoCAD object without leaving the program (or container application). This is called in-place editing.

A different set of BtoCAD menus and toolbars temporarily replaces most of the menus and controls in the active window while you edit the BtoCAD object.

#### **To edit an embedded BtoCAD object in place**

- 1 In the container application, double-click the embedded BtoCAD object. A different set of BtoCAD menus and controls appears.
- 2 Edit the BtoCAD drawing.
- 3 Click anywhere outside the drawing window to exit the in-place editing controls.

### **Linking drawings**

When you link an BtoCAD drawing to another document, the other document contains only a reference to the BtoCAD drawing file, rather than the actual drawing. You link data in a saved BtoCAD file so that the other program can find the data and display it.

Linking works well when you want to include the same BtoCAD data in more than one document. When you update the data, you need update it in only one location.

The versions that are linked to other documents reflect the changes automatically.

Linking an BtoCAD file to another document does not increase the file size the way embedding an BtoCAD object does. However, links require more maintenance. To transport the data, you must make sure to transfer all linked files to the other computer.

### To link an BtoCAD file to another document

- 1 Open the drawing you want to link.

**NOTE** Because a link is a reference to a file, you can link only files that are saved to a location on a disk. If you haven't saved the drawing you want to link, choose File > Save.

- 2 In the other program, open the document in which you want to include the BtoCAD drawing.

- 3 Choose that program's command for inserting objects.

In Microsoft® Office programs, choose Insert > Object. In the Object dialog box, click the Create From File tab. Specify the name of the drawing file you want to link. Select the Link to File check box, and then click OK.

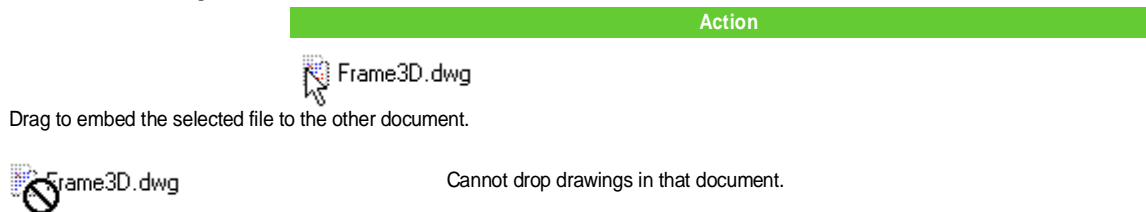
The drawing appears in the document, with a link to the original BtoCAD file.

### Dragging BtoCAD drawings into other programs

If the other program in which you want to include BtoCAD drawings is compatible with ActiveX, an alternative to pasting drawings with menu commands is to drag drawing file icons from Windows Explorer into the other document. Dragging and dropping drawings does not use the Clipboard, so data on the Clipboard is not affected.

When you drag an BtoCAD drawing file from Windows Explorer, you link or embed the entire drawing in the other document. When you drag the file, the cursor changes in response to the action you take.

#### How the cursor changes



**TIP** Before you drag a drawing, position the Windows Explorer window and the other program's window so

*you can see the file icon and the document in which you want to drop it.*

**To drag and embed drawings into another document**

- Select the icon for the drawing file, and then drag the drawing into the document.

**Exporting drawings**

You can save or export BtoCAD drawings in a number of different formats for use with other programs. When you save a drawing in a different format, the program saves all the entities in the drawing to the new file. Or, you can choose which entities are included in the new file.

**Export formats**

	File extension	Details
AutoCAD Drawing or R11/12	DWG	AutoCAD versions 2004, R14, R13,
ASCII AutoCAD Drawing R11/12	DXF	AutoCAD versions 2004, R14, R13, or
Exchange Format R11/12	DXF	AutoCAD versions 2004, R14, R13, or
Bitmap	BMP	Graphics file Enhanced Windows Metafile
Portable Document Format for using with Adobe® Acrobat® Reader® and Adobe® Acrobat	PDF	Distribute your drawing to others
Design Web Format for using with Autodesk® software and tools	DWF	Distribute your drawing to others
SVG language		Graphics file format and Web development

You can also export ACIS solids, regions, and surfaces to an ASCII file (\*.sat) that you can use in other programs.

**Exporting to a DWG, DXF, BMP, EMF, WMF, or SVG file**

Exporting to a file is similar to saving a standard drawing file.

**To export a drawing to a DWG, DXF, BMP, EMF, WMF, or SVG file**

- 1 Do one of the following:
  - Choose File > Export To File.
  - Type *export* and then press Enter.

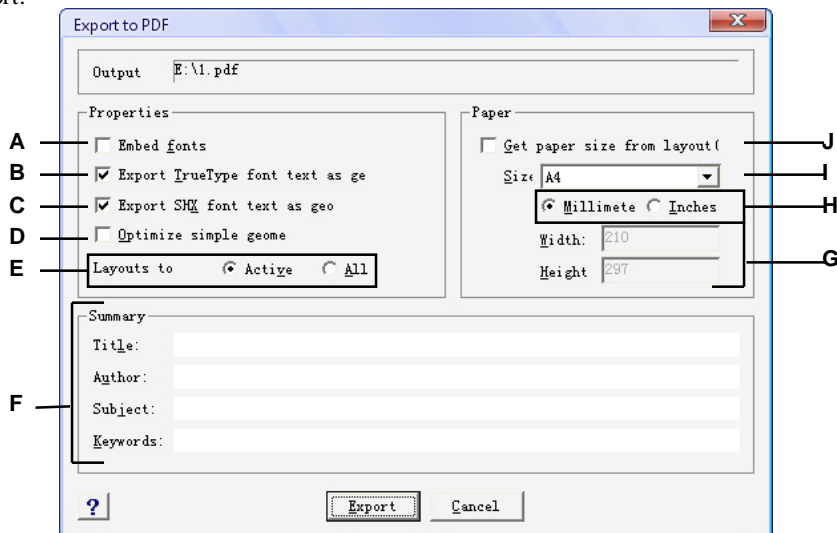
- 2 In the Export Drawing As File dialog box, under Save As Type, choose the file format.
- 3 Specify the name of the file you want to create.
- 4 Click Save.
- 5 If the selection prompt box displays, choose the entity-selection method, and then create the selection set.
- 6 When you have finished selecting entities, press Enter.

### Exporting to a PDF file

PDF files allow you to distribute your drawing to others for viewing in Adobe® Acrobat® Reader®, which is free software that users can download. PDF files can also be viewed, reviewed, and edited in Adobe® Acrobat.

#### To export a drawing to a PDF file

- 1 Do one of the following:
  - Choose File > Export To File.
  - Type *export* and then press Enter.
- 2 In Save As Type, choose Portable Document Format (pdf).
- 3 Specify the name of the file you want to create.
- 4 Click Save.
- 5 Choose the entity-selection method, and then create a selection set that contains the entities you want to export.
- 6 When you have finished selecting entities, press Enter.
- 7 Choose the options for how you want to export to the PDF file.
- 8 Click Export.



- A** Click to include fonts within the PDF file, otherwise system fonts are used. If selected, TrueType fonts are embedded within the exported PDF file, which can cause very large file sizes in some cases.
- B** Click to export TrueType font text as geometry instead of text.
- C** Click to export SHX font text as geometry instead of text.
- D** Click to optimize geometry processing, for example, save arcs as bezier curves instead of an enumeration of lines, save separated segments with equal ends and equal attributes as one polyline, and save rectangles as rectangles instead of four lines.
- E** Choose whether to export only the current, active layout, or all layouts in the drawing.
- F** Enter details if you want to save the information as properties for the PDF file.
- G** Enter the width and height of the paper for the layouts you are exporting. This will be the width and height of the page in the PDF file.
- H** Choose the desired unit of measure for the paper size: millimeters or inches.
- I** Select a paper size for the layouts you are exporting. This will also be the page size in the PDF file. If you want to specify your own custom paper size, choose Custom Size.
- J** Click to use the same paper size that is defined for the exported layouts. If this check box is unmarked, specify a different paper size in the Size list.

### *Exporting to a DWF file*

DWF files allow you to publish your drawings so they can be viewed on the Internet using a Web browser. BtoCAD exports your drawing to a Design Web Format (.dwf) file, which can be viewed in a Web browser if Autodesk® DWF Viewer is also installed on the computer. DWF Viewer is a free tool from Autodesk®.

You can export your drawing to a 2D DWF file or a 3D DWF file. 2D DWF files have smaller file sizes, but cannot be viewed in three dimensions. 3D DWF files can be viewed in three dimensions using the Autodesk® DWF Viewer, but have larger file sizes.

#### **To export a drawing to a 2D DWF file**

- 1** Do one of the following:
  - Choose File > Export To File.
  - Type *export* and then press Enter.
- 2** In Save As Type, choose Design Web Format (dwf).
- 3** Specify the name of the file you want to create.
- 4** Click Save.
- 5** Choose how you want to export:
  - **DWF File Version** — Choose the DWF file version you want. Version 4.2 can export entities on the Model tab only (no layouts). Version 5.5 can export the current layout only. Version 6.0 can export the current layout or all layouts.
  - **DWF File Format** — Choose the desired file format. Compressed binary files have a smaller file size than uncompressed binary files. ASCII files have the largest file size.
  - **Layout to Export** — Choose whether to export the current layout only, or all layouts in the drawing.
- 6** Click OK.

- 7 Choose the entity-selection method, and then create a selection set that contains the entities you want to export.
- 8 When you have finished selecting entities, press Enter.

#### **To export a drawing to a 3D DWF file**

- 1 Do one of the following:
  - Choose File > Export To File.
  - Type *export* and then press Enter.
- 2 In Save As Type, choose 3D DWF.
- 3 Specify the name of the file you want to create.
- 4 Click Save.
- 5 Choose the entity-selection method, and then create a selection set that contains the entities you want to export.
- 6 When you have finished selecting entities, press Enter.

#### **Sending drawings through e-mail**

You can send an BtoCAD drawing to another user via e-mail. BtoCAD is compatible with e-mail programs that support the Messaging Application Program Interface (MAPI) protocol.

##### **To include a drawing file in an e-mail message**

- 1 While the drawing file is open, choose File > Send Mail.

If your mail program is not already running, it starts; a new e-mail message containing the BtoCAD icon and file name appears.

- 2 Address the e-mail, type a message, and send the e-mail message as you would any other message.

##### **To view an BtoCAD file sent by e-mail**

- Open the e-mail message, and then double-click the BtoCAD icon.

**NOTE** *BtoCAD software must be installed on the computer used to open drawings in e-mail.*