

DXFTool For CorelDRAW Professional Edition

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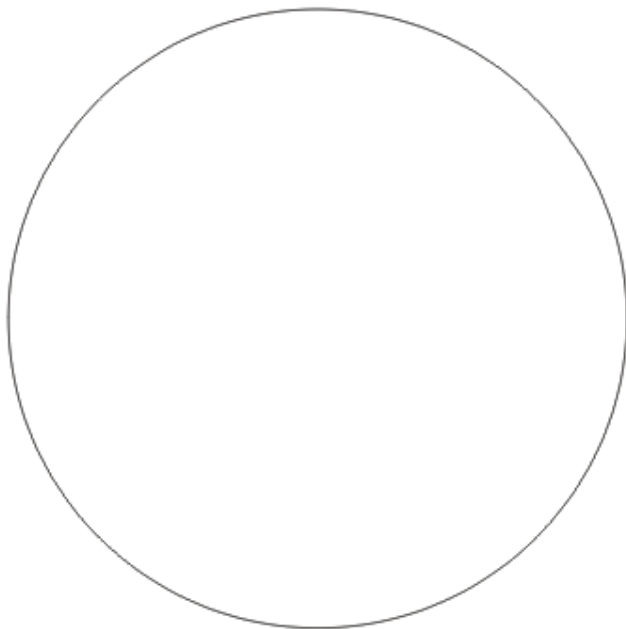
DXFTool For CorelDRAW Professional Edition

<http://www.LeonardCNCSoftware.com>

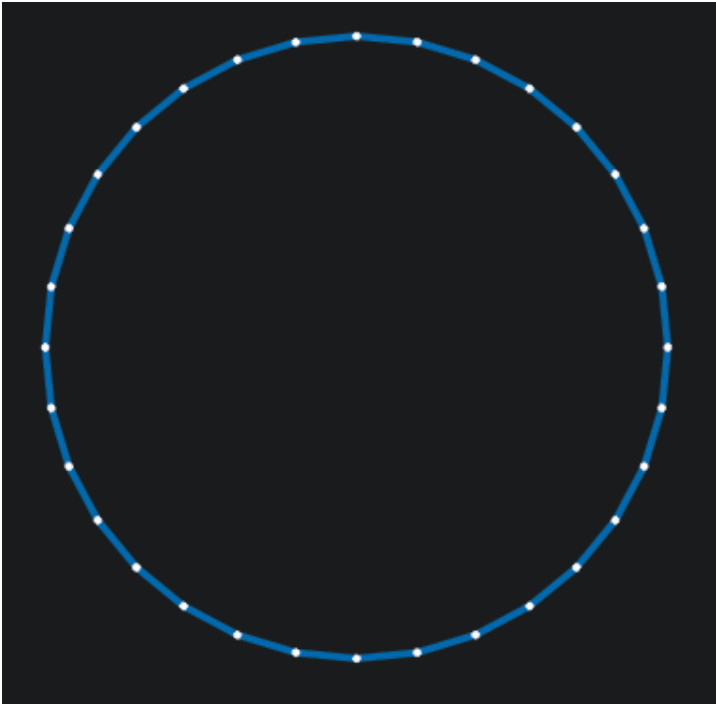
The DXFTool Professional Edition is a utility program that provides very high quality DXF files for use in CAD / CAM programs. They are also very useful for Laser and Vinyl cutting systems that use DXF files since text handling is optimized and you do NOT have to ever convert your drawing to curves. The advantages of this tool are provided by conversions of the bezier curves in CorelDRAW to LINE and ARC DXF entities only. What this means is that instead of a large number of very short lines the DXF file has as many smooth curves as can be made from the CorelDRAW shapes in your drawing. The Professional Edition has four types of exports. A simple DXF file which has only LINE entities for each shape consisting of small line segments, a simple DXF file which has only LINE and ARC entities, a DXF file that has POLYLINES for each shape consisting of small line segments and a DXF file that has POLYLINES with ARC bulges so that each shape is a fully linked series of LINE and ARC entities. We call this export type a POLYARC.

Our POLYLINE export is improved by having a single straight line where possible unlike Corel's exports which has many separate small lines even if they are not needed to define a curve. The LINE ONLY export operates in the same fashion.

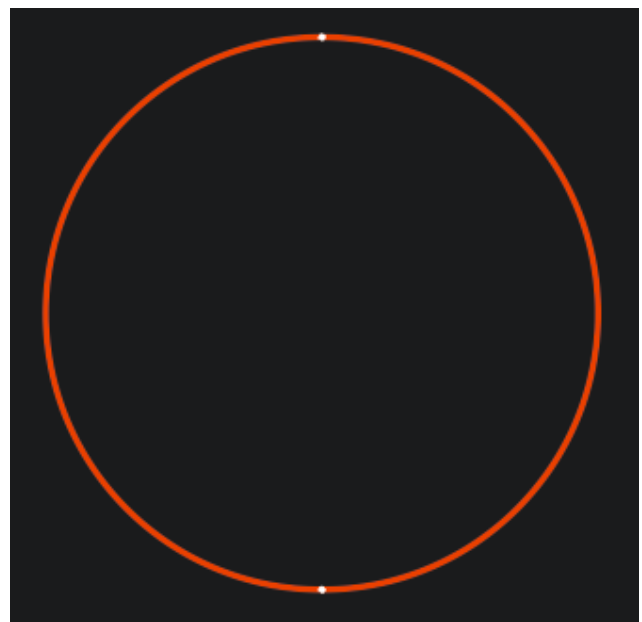
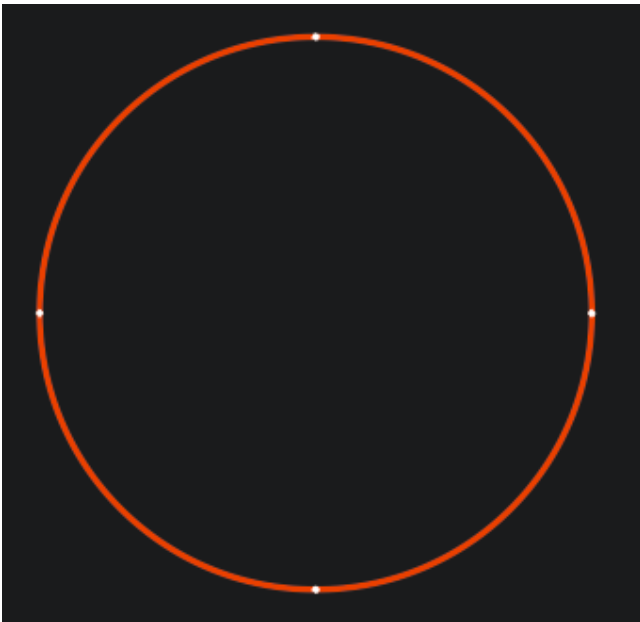
A simple circle can be hard to cut when it is many small lines instead of arcs as most CAD programs would make it. Here is a circle from CorelDRAW.

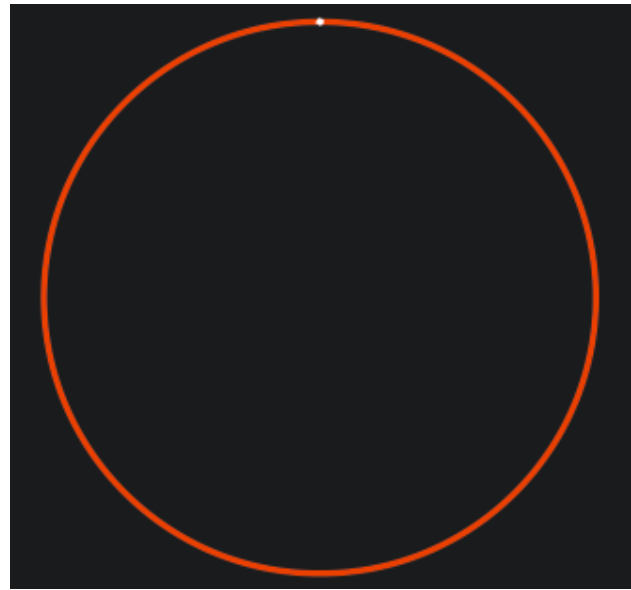
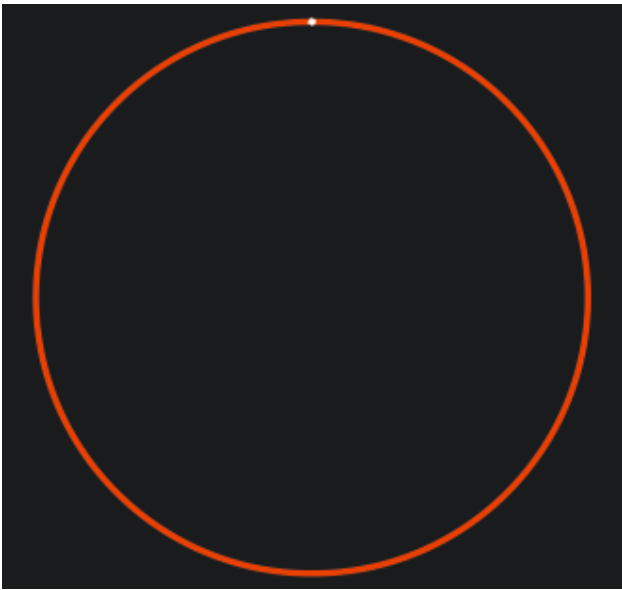


The CorelDRAW DXF export produces this result. It is NOT very friendly to most CNC systems. It is a series of lines as defined by the curve resolution inside CorelDRAW.



The DXFTool Professional Edition export is at MOST 4 arcs. This is a large reduction in node count and an even larger saving in cutting time if your CNC system stops at every end of line. You can also have circles that are two arcs, one arc and a DXF CIRCLE entity for the smallest possible DXF files.





Note that the 1 arc circle and the DXF circle entity are essentially identical. It just depends on what your software needs. This allows the DXF file to be optimized for applications where the size of the file is very important.

The DXTool Professional Edition is the best solution for using CorelDRAW with CNC. CorelDRAW is a world class drawing program and now it also does CNC very well!

DXFTool For CorelDRAW Professional Edition

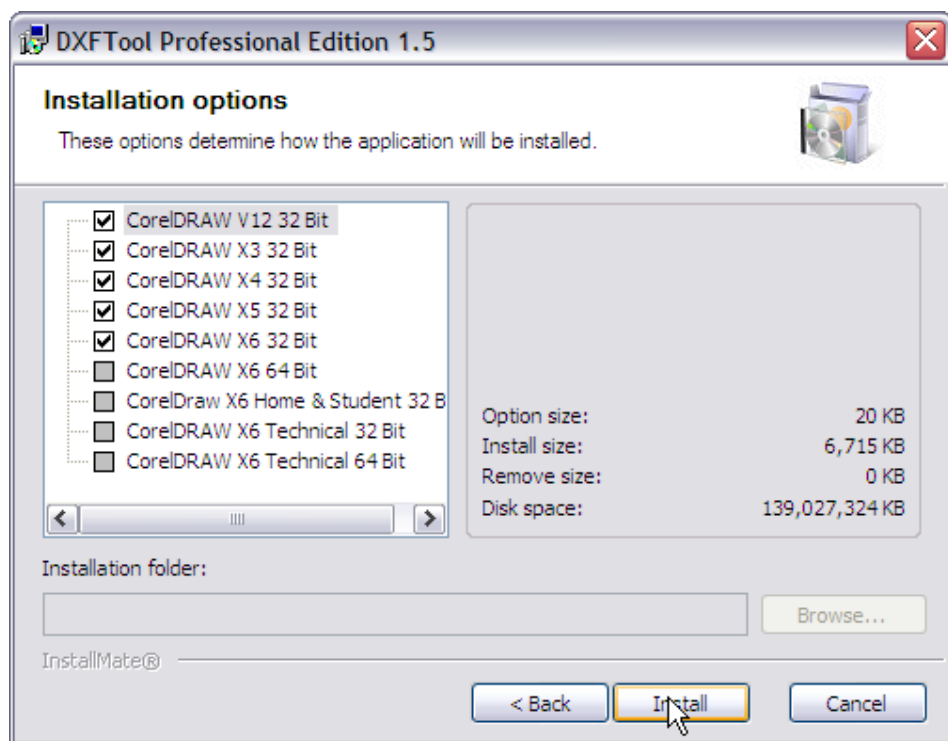
Installation of the DXFTool Professional Edition is very simple. Just unzip the file you downloaded. You can use built in ZIP utilities or get WINZIP from Corel.

<http://www.winzip.com/>

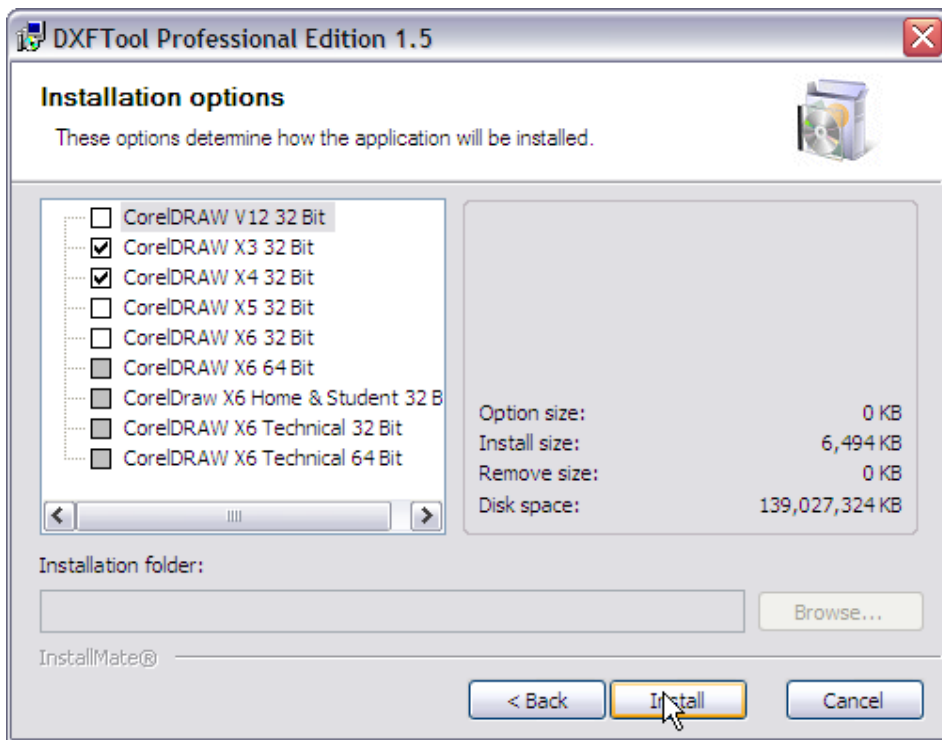
There is a free WinZIP alternative from:

<http://www.jzip.com/>

To use the installer program you must rename it. It will originally have a file extension of .ex1. This must be renamed to .exe so you can double click on it to run it. DxfToolPro-Setup.ex1 will be renamed to DxfToolPro-Setup.exe. When you run DxfToolPro-Setup.exe you will see the welcome screen, then a license text screen. After you agree to the license you will see:



This screen shows all the supported CorelDRAW versions that were found on the computer being installed. If you want all the versions checked then just press the 'Install' button and the installation will proceed.



If you only want some of the CoreIDRAW versions to have the product installed then uncheck the ones that you don't want.

Disk Drive Used

If your computer does NOT have a C: drive then just install as usual. Substitute the drive letter you installed on for the C: in the examples in this document. For example, a system that only has an I: main disk drive will usually have CoreIDRAW X3 installed here:

I:\Program Files\Corel\CoreIDRAW Graphics Suite 13

Windows Vista

Windows Vista is only supported for CoreIDRAW X3, X4, X5 and X6, since Corel only supports X3, X4, X5 and X6.

Please disable the UAC temporarily before installing.

Windows 7

Windows 7 is only officially supported for CoreIDRAW X4, X5 and X6, since Corel only supports X4, X5 and X6.

However, X3 with SP2 seems to work well. SP1 for X3 would not install on Windows 7 for me so it may not be a viable choice. Our software does work though.

Please disable the UAC temporarily before installing.

Windows 8

Windows 8 is only officially supported for CoreIDRAW X6 since Corel only supports X6.

Please disable the UAC temporarily before installing.

Customizing the Command Bar for CorelDRAW X3, X4, X5 and X6

The 'Settings' dialog contains a listbox of available Command Bars that can be used for the DXFTool Professional Edition plugin icon. It defaults to the 'Standard' Command Bar but it can be set to any other Command Bar including and custom Command Bar that you might create.

CorelDRAW Version 12 Special Instructions

The V12 installer does NOT install the workspace for DxfTool Professional Edition with the DXFTool button automatically. You will find an exported workspace in the DXFTool Professional Edition folder:

C:\LeonardCNCSoftware\DXFTool Professional Edition\DxfToolPro.xslt

This workspace can be imported into CorelDRAW 12 by these steps:

- 01.** open or create a drawing. The CorelDRAW menus you need will NOT appear until you do this.
- 02.** The menu item Tools->Customization->Workspace is where you customize V12 workspaces. Select the workspace that you want the DXFTool workspace to be based on when you create the new workspace.
- 03.** The panel on the right shows an 'Import' button. Press it and a screen will display that will allow you to browse for this workspace file in the DXFTool Professional Edition folder. Browse to the file 'DxfToolPro.xslt'. You will find it at:
C:\LeonardCNCSoftware\DXFTool Professional Edition\DxfToolPro.xslt
- 04.** Press the 'Next' button and you will see a list of items to import. Just leave all the checkboxes checked and then press the 'Next' button again.
- 05.** Select the 'New Workspace' radio button and then press 'Next'.
- 06.** Name the new workspace 'DxfToolPro' then press 'Next'.
- 07.** You will see a list of everything included in the new workspace. Just press 'Finish' and the DXFTool icon will appear on the Standard toolbar.

NOTE: CorelDRAW Version 12 treats a workspace modification as a drawing change. Please save the current drawing and then exit CorelDRAW to complete the process.

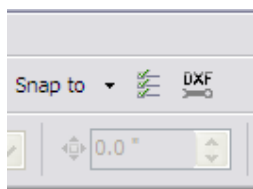
NOTE: If you want to add the DXFTool Professional Edition to your own workspace there is an icon at:

C:\LeonardCNCSoftware\DXFTool Professional Edition\DxfToolPro.ico

DXFTool For CorelDRAW Professional Edition

The DXFTool was originally written in CorelDRAW VBA. This was a good first step, but it had some disadvantages. The biggest one was the need to have VBA installed in your copy of CorelDRAW. Some people did not install VBA and some OEM versions of CorelDRAW (particularly X3) did NOT include VBA in the distribution.

The new DXFTool Professional Edition has been rewritten in C++ to give many benefits. It is faster, better integrated with CorelDRAW and supports multiple versions with ease! The V12 version does still require VBA to start it but the X3, X4, X5 and X6 versions run from a plugin. No custom workspace is needed for X3, X4, X5 and X6, the plugin just adds a button to the Standard toolbar when it starts up. The DXFTool Professional Edition icon is different, it is a black DXF with a wrench together so you know that you have 'tools'. Here is what it looks like on X5:

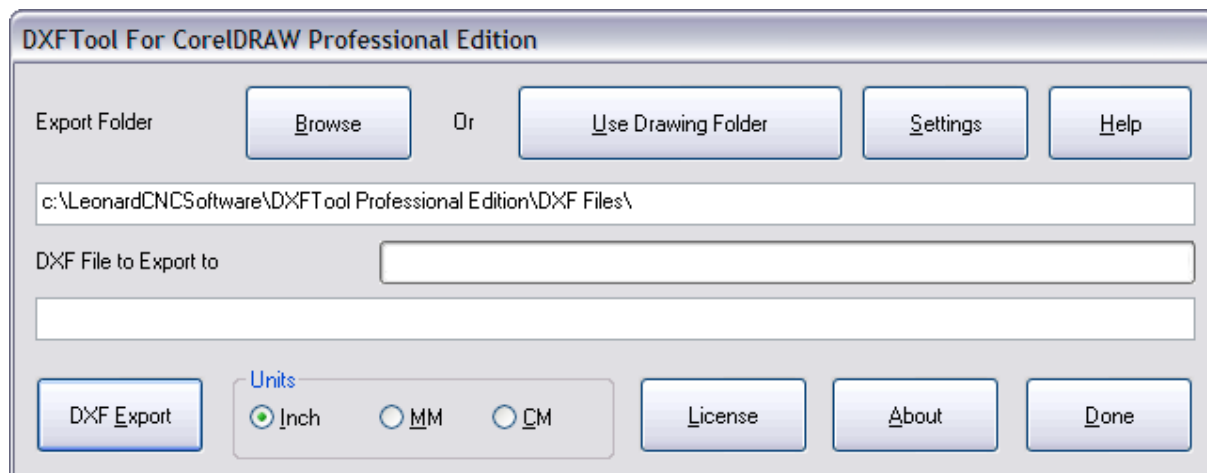


New features that were made possible by the rewrite are international languages and metric units (MM and CM) support.

The DXFTool Professional Edition works on the bezier curves internally, there is NEVER any need to convert your drawing to curves, not even for text! This means that you can quickly make changes and export a new DXF file. You don't even have to save your drawing before exporting.

The main screen of the DXFTool Professional Edition shows the different options that are available. The 'Quick Start' section gives a simple workflow that will get you going ASAP.

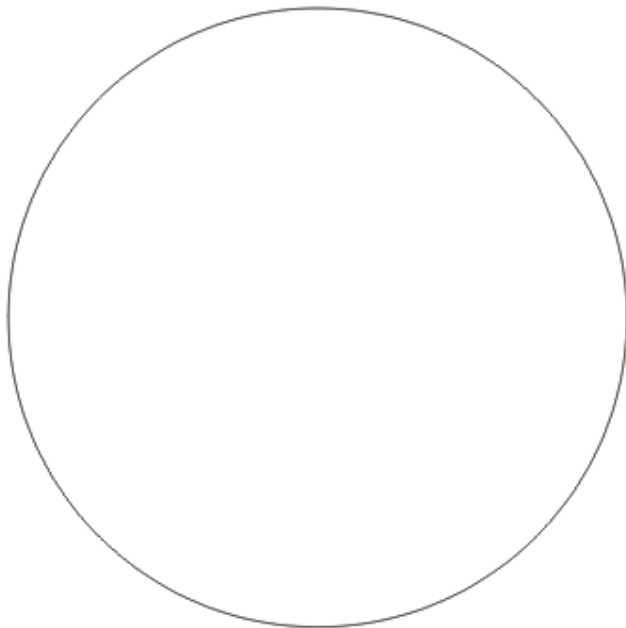
Note that the 'Settings' button will display a dialog that controls many new aspects of the DXFTool Professional Edition.



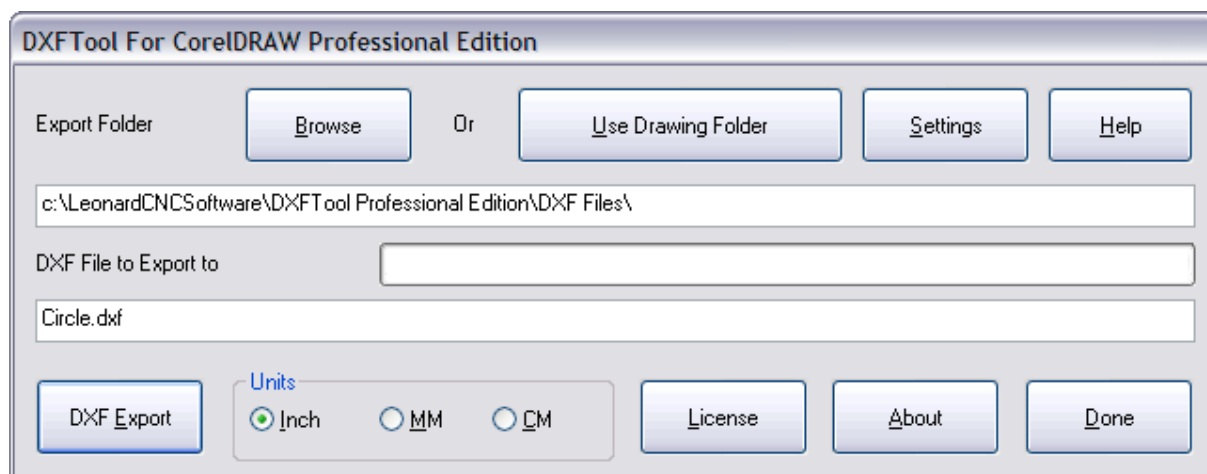
The DXFTool will export all your shapes (except bitmaps and OLE objects) easily without converting to curves. Both TEXT and SYMBOL objects are handled with ease and without modifying your original drawing.

DXFTool For CorelDRAW Professional Edition

To get started, just push the toolbar button that was installed for your version of CorelDRAW. This will display the main menu screen for the DXFTool. Note that if you do not have the drawing that you want to export open then you must close the DXFTool main menu screen to open that drawing. The example we will use here is the simple circle.

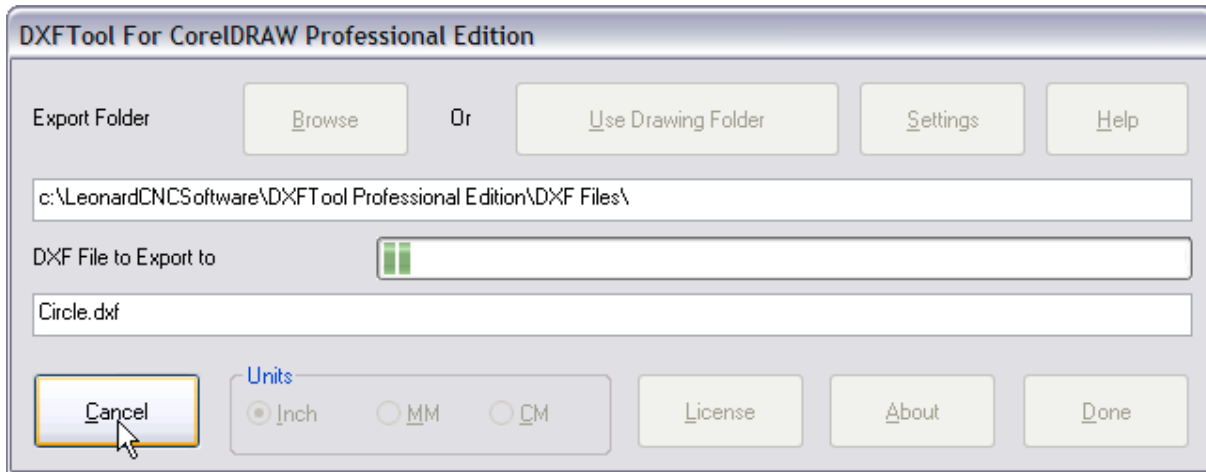


This is the DXFTool main menu screen that you will see when you have the 'Circle' example open. The circle itself is a 1.000 inch diameter circle drawn by the ellipse tool with the control key held down to constrain the operation to a true circle.

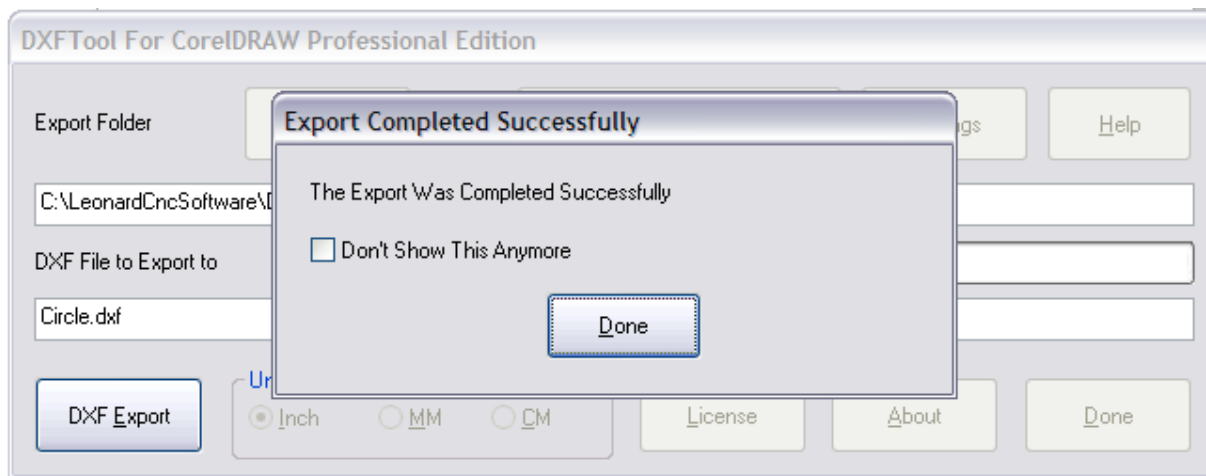


The dimensions of 1.000 diameter were entered on the property bar. Since this document is in inch units the 'Inch' radio button is automatically selected. If it was in millimeters or centimeters the 'MM' or 'CM' button would be selected. Note that you can change the export units just by selecting the units that you want that DXF file to be created with. If the default export folder is not where you want the DXF file to end up then use the 'Browse' button to select a new folder. This will also be saved as the default for future sessions. The name of the DXF file will be the same as the drawing with a file extension '.dxf'. You can change the name of the file just by typing in a new name. Ok, now that you have confirmed that both of these settings are correct press the 'DXF Export' button and your DXF file will be created! It is simply that easy.

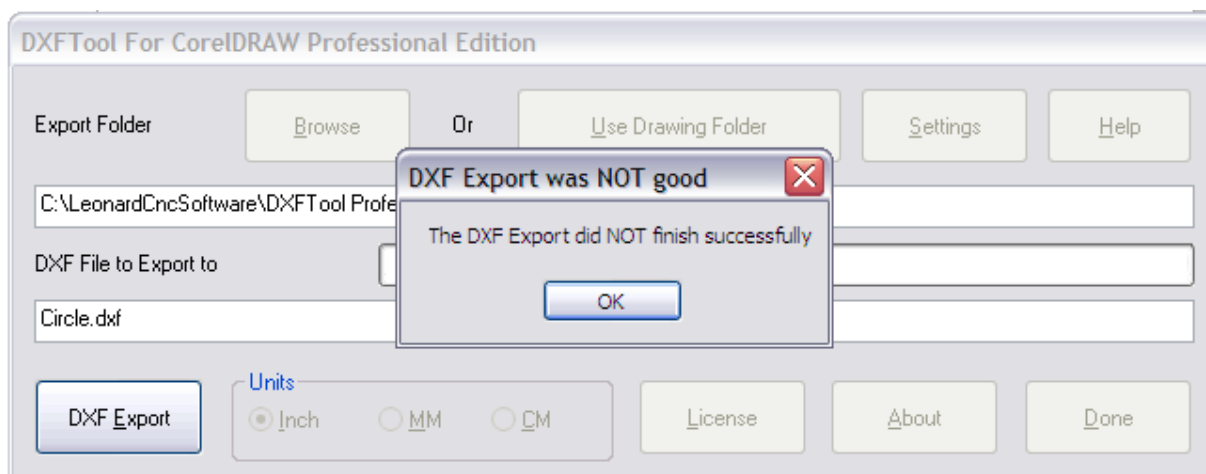
While the DXF file is being created all of the buttons will be grayed out (disabled) so that they cannot be pushed except the 'DXF Export' button. This button will change to 'Cancel'. This can be used to stop very long exports when problems may exist in the drawing being exported. Here is what the main screen will look like during an export:



If the export completes successfully you will see this screen IF it has not been disabled during a prior export operation. To disable this screen from showing again just check the "Don't Show This Anymore" checkbox.



If you push the 'Cancel' button a warning message box will pop up to remind you that the DXF file was not successfully created since the export was cancelled.



DXFTool For CorelDRAW Professional Edition

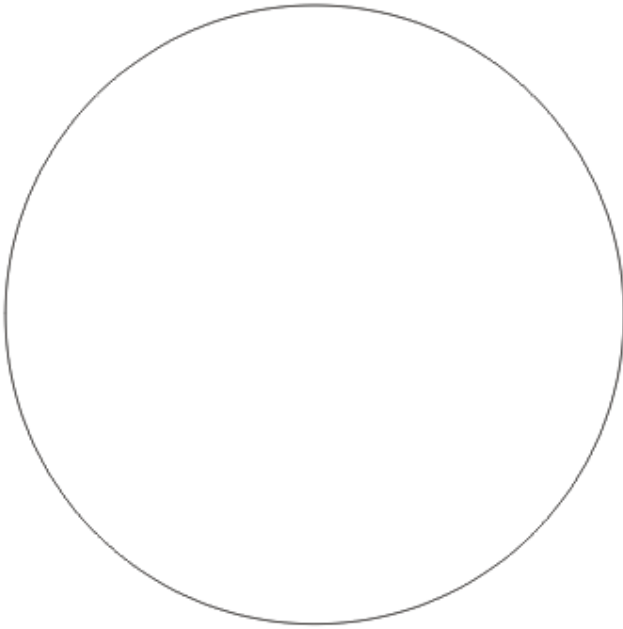
There are several example drawings that are installed with the DXFTool. They are in the folder:

C:\LeonardCNCSoftware\DXFTool Professional Edition\Sample Drawings\

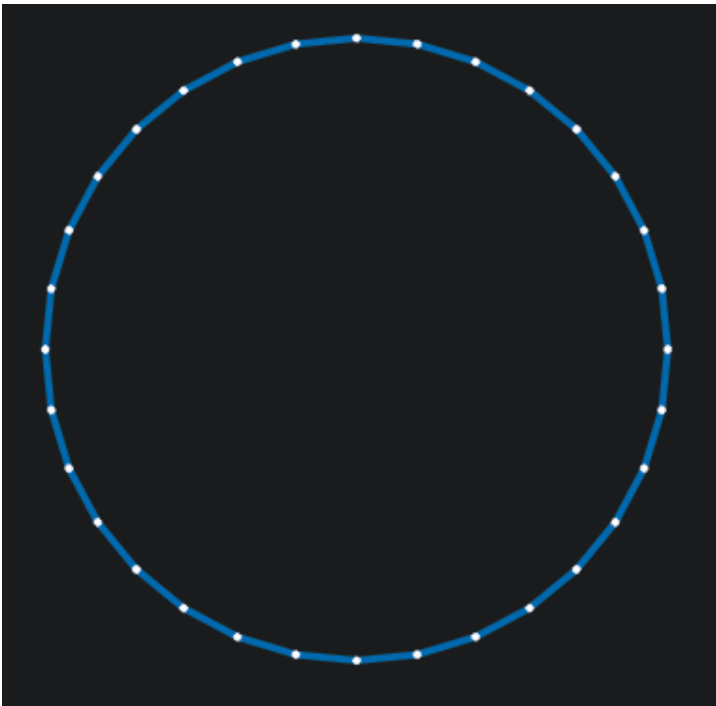
All of these screencaps were taken from CorelDRAW running a CorelDRAW based DXF visualizer. This tool displays LINE segments in BLUE and ARC segments in RED. The segments are separated by small WHITE dots so you can see what the DXF file really contains.

'Circle.cdr' is the simple circle used in the Introduction and Quick Start.

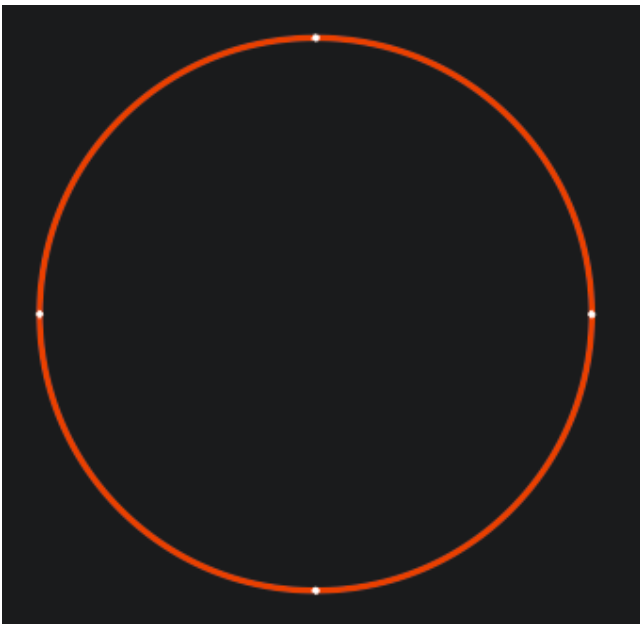
Here is the original image:



Here is the image made by the DXF file that was exported using CorelDRAW X4 and the R11 DXF filter.

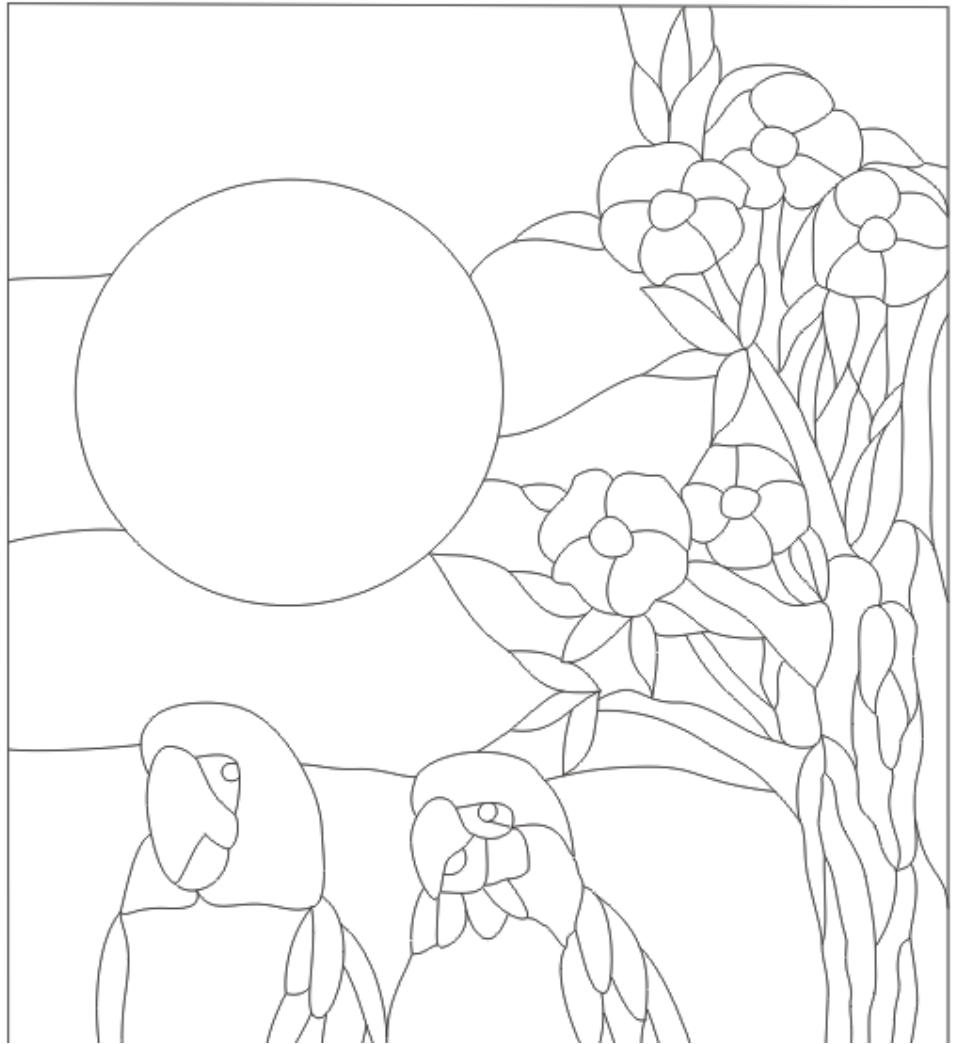


Here is the image made by the DXF file that was exported using the DXFTool Professional Edition.

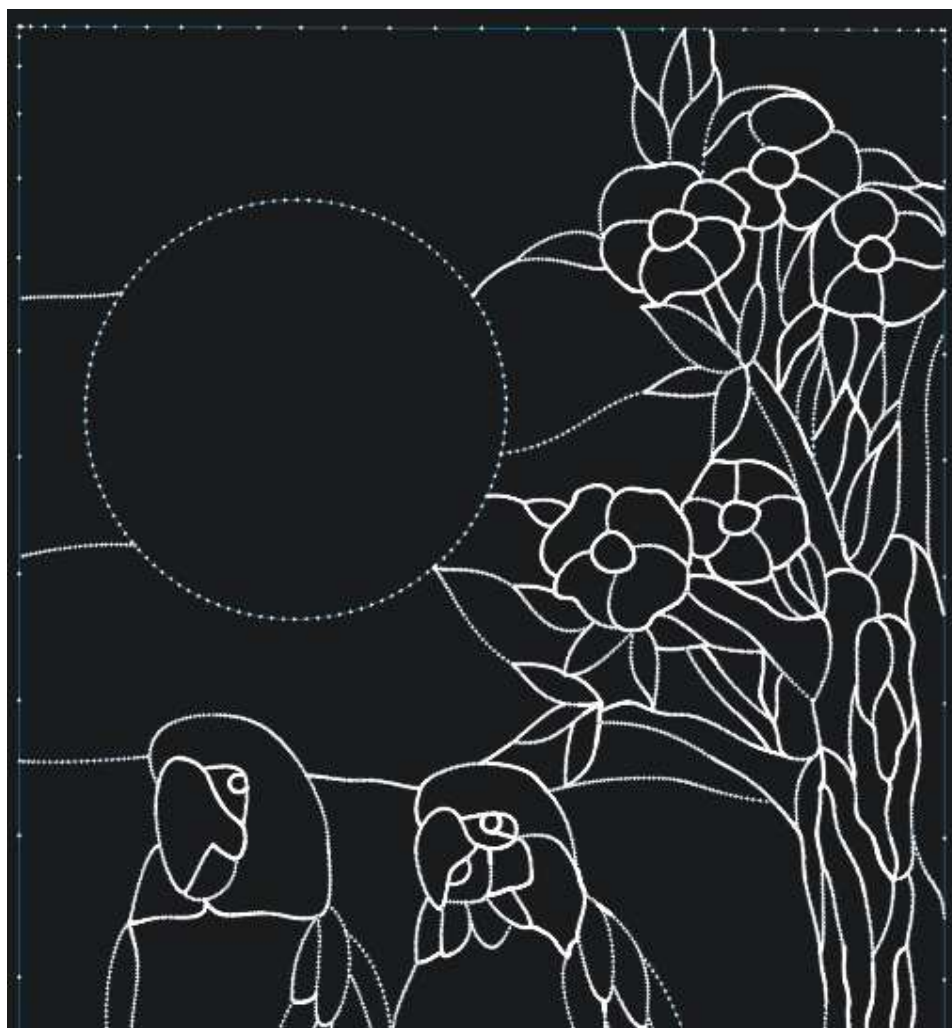


Note that the CorelDRAW DXF file is 9858 bytes and the DxfTool Professional Edition DXF file is 851 bytes

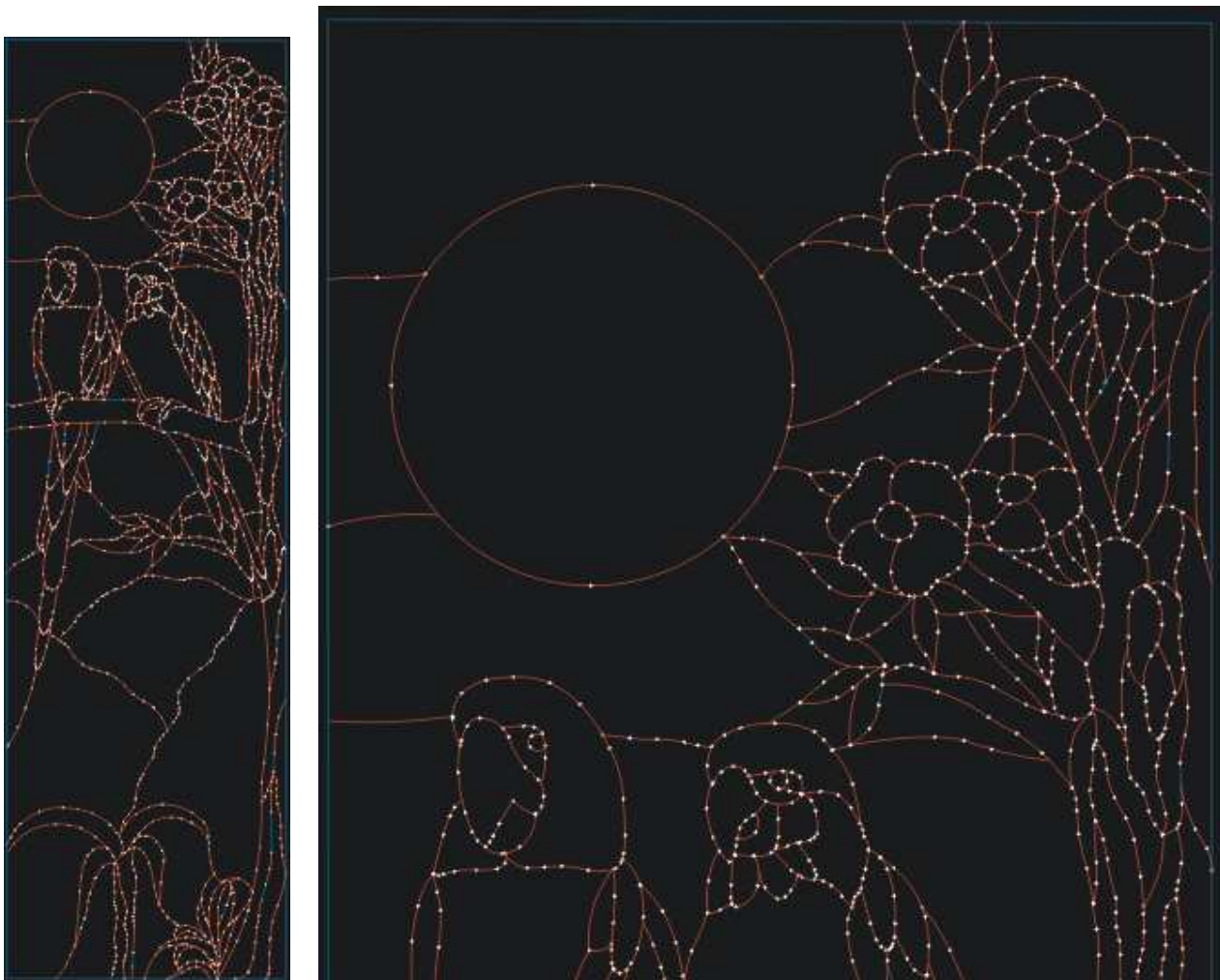
'Birds.cdr' is a drawing that was hand traced from bitmap artwork. Here is the original image:



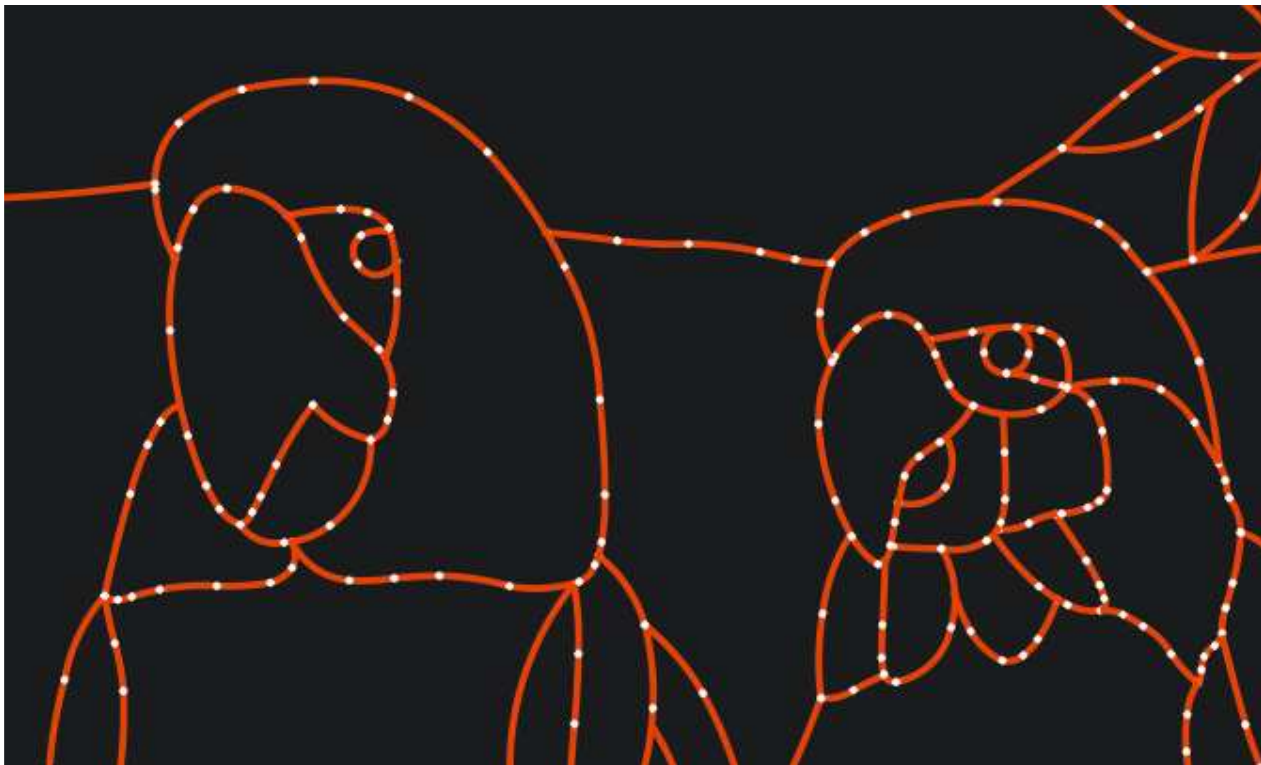
Here is the image made by the DXF file that was exported using CorelDRAW X4 and the R11 DXF filter.



Here is the image made by the DXF file that was exported using the DXFTool Professional Edition.

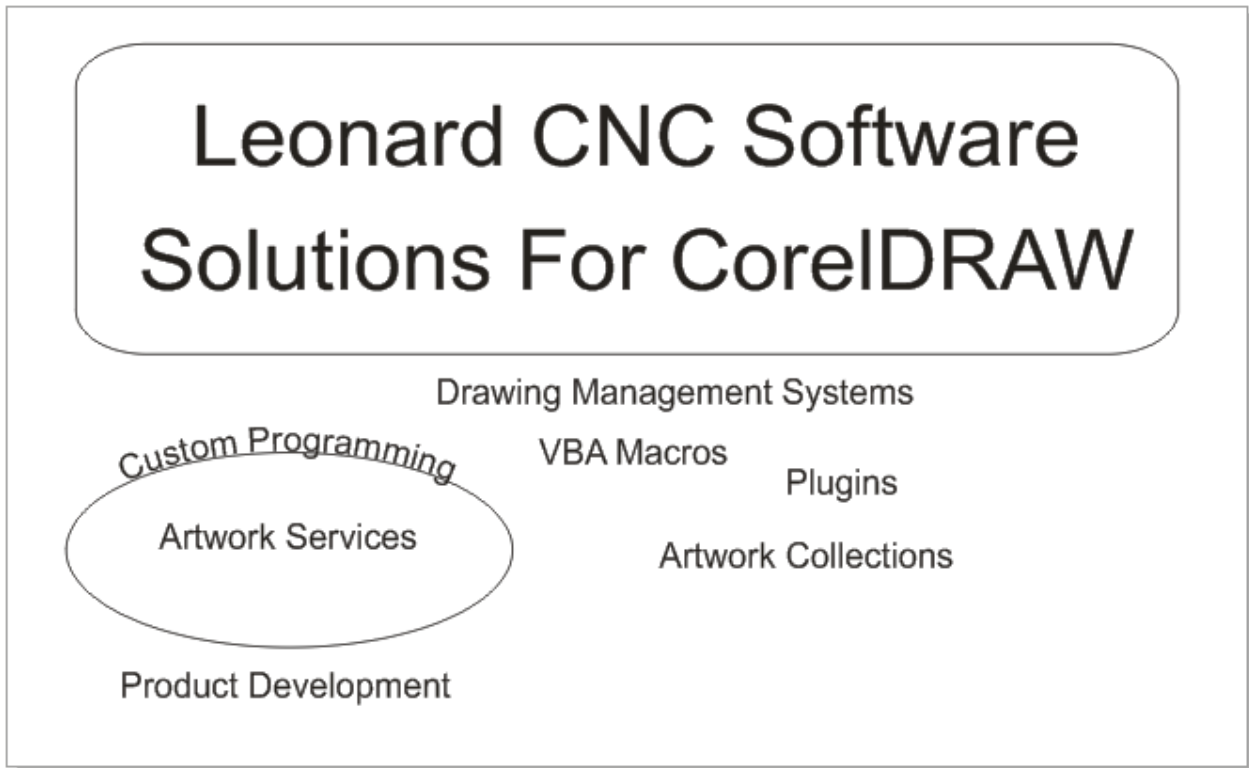


Here is a close up detail of the birds showing the beautiful flowing arcs and very small segment count.

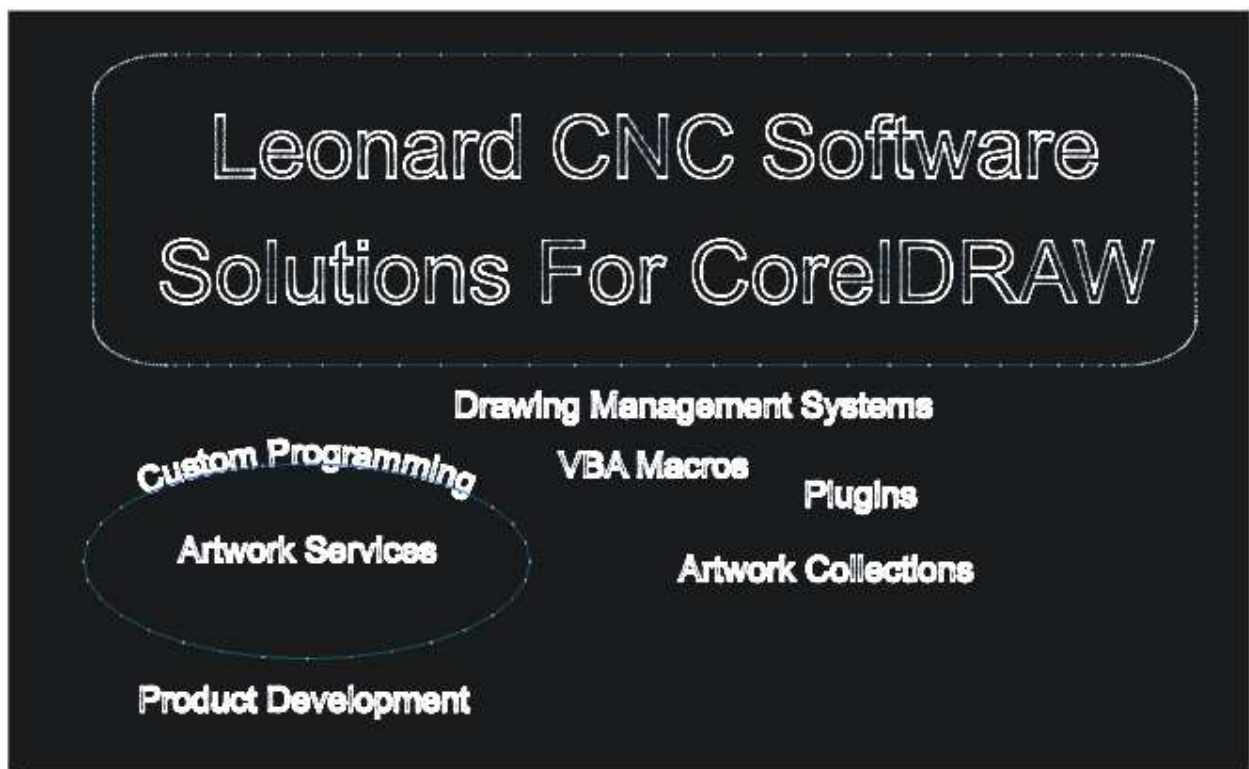


Note that the CorelDRAW DXF file is 2,338,599 bytes and the DxfTool Professional Edition DXF file is 152,595 bytes

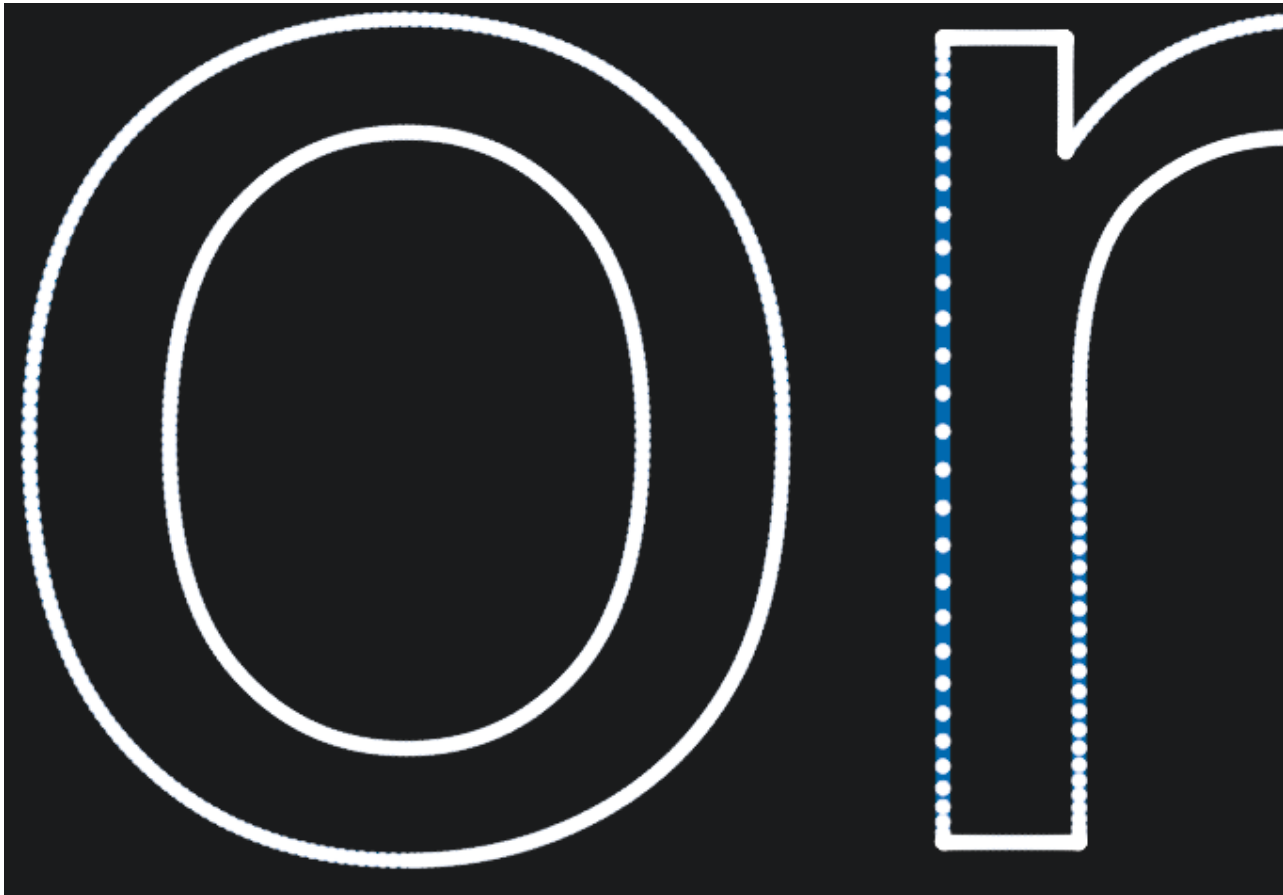
'LCS-Sign01.cdr' is a drawing that shows the text handling capabilities of the DXFTool Professional Edition. Here is the original image:



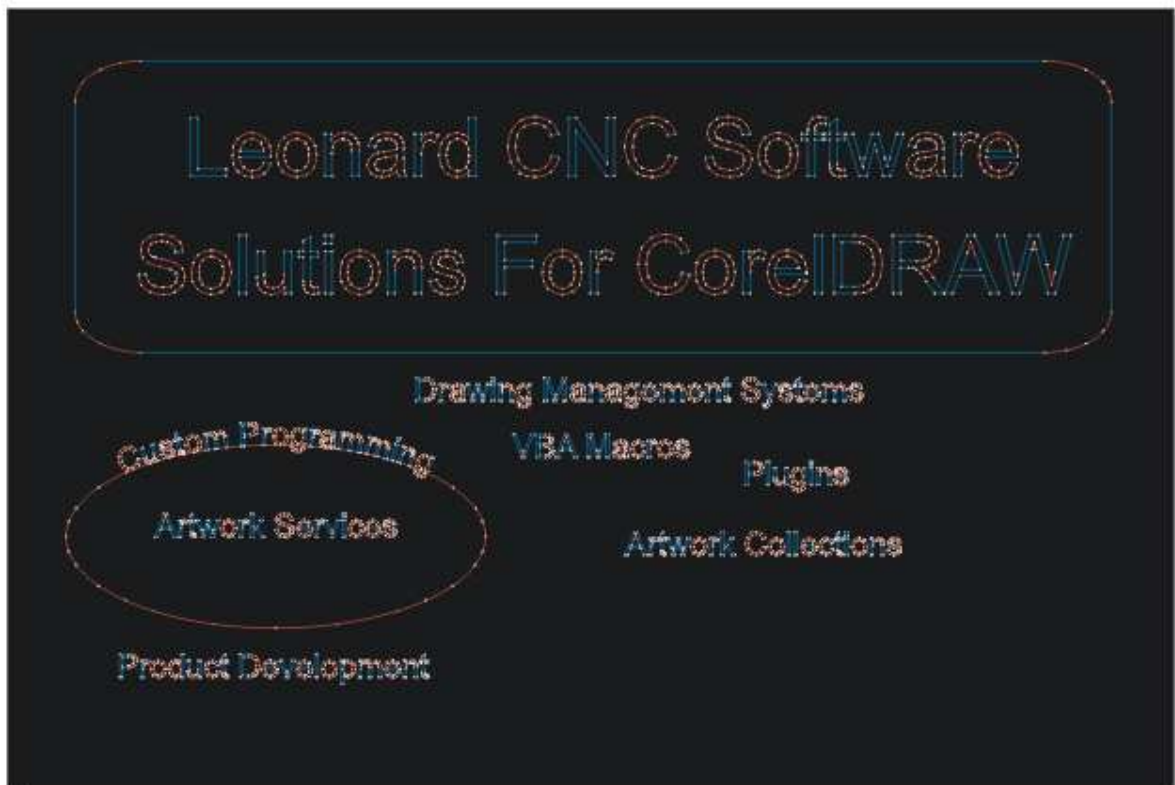
Here is the image made by the DXF file that was exported using CorelDRAW X4 and the R11 DXF filter.



Here we are emphasizing the text and we also had to zoom in to 1800% to be able to see the EXTREMELY small lines that CorelDRAW makes for it's DXF files. The bumps are actually the dots we use to show the segment boundaries in our DXF visualizer. Here the segments are SO SMALL they blend together on the curves.



Here is the image made by the DXF file that was exported using the DXFTool Professional Edition.



This is the same closeup as the CorelDRAW DXF, but it shows the small number of segments and the smooth arcs made by the DXFTool Professional Edition.

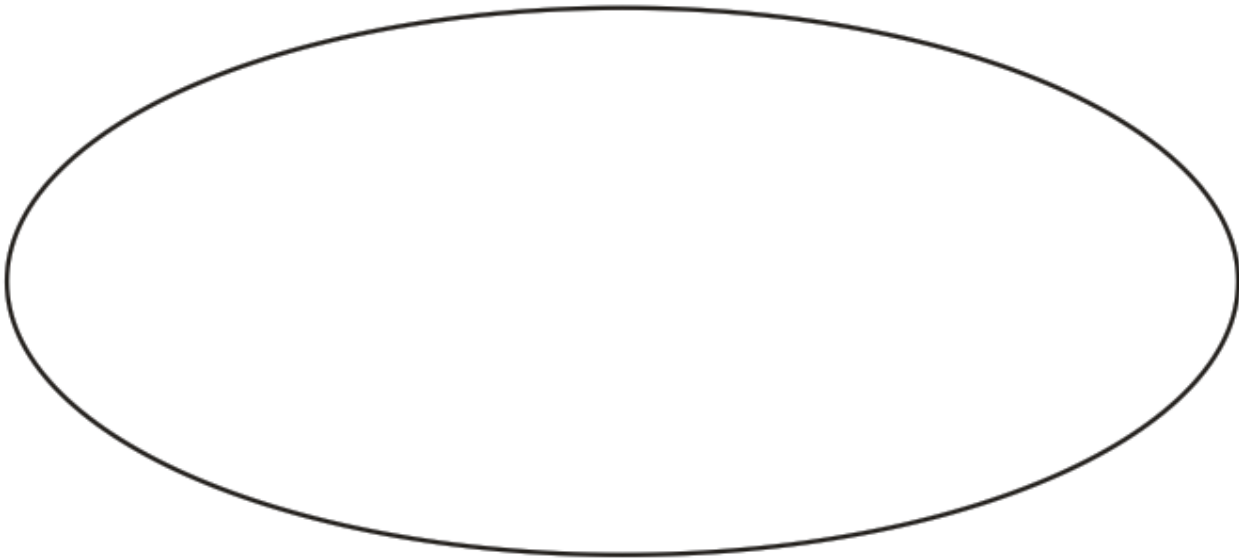


Now the letters 'D' and 'R' - very beautiful!

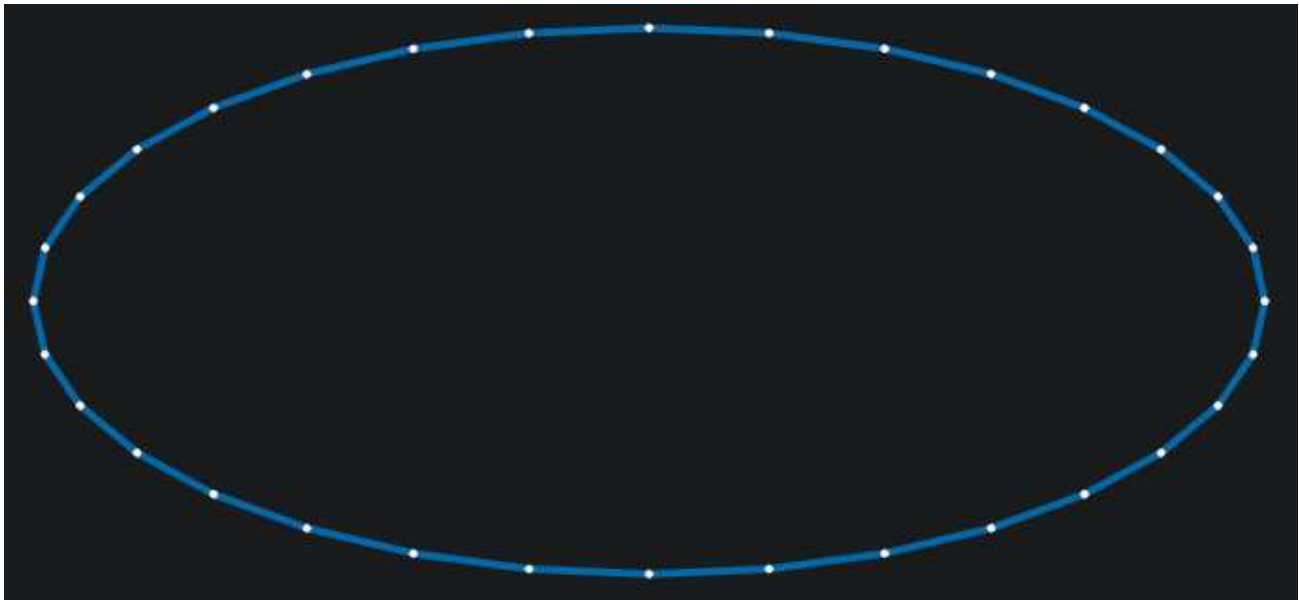


Note that the CorelDRAW DXF file is 10,114,748 bytes and the DxfTool Professional Edition DXF file is 241,474 bytes

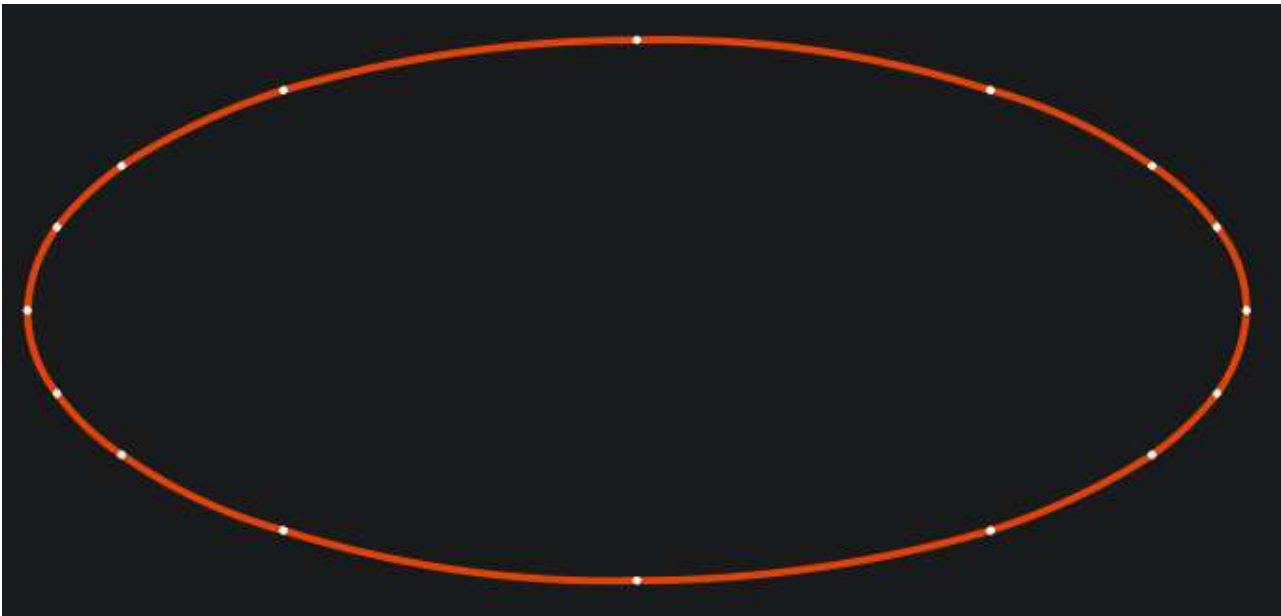
'Ellipse' is a simple ellipse, but this is one of the most difficult shapes to cut on a CNC system. Here is the original image:



Here is the image made by the DXF file that was exported using CorelDRAW X4 and the R11 DXF filter.

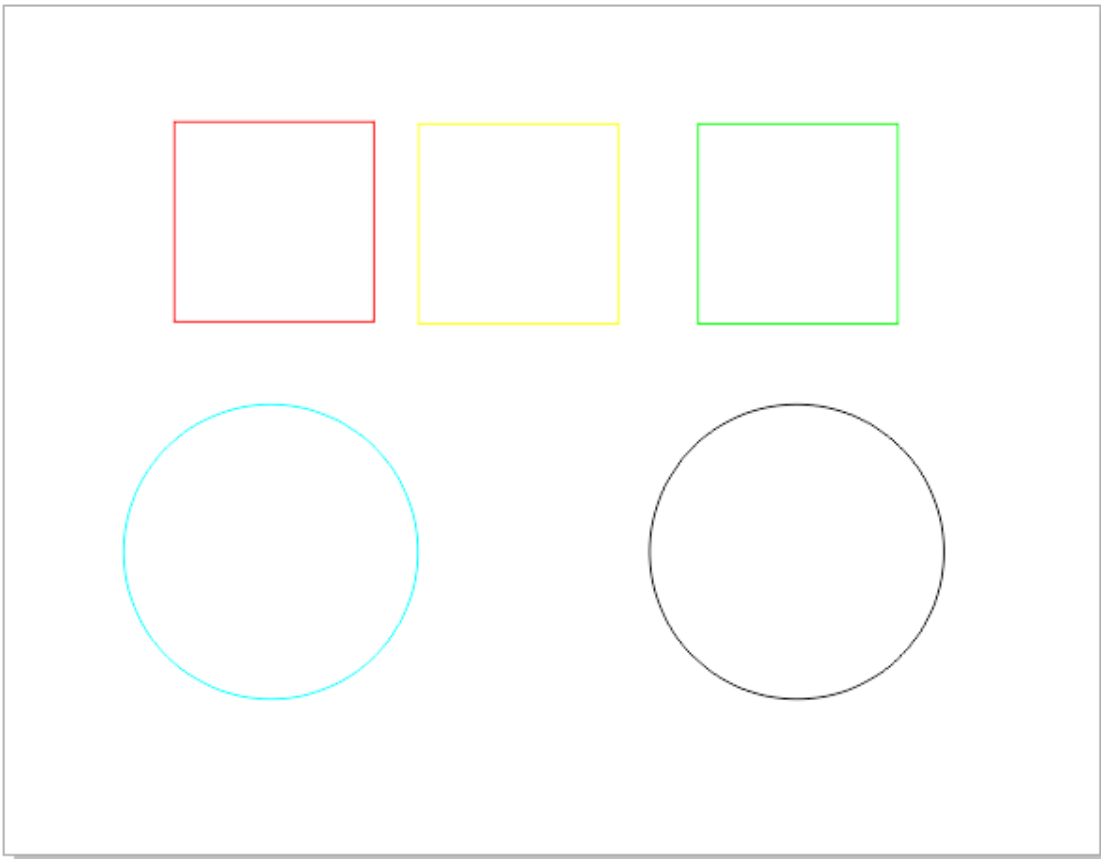


Here is the image made by the DXF file that was exported using the DXFTool Professional Edition.

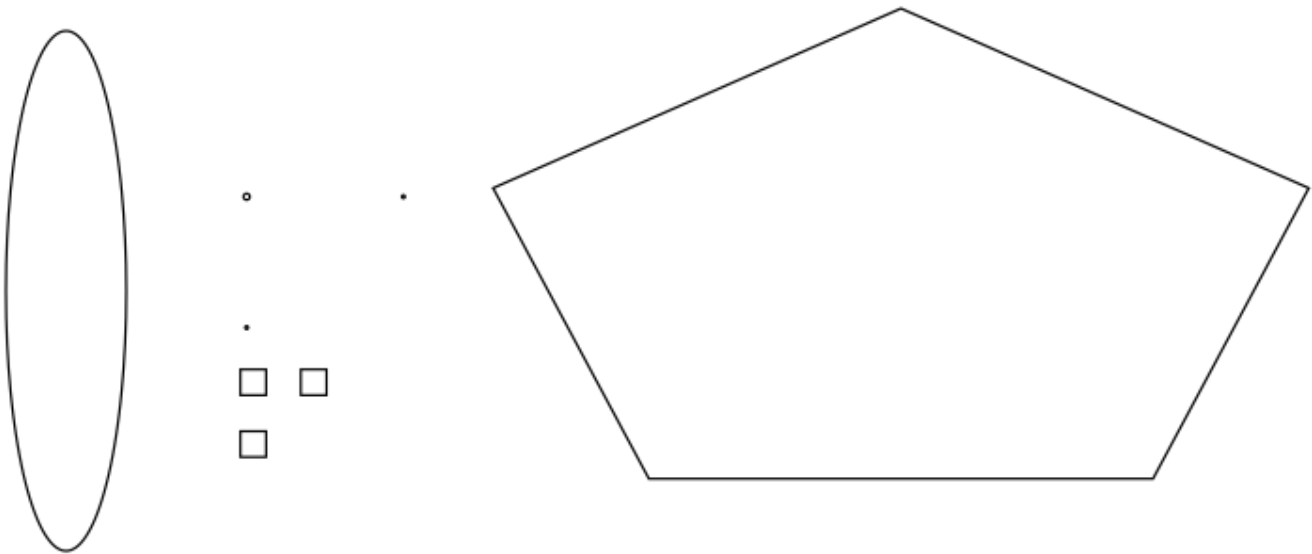


Note that the CorelDRAW DXF file is 9,824 bytes and the DxfTool Professional Edition DXF file is 1,519 bytes

Here is the ColorTest01 example. The colors in this drawing are the first five colors of the Standard DXF Colors.



Here is the PointTest01 example.



The shapes between the ellipse and the polygon are on the designated POINT shape layer.

DXFTool For CorelDRAW Professional Edition

There are MANY programs that will benefit from the 'Polyarc' export type. These are usually CAM systems that will complain that a DXF file "is not linked" or that the "endpoints do not match". What this really means is that they require a Polyline or a Polyline with ARC bulges to specify end-to-end chains and closed shapes in the DXF file. Other software like SheetCAM or FlashCUT have a 'link tolerance' value that they apply to DXF imports to decide if a LINE or ARC is part of an end-to-end chain or closed shape.

Known compatible programs and application types

PCB software - Polylines are typically used

SheetCAM - both Classic and TNG - LINE / ARC is OK, Polyarc is better. POINT entities can be used as drilling locations.

FlashCUT 3.0 - LINE / ARC is OK, Polyarc is better

PlasmaCAM - Polyarc is needed - you must manually link LINE / ARC exports - BIG benefit

iBend - Polyarc is needed - BIG benefit

Accu-Bend - LINE / ARC is required by their software and the outer curves must be Clockwise while the inner curves must be CounterClockwise. BIG benefit since no massaging in other software is needed.

Die Cutters - Polyarc is needed - BIG benefit

Wire EDM - LINE / ARC is OK, Polyarc is better

AutoCAD - LINE / ARC is OK, Polyarc is better - BIG benefit

AutoSketch - LINE / ARC is OK, Polyarc is better

Laser cutters - LINE / ARC is OK, Polyarc is better

Vinyl cutters - LINE / ARC is OK, Polyarc is better

SolidWorks - LINE / ARC is OK, Polyarc is better - BIG benefit

Grammil Creative Studio - LINE / ARC is OK, Polyarc is better

PrimCAM from Primus Data - Polyarc is needed - BIG benefit

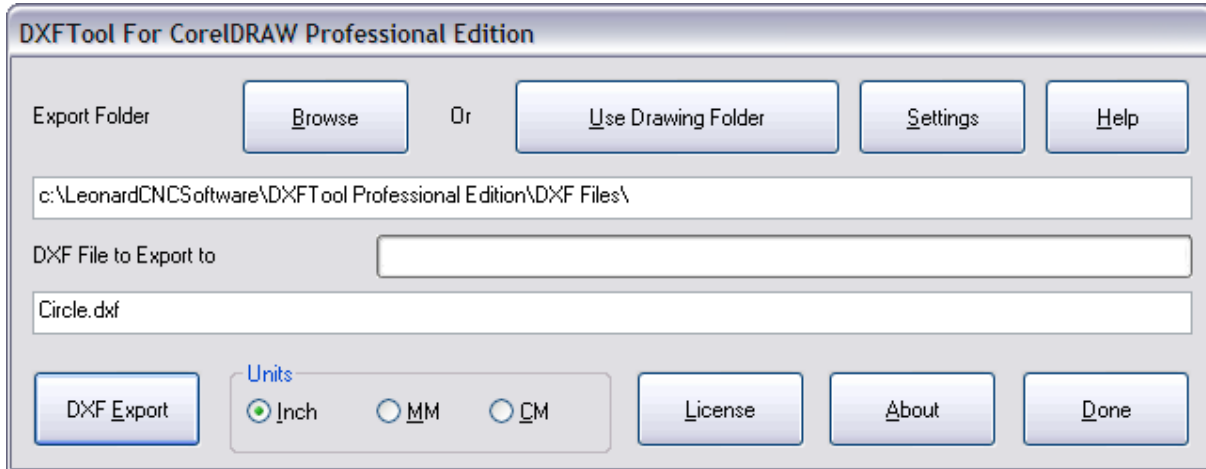
Vectric Cut2D and VCarve Pro - Polyarc is needed - you must manually link LINE / ARC exports - BIG benefit

Excimer Laser Software - special grid processing by using DXF POINT entities - BIG benefit

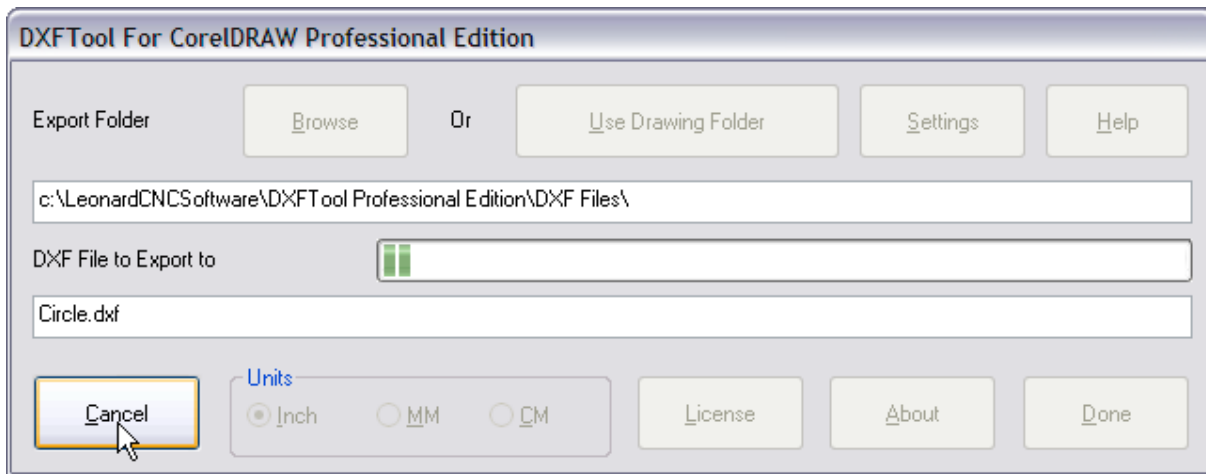
VIRO EPS Systems StyroDesign - The DXFTool is recommended by them

DXFTool For CorelDRAW Professional Edition

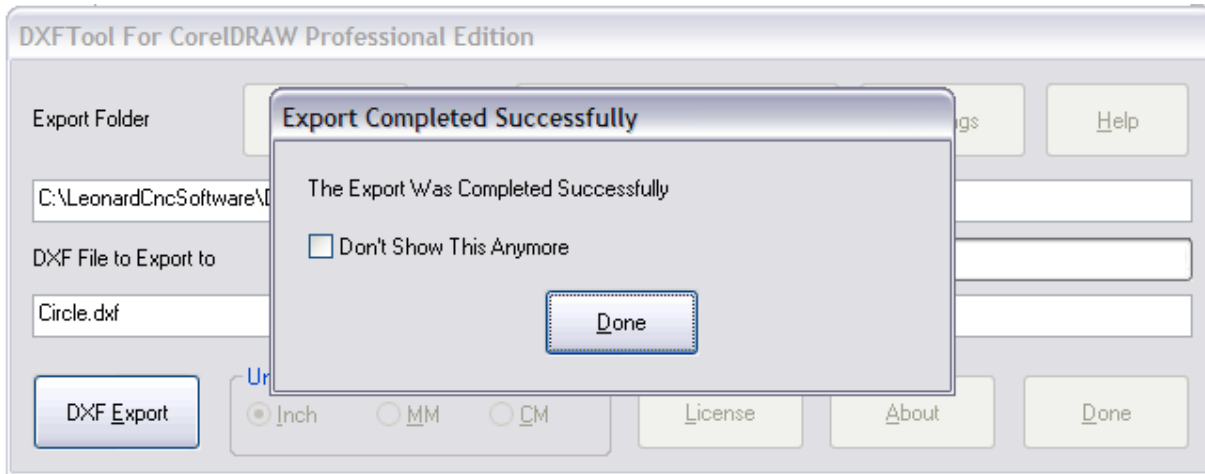
The user interface has a number of shortcut keys that are shown on the buttons with an underline character under them. To use the shortcuts hold down the ALT key then press the letter that is underlined. The result will be the same as if you had pushed the button with the mouse pointer. In addition, the 'DXF Export' button is now the default button, so you can just press the ENTER key to do the export operation.



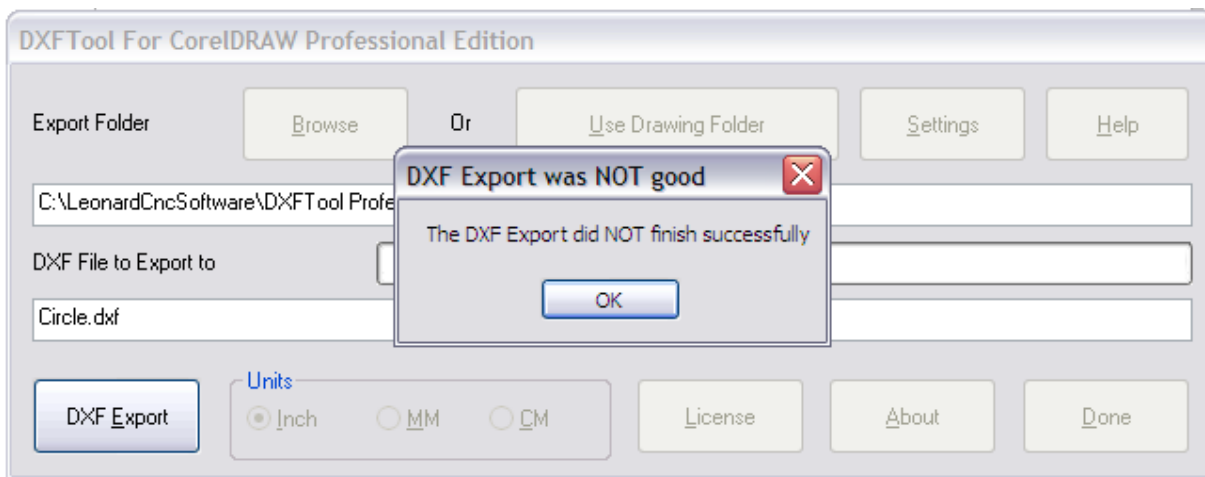
The 'DXF Export' button will change to 'Cancel' while the export is running, allowing you to stop a long running export operation that is caused by a bad drawing.



If the export completes successfully you will see this screen IF it has not been disabled during a prior export operation. To disable this screen from showing again just check the "Don't Show This Anymore" checkbox.

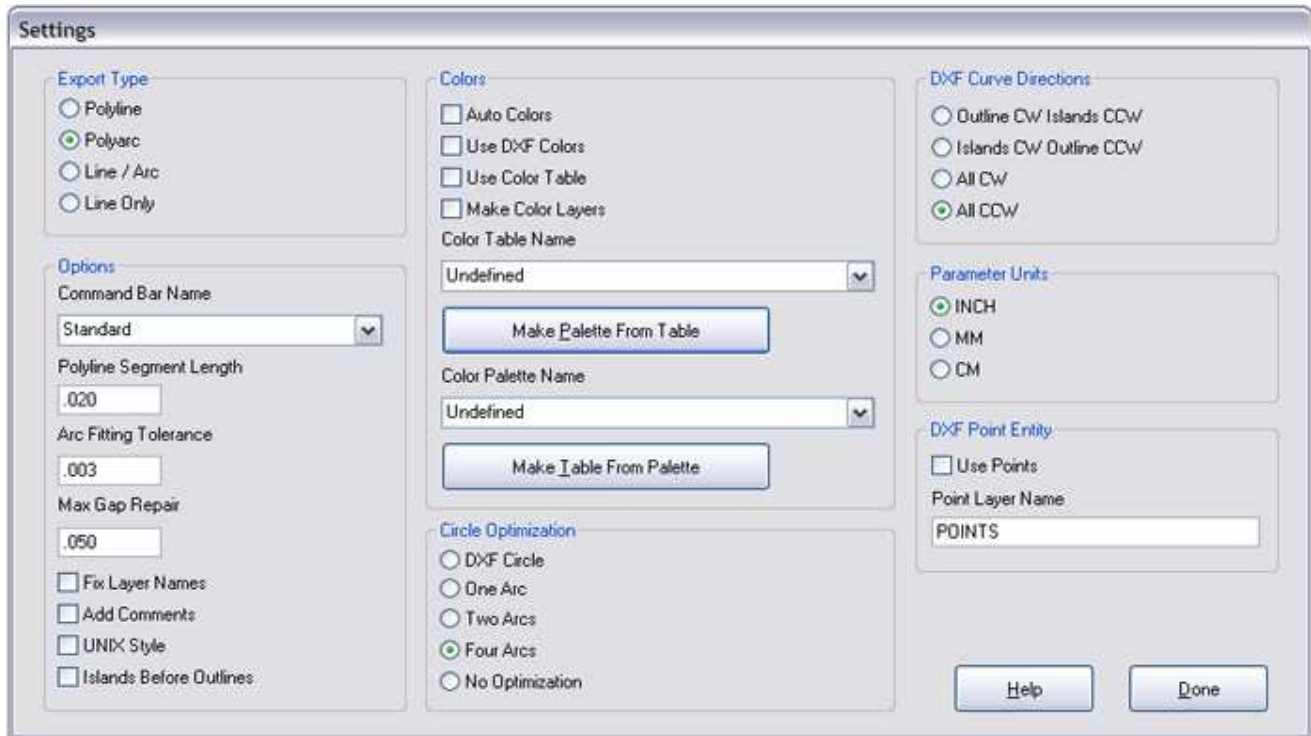


If the 'Cancel' button is pressed during an export the export will stop and an error message box will appear informing you that the export was NOT completed correctly.

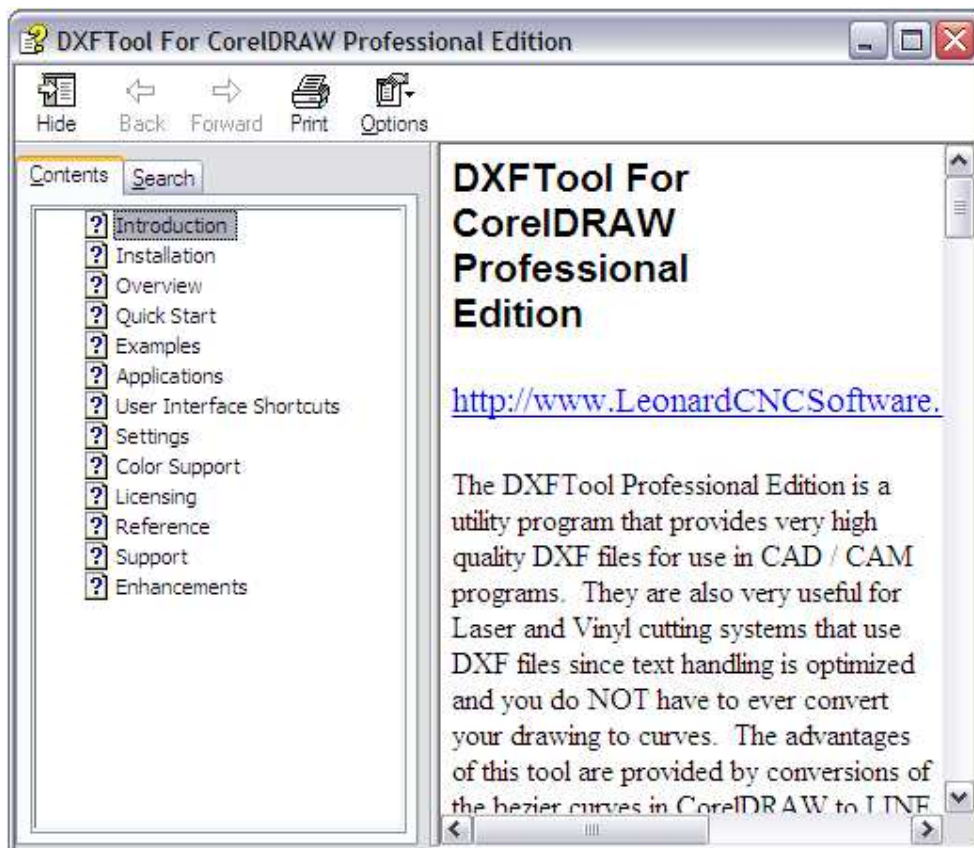


The 'Browse' button will allow the selection of the export folder by browsing for it with the standard windows folder browser dialog.

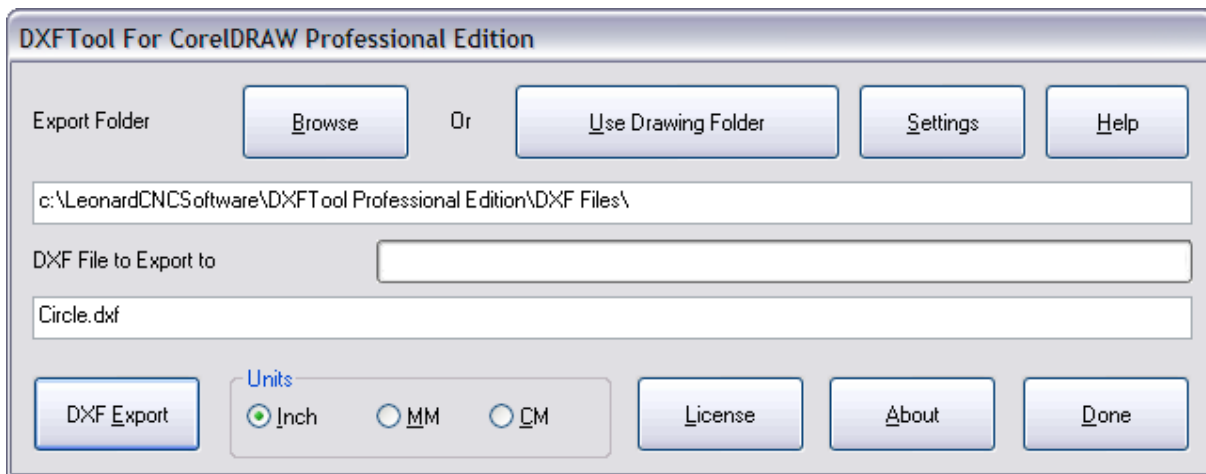
The 'Settings' button will display this dialog which controls all the new options that been added to the DXFTool Professional Edition. See the Settings section for a detailed explanation of each option and parameter.



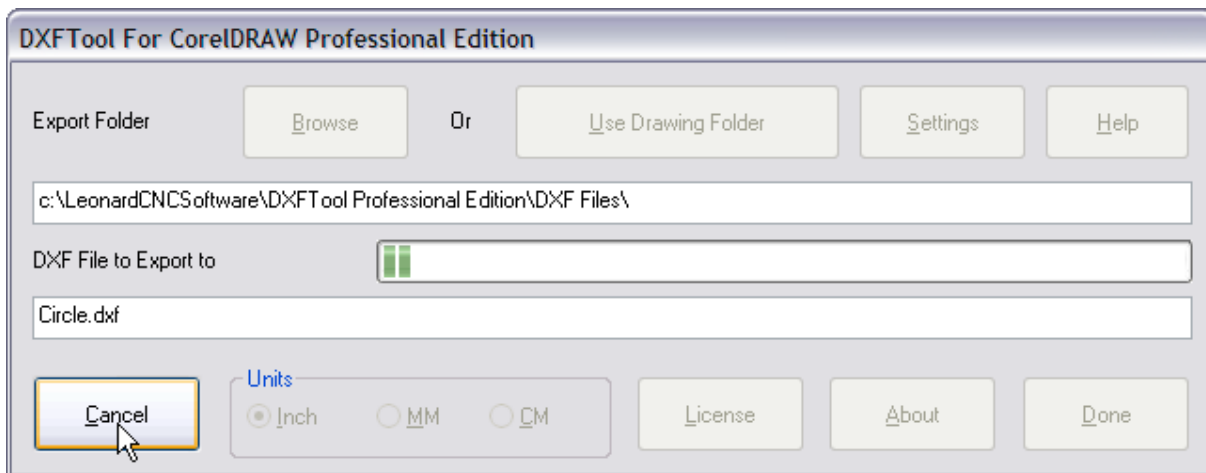
The 'Help' button displays the online help system for the DXFTool Professional Edition. It is the same as the PDF manual.



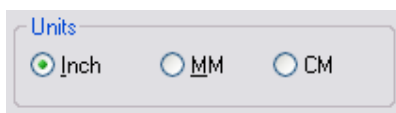
The 'Use Drawing Folder' button sets the 'Export Folder' to be the same folder that the drawing is in currently.



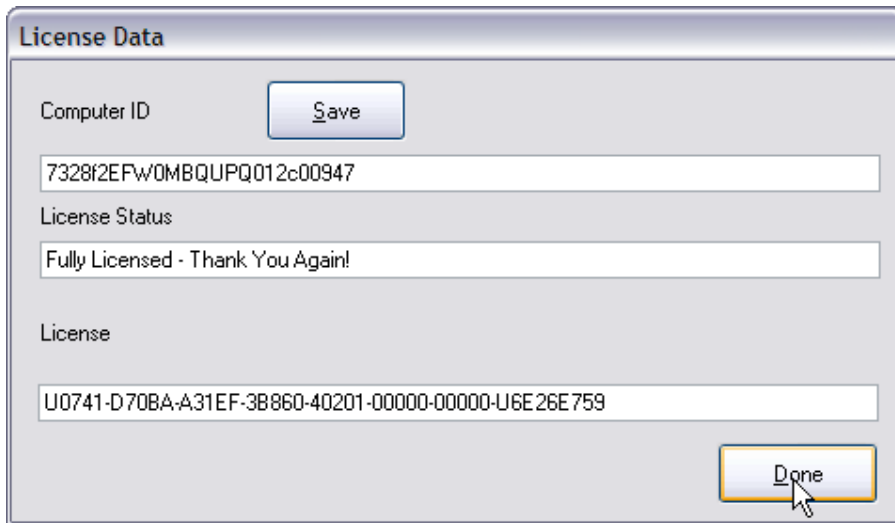
The 'DXF Export' button performs the DXF export.



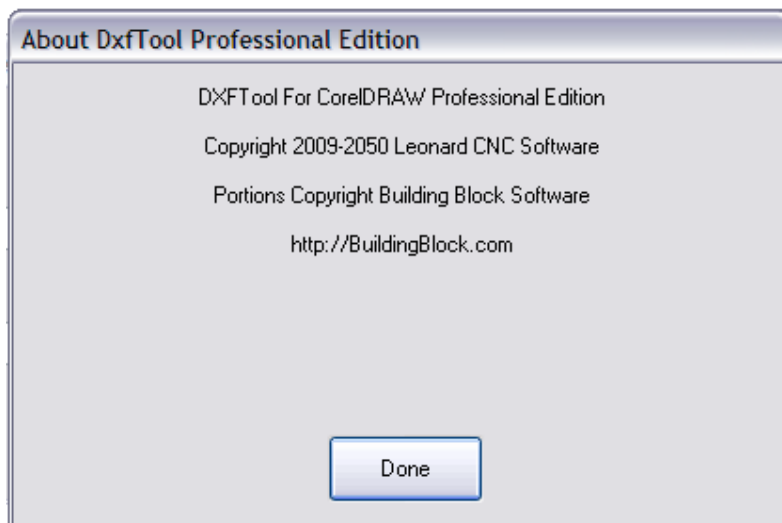
The 'Units' radio buttons select Inch (Imperial), MM (Millimeter metric) or CM (Centimeter metric) as the drawing units to be used in the the DXF file.



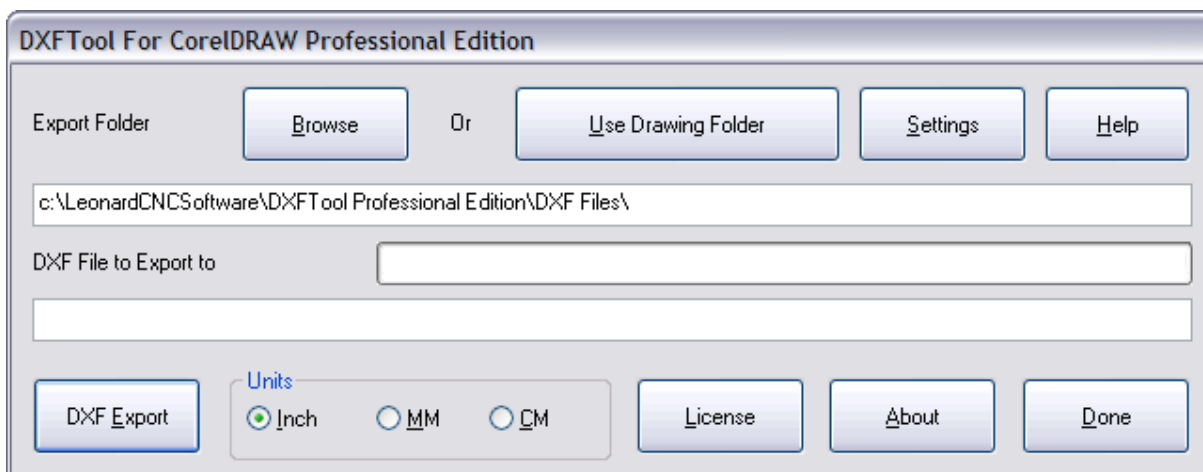
The 'License' button displays the license dialog.



The 'About' button will display a dialog that gives information about the DXFTool Professional Edition.



The 'Done' button closes the DXFTool Professional Edition dialog.



DXFTool For CorelDRAW Professional Edition

The settings dialog has the following features that can be used to control the operation of the DXFTool Professional Edition:

Export Type

This is the type of export that will be used in the DXF file.

'Polyline' is a LINE segments only DXF export that consists of an end-to-end chain of LINE entities that are at MOST the 'Polyline Segment Length' long. Some lines will be smaller according to the division of a CorelDRAW segment or a natural line length. Our POLYLINE export is improved by having a single straight line where possible unlike Corel's exports which has many separate small lines even if they are not needed to define a curve.

'Polyarc' is a LINE and ARC segment export that consists of an end-to-end chain of LINE and ARC entities. This is probably the most useful export in the Professional Edition.

'Line / Arc' is a LINE and ARC segment export that consists of individual LINE and ARC DXF entities. It is basically the same as the export that the DXFTool Standard Edition provides.

'Line Only' is a LINE segment export that has a single straight line where possible.

Command Bar Name

This is the name of the CorelDRAW command bar that you want the DXFTool Professional Edition icon to appear on. Note that the icon will NOT move to this new command bar until you close CorelDRAW and open it again.

Polyline Segment Length

This is the MAXIMUM length that the lines in a Polyline export will be. Some lines will be smaller according to the division of a CorelDRAW segment or a natural line length. This parameter also specifies the Line Only export line length.

Arc Fitting Tolerance

This is the value that controls how closely the generated ARC entities will match the original drawings. Note that LINE entities will precisely match line segments from the original drawing. The default is .003 which is usually a good compromise. Making this value SMALLER will give less ARCs but they will match the original drawing not so well. Making this value LARGER will give more ARCs and they will match the original drawing better.

Max Gap Repair

This is the MAXIMUM gap in a DXF shape that will be repaired by inserting a line between segments.

Fix Layer Names

Checking this option will cause the DXFTool Professional Edition to change layer names to comply with AutoCAD R14 naming conventions. Later versions of AutoCAD and other software will not load a layer correctly if it has blanks or other unwanted characters in the layer name.

Add Comments

Checking this option will add a comment to every shape export which includes the shape name (if any) and the XY position of the shape.

UNIX Style

Checking this option will cause the DXFTool Professional Edition to format the DXF file as a UNIX style file using only linefeed characters to separate each line of text.

Islands Before Outlines

Checking this option causes the interior parts of a shape to be exported before the outside of the shape.

Colors

These are the DXF color export options settings. They control the various aspects of the DXF colors and color mapping facility. The colors can be the AutoCAD Standard Color Index colors or the color numbers (0 - 255) can be mapped to other colors in your drawing by using a user defined color table or the Auto Color option.

Auto Color

If this option is selected then the colors in the current drawing are mapped to the AutoCAD Standard Color Index colors by order of appearance. I.E. The first color encountered becomes color 0, the second color color 1, etc. The 'Use DXF Colors' option and the 'Use Color Table' option are both ignored if this option is selected.

Use DXF Colors

If this option is selected and Use Color Table is not then the colors in the drawing that match the AutoCAD Standard Color Index colors will be mapped to the correct color numbers. We provide a special CorelDRAW palette for use in creating compliant drawings. Support for the AutoCAD Standard Color Index colors is built into the DXFTool.

Use Color Table

If this option AND Use DXF Colors is selected then the color table selected in the Color Table Name combo box is loaded and the colors in the drawing that match the color table colors are mapped to the correct color numbers. I.E. If the second color in the table matches a drawing outline color then that color number ('2') is used for that shapes export.

Make Color Layers

If Use DXF Colors is selected then a unique layer is created in the DXF file for each color. So, if your drawing assigns different colors to different classes of shapes then all the shapes of the same color / class will be on the same layer together.

Color Table Name

This combo box contains all the names of the color tables found in the Color Tables subfolder.

Make Table

This button creates a color table from the selected CorelDRAW palette and gives it the same name as the palette with an extension of .clr. The color table is created in the Color Tables subfolder.

Make Palette

This button creates a CorelDRAW palette from the selected color table. The palette is created in the Color Tables subfolder.

Circle Style

This is the type of circle that will be used by the circle optimizer.

'DXF Circle'

This option outputs circles as a DXF circle entity.

'One Arc'

This option outputs circles as a single 360 degree ARC.

'Two Arcs'

This option outputs circles as as two 180 degree ARCs.

'Four Arcs'

This option outputs circles as four 90 degree ARCs.

'No Optimization'

This option disables all circle optimization.

DXF Curve Directions

This sets the curve directions as Clockwise (CW) or CounterClockwise (CCW) for the outlines and any islands in the shape. An island is a closed curve that is completely contained inside the closed outline curve. An upper case 'D' has one outline and one island.

Parameter Units

This sets the units that are used for the Polyline Segment Length, Arc Fitting Tolerance, Max Gap Repair and Point Object Size.

DXF Point Entity

Use Points

This sets the POINT entity conversion on / off.

Point Layer Name

This is the name of the layer where POINT objects are created.

In order for the DXFTool to output DXF POINT entities the 'Use Points' checkbox must be checked and the layer named in the 'Point Layer Name' must exist. Then POINT entities with an XY position of the center of all shapes on that layer will be output to the DXF file.

The screenshot shows the 'Settings' dialog box for DXFTool, organized into several sections:

- Export Type:** Radio buttons for Polyline, Polyarc (selected), Line / Arc, and Line Only.
- Options:** A dropdown for Command Bar Name (Standard), input fields for Polyline Segment Length (.020), Arc Fitting Tolerance (.003), and Max Gap Repair (.050). Checkboxes for Fix Layer Names, Add Comments, UNIX Style, and Islands Before Outlines.
- Colors:** Checkboxes for Auto Colors, Use DXF Colors, Use Color Table, and Make Color Layers. A dropdown for Color Table Name (Undefined) and a button 'Make Palette From Table'. Another dropdown for Color Palette Name (Undefined) and a button 'Make Table From Palette'.
- Circle Optimization:** Radio buttons for DXF Circle, One Arc, Two Arcs, Four Arcs (selected), and No Optimization.
- DXF Curve Directions:** Radio buttons for Outline CW Islands CCW, Islands CW Outline CCW, All CW, and All CCW (selected).
- Parameter Units:** Radio buttons for INCH (selected), MM, and CM.
- DXF Point Entity:** A checkbox for Use Points (unchecked) and an input field for Point Layer Name (POINTS).

Buttons for 'Help' and 'Done' are located at the bottom right of the dialog.

DXFTool For CorelDRAW Professional Edition

The settings dialog has the following features that can be used to control the operation of the DXFTool Professional Edition DXF color export.

These are the DXF color export options settings. They control the various aspects of the DXF colors and color mapping facility. The colors can be the AutoCAD Standard Color Index colors or the color numbers (0 - 255) can be mapped to other colors in your drawing by using a user defined color table or the Auto Color option.

Auto Color

If this option is selected then the colors in the current drawing are mapped to the AutoCAD Standard Color Index colors by order of appearance. I.E. The first color encountered becomes color 0, the second color color 1, etc. The 'Use DXF Colors' option and the 'Use Color Table' option are both ignored if this option is selected.

Use DXF Colors

If this option is selected and Use Color Table is not then the colors in the drawing that match the AutoCAD Standard Color Index colors will be mapped to the correct color numbers. We provide a special CorelDRAW palette for use in creating compliant drawings. Support for the AutoCAD Standard Color Index colors is built into the DXFTool.

Use Color Table

If this option AND Use DXF Colors is selected then the color table selected in the Color Table Name combo box is loaded and the colors in the drawing that match the color table colors are mapped to the correct color numbers. I.E. If the second color in the table matches a drawing outline color then that color number ('2') is used for that shapes export.

Make Color Layers

If Use DXF Colors is selected then a unique layer is created in the DXF file for each color. So, if your drawing assigns different colors to different classes of shapes then all the shapes of the same color / class will be on the same layer together.

Color Table Name

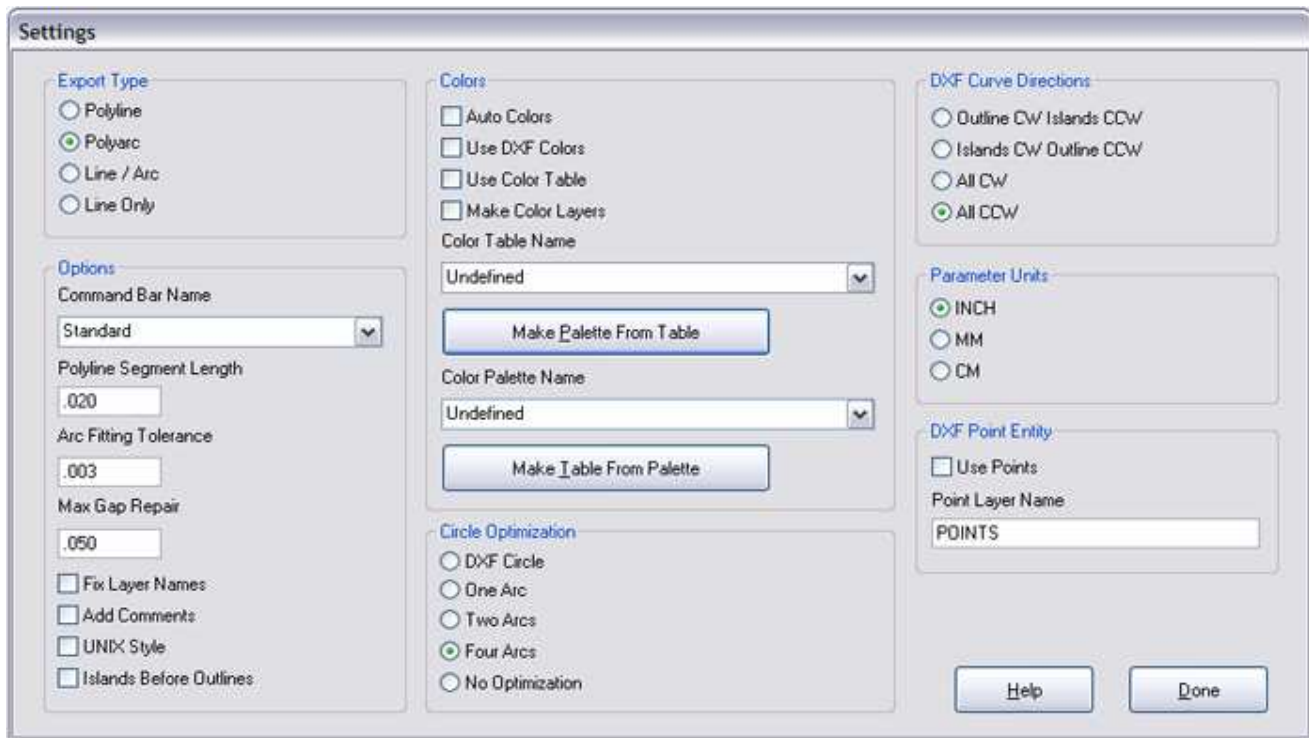
This combo box contains all the names of the color tables found in the Color Tables subfolder.

Make Table

This button creates a color table from the selected CorelDRAW palette and gives it the same name as the palette with an extension of .clr. The color table is created in the Color Tables subfolder.

Make Palette

This button creates a CorelDRAW palette from the selected color table. The palette is created in the Color Tables subfolder.



The color support can be used in many ways.

In order to create drawings that will interface with other applications that use the AutoCAD Standard Color Index use the DxfStdColors palette. The colors in this palette use the same RGB values and map to the same color numbers when the 'Use DXF Colors' option is selected.

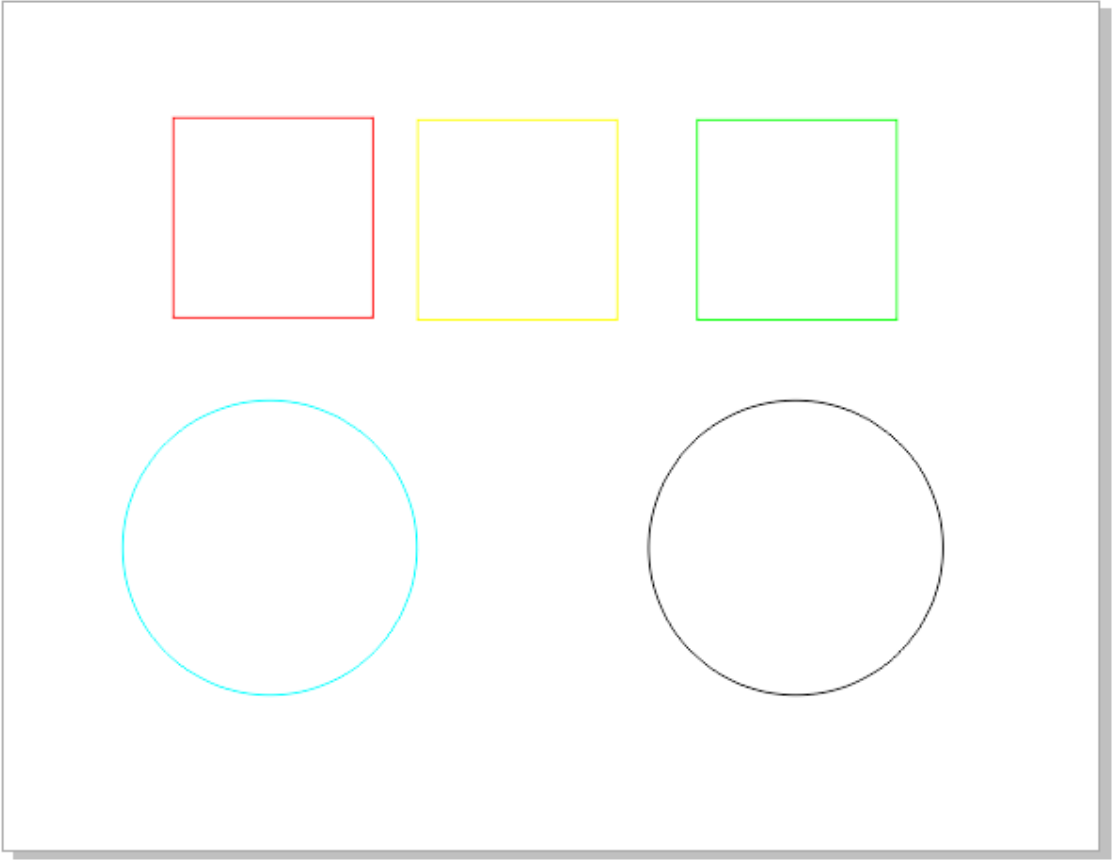
To map a selected set of RGB colors to a DXF export create a custom color table of RGB colors that matches the colors in your drawings. Then select that color table name in the list and the 'Use DXF Colors' and 'Use Color Table' options. Your custom colors will be mapped to the AutoCAD Standard Color Index by the location in your color table. The first entry in your color table will map to ACI color 0, the second will map to ACI 1 and so forth.

To export a DXF that has each color on a separate named layer use the option 'Make Color Layers'.

If you have drawings that have multiple colors and you want to preserve the use of color (but not map to any defined colors) then use the option 'Auto Color'. This will map the exported colors to the AutoCAD Standard Color Index colors by order of appearance. I.E. The first color encountered becomes color 0, the second color color 1, etc. The 'Use DXF Colors' option and the 'Use Color Table' option are both ignored if this option is selected. The drawings don't have to have RGB colors. CYMK or other types are fine for this usage.

If you use the options 'Auto Color' and 'Make Color Layers' together the result will be a DXF file that has the individual colors in the original CorelDRAW file organized into individual layers. This is an easy way to process customer artwork for CNC, Die Making, Vinyl Cutting and many other similar tasks.

Here is the example file ColorTest01.cdr. It will export using any of the methods that were just listed. It uses the first five DXF Standard Colors as found in the AutoCAD Standard Color Index (ACI).



DXFTool For CorelDRAW Professional Edition

DXF Point Entity Processing

These are the settings that control DXF POINT entity production.

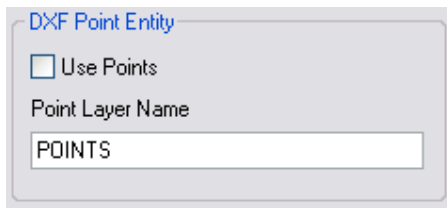
Use Points

This sets the POINT entity conversion on / off.

Point Layer Name

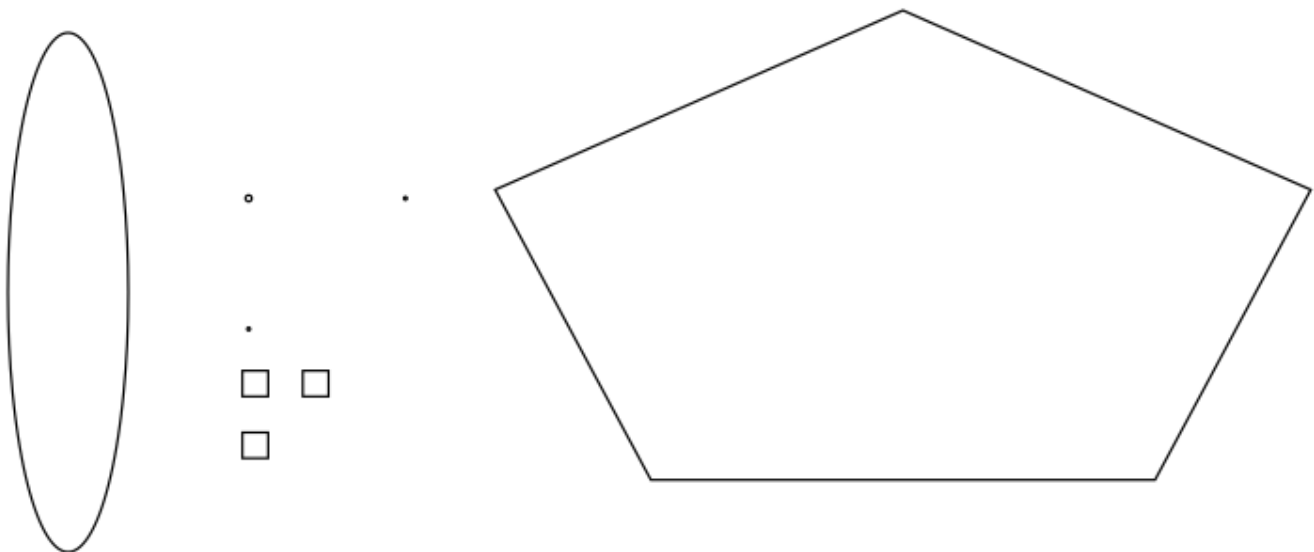
This is the name of the layer where POINT objects are created.

In order for the DXFTool to output DXF POINT entities the 'Use Points' checkbox must be checked and the layer named in the 'Point Layer Name' must exist. Then POINT entities with an XY position of the center of all shapes on that layer will be output to the DXF file.



Certain software (Excimer Laser software for example) will perform special processing by using DXF POINT entities in the DXF file.

Thus is the sample DXF POINT drawing.



The shapes between the ellipse and the polygon are on the designated POINT shape layer.

DXFTool For CorelDRAW Professional Edition

Licensing the DXFTool Professional Edition after the end of the evaluation period (or before!) is easy. Press the 'License' button on the main screen and you will see the license screen. The Computer ID is at the top. This string of characters uniquely identifies the computer you want to license for the DXF Tool. Press the 'Save' button and a file 'DXFToolProID.uid' will be created in the folder "C:\LeonardCNCSoftware\DXFTool Professional Edition". Just email this file to us at 'license@leonardcncsoftware.com' and then pay us with PayPal or use the payment buttons on the website.

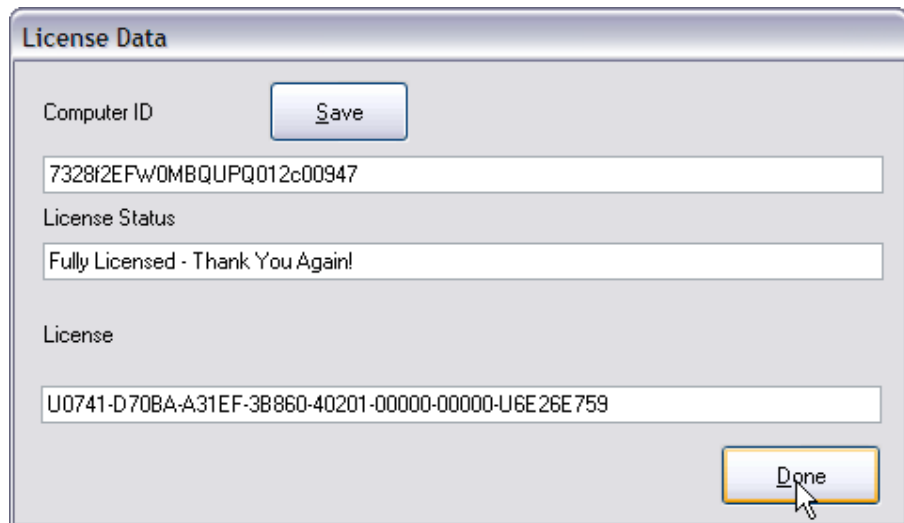
We will return another file to you which is 'DXFToolPro.lic'. Copy this file to the folder "C:\LeonardCNCSoftware\DXFTool Professional Edition" and your DXF Tool is licensed for unlimited nests!

If you have purchased the dongle option then the ID file will be 'DXFToolProID.don' and the license file will be 'DXFToolPro.don'. You MUST copy the 'DXFToolPro.don' to the folder "C:\LeonardCNCSoftware\DXFTool Professional Edition" on every computer that you want to run the DXFTool Professional Edition on. The dongle MUST be plugged in at all times you wish to use or license the software.

NOTE: The 64 bit ID and license files will be named 'DXFToolPro64ID.uid', 'DXFToolPro64ID.don', 'DXFToolPro64.lic' and 'DXFToolPro64.don'

If the license key in the DXFToolPro.lic file does not match the computer ID of the current computer the text 'Invalid License - Please contact us' will display in the License Status box.

If all is well you will see this screen with the text 'Fully Licensed - Thank You Again' in the License Status box.



The screenshot shows a dialog box titled "License Data" with a light gray background and a blue title bar. It contains three text input fields and two buttons. The first field is labeled "Computer ID" and contains the alphanumeric string "7328f2EFw0MBQUPQ012c00947". To its right is a "Save" button. The second field is labeled "License Status" and contains the text "Fully Licensed - Thank You Again!". The third field is labeled "License" and contains the alphanumeric string "U0741-D70BA-A31EF-3B860-402D1-00000-00000-U6E26E759". At the bottom right of the dialog is a "Done" button with a mouse cursor pointing at it.

Field Label	Value
Computer ID	7328f2EFw0MBQUPQ012c00947
License Status	Fully Licensed - Thank You Again!
License	U0741-D70BA-A31EF-3B860-402D1-00000-00000-U6E26E759

DXFTool For CorelDRAW Professional Edition

The drawing does not have to be saved, but this is advisable.

ALL shapes MUST be completely inside the CorelDRAW page boundaries.

Only the visible layers will be exported. If any shapes are selected on a drawing, only those shapes will be exported.

The X3, X4, X5 and X6 versions do NOT require VBA to be installed. The V12 version does require VBA.

The options that are used on startup are in the 'DxfToolPro.ini' file which is in the DXFTool Professional Edition subfolder of the C:\LeonardCNCSsoftware\ folder. On a normal installation of X4 this is:

C:\LeonardCNCSsoftware\DXFTool Professional Edition\DxfToolPro.ini

The 'DxfToolPro.ini' file contains these items for a US English installation:

```
[Options]
Units=INCH
DefaultDxfFolder=Undefined
LangDll=DXFToolProUSEnglish
ExportType=POLYARC
PolySegLen=.020
ArcTolVal=.003
UseComments=N
UseCircles=N
UseOneArc=N
UseTwoArcs=N
UseFourArcs=Y
UnixStyle=N
ToolBarName=Standard
FixLayerNames=N
UseDxfColors=N
UseColorTable=N
MakeColorLayers=N
ColorTableName=Undefined
MaxGapRepair=.050
ShowExportGood=Y
AutoColor=N
UsePoints=N
PointLayer=POINTS
InBeforeOut=N
NoOptimization=N
CurveDir=ALL-CCW
ParamUnits=INCH
PolySegLen_MM=.508
ArcTolVal_MM=.0762
MaxGapRepair_MM=1.27
PolySegLen_CM=.0508
ArcTolVal_CM=.00762
MaxGapRepair_CM=.127
[Debug]
LogFile=N
```

The only option that would ever be changed manually is 'LogFile=N'.

'LogFile=N' would be changed to 'LogFile=Y' - then there would be two new folders that will appear on the Windows Desktop screen.

The buttons on the main screen are used for:

The 'Browse' button will allow the selection of the export folder by browsing for it with the standard windows folder browser dialog.

The 'Settings' button will display this dialog which controls all the new options that been added to the DXFTool Professional Edition.

The settings dialog has the following features that can be used to control the operation of the DXFTool Professional Edition:

Export Type

This is the type of export that will be used in the DXF file.

'Polyline' is a LINE segments only DXF export that consists of an end-to-end chain of LINE entities that are at MOST the 'Polyline Segment Length' long. Some lines will be smaller according to the division of a CorelDRAW segment or a natural line length. Our POLYLINE export is improved by having a single straight line where possible unlike Corel's exports which has many separate small lines even if they are not needed to define a curve.

'Polyarc' is a LINE and ARC segment export that consists of an end-to-end chain of LINE and ARC entities. This is probably the most useful export in the Professional Edition.

'Line / Arc' is a LINE and ARC segment export that consists of of individual LINE and ARC DXF entities. It is basically the same as the export that the DXFTool Standard Edition provides.

'Line Only' is a LINE segment export that has a single straight line where possible.

Command Bar Name

This is the name of the CorelDRAW command bar that you want the DXFTool Professional Edition icon to appear on. Note that the icon will NOT move to this new command bar until you close CorelDRAW and open it again.

Polyline Segment Length

This is the MAXIMUM length that the lines in a Polyline export will be. Some lines will be smaller according to the division of a CorelDRAW segment or a natural line length.

Arc Fitting Tolerance

This is the value that controls how closely the generated ARC entities will match the original drawings. Note that LINE entities will precisely match line segments from the original drawing. The default is .003 which is usually a good compromise. Making this value SMALLER will give less ARCs but they will not match the original drawing as well. Making this value LARGER will give more ARCs and they will match the original drawing better.

Fix Layer Names

Checking this option will cause the DXFTool Professional Edition to change layer names to comply with AutoCAD R14 naming conventions. Later versions of AutoCAD and other software will not load a layer correctly if it has blanks or other unwanted characters in the layer name.

Add Comments

Checking this option will add a comment to every shape export which includes the shape name (if any) and the XY position of the shape.

UNIX Style

Checking this option will cause the DXFTool Professional Edition to format the DXF file as a UNIX style file using only linefeed characters to separate each line of text.

Circle Style

This is the type of circle that will be used by the circle optimizer.

'DXF Circle'

This option outputs circles as a DXF circle entity.

'One Arc'

This option outputs circles as a single 360 degree ARC.

'Two Arcs'

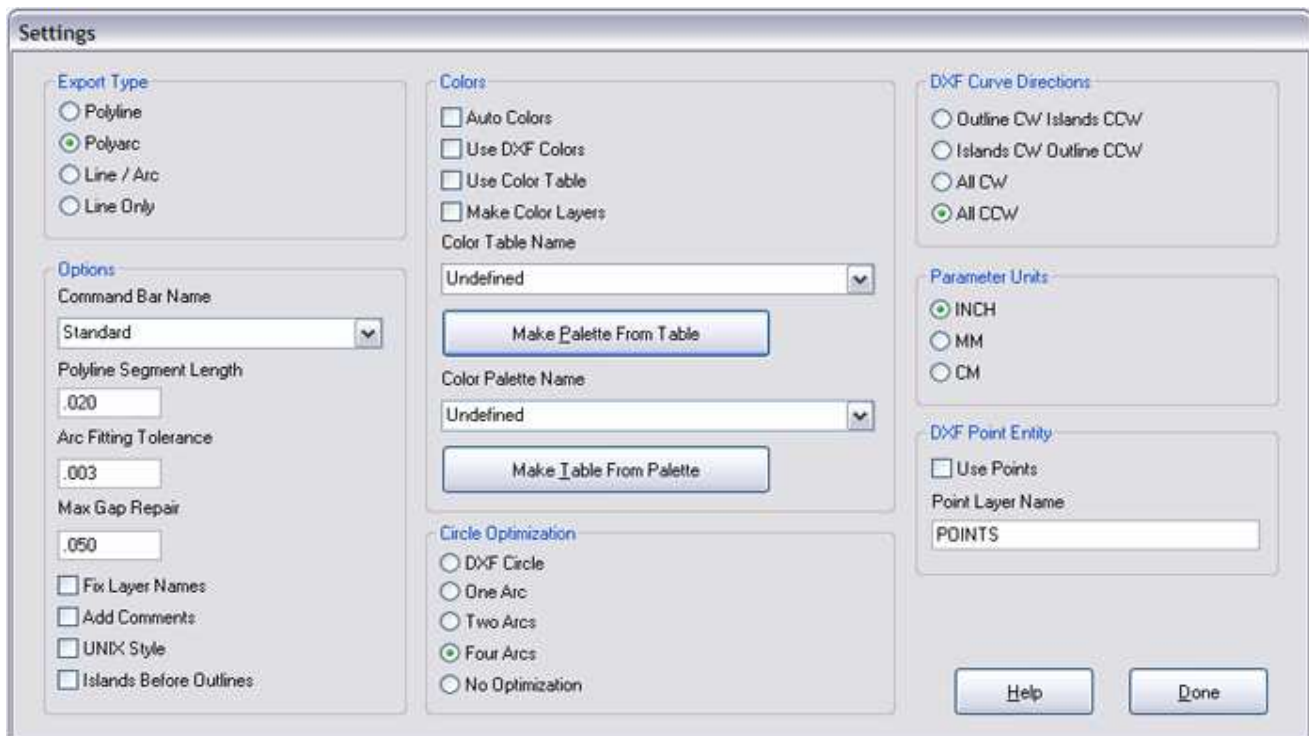
This option outputs circles as as two 180 degree ARCs.

'Four Arcs'

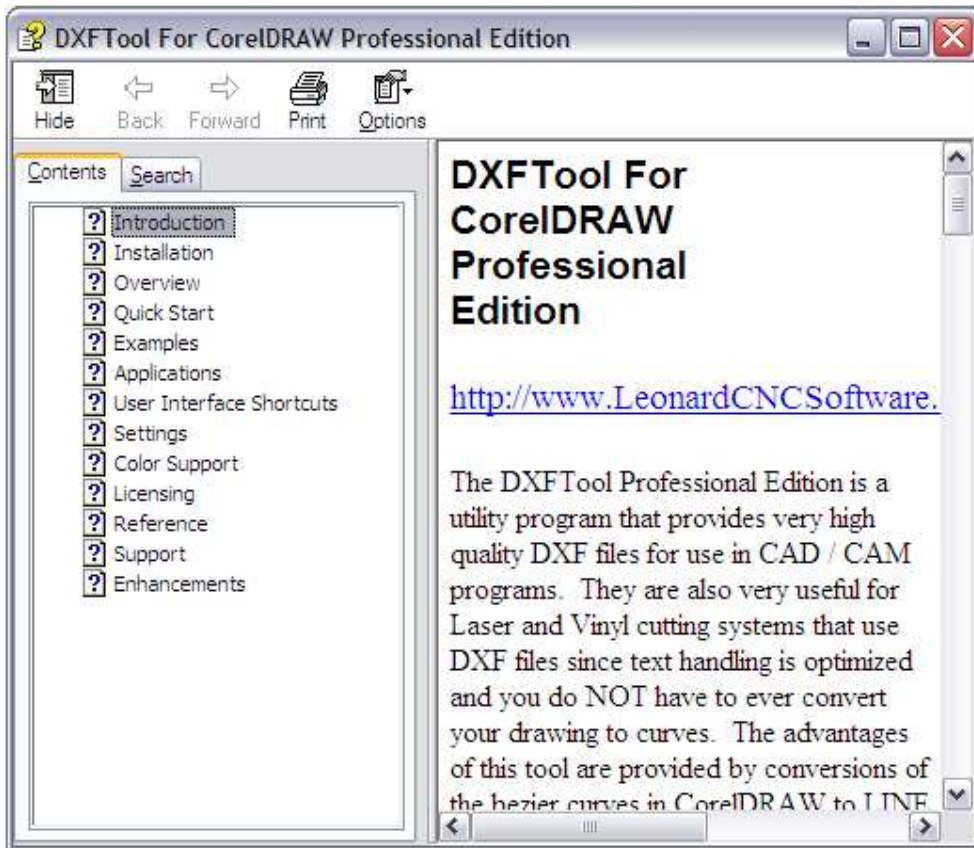
This option outputs circles as four 90 degree ARCs.

'No Optimization'

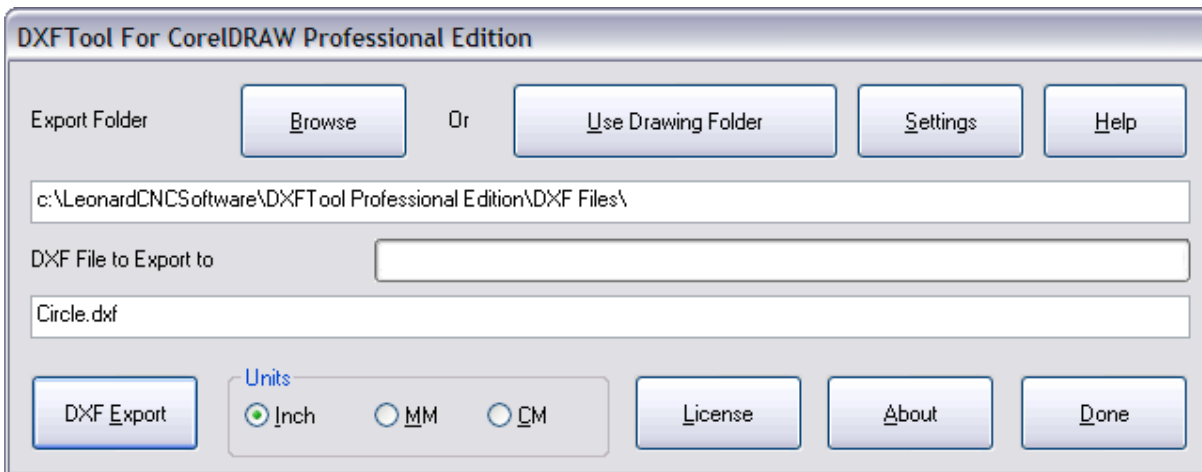
This option disables all circle optimization.



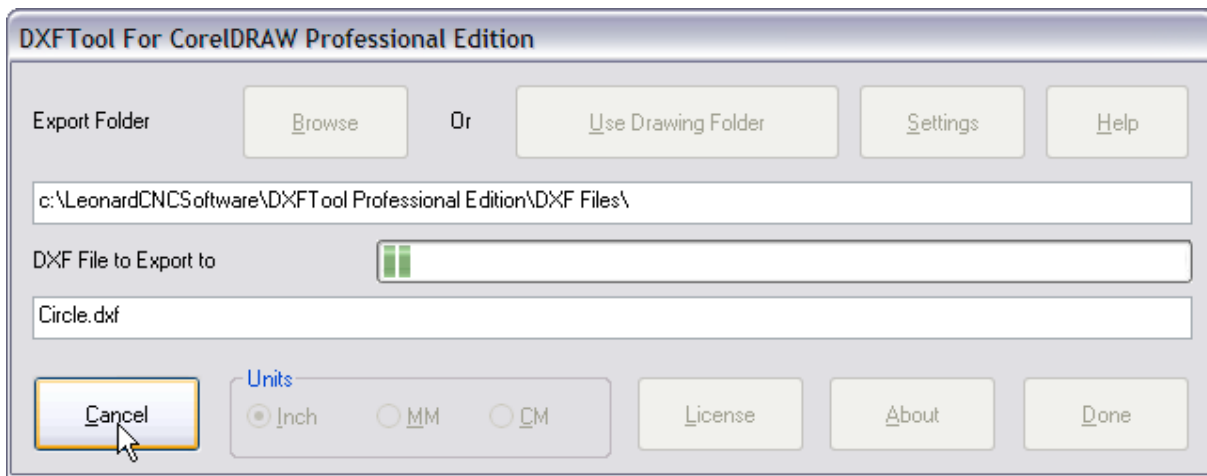
The 'Help' button displays the online help system for the DXFTool Professional Edition. It is the same as the PDF manual.



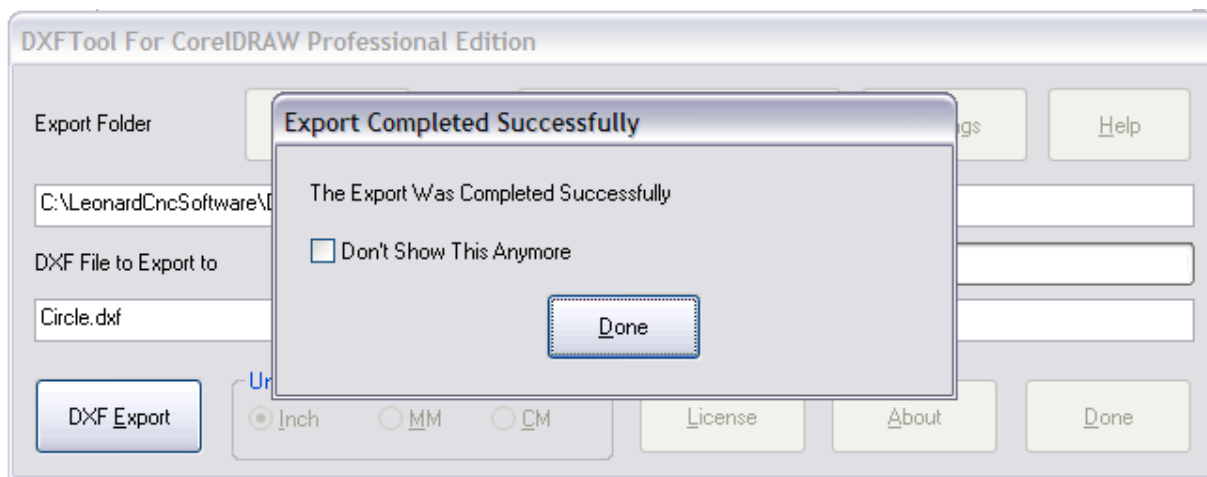
The 'Use Drawing Folder' button sets the 'Export Folder' to be the same folder that the drawing is in currently.



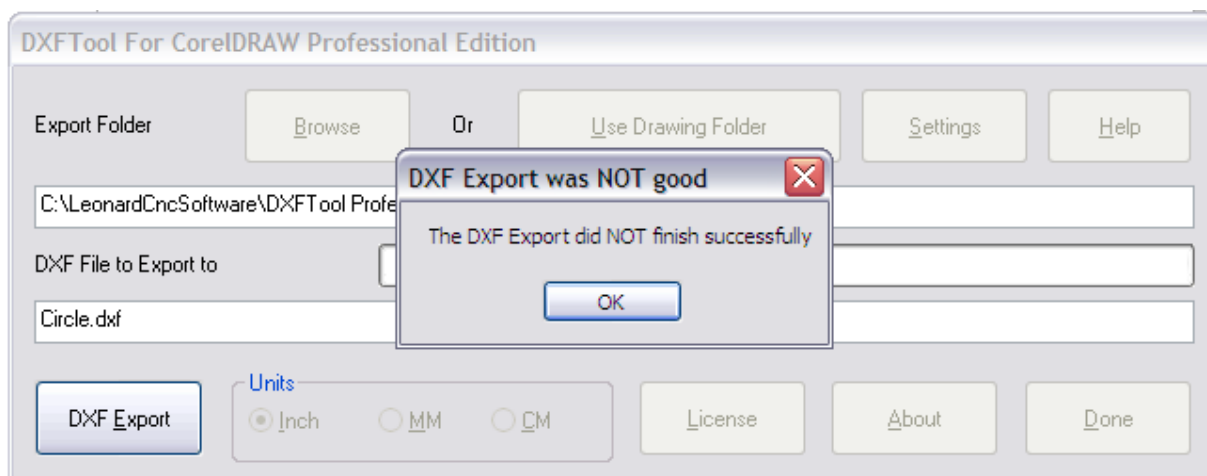
The 'DXF Export' button performs the DXF export. While the DXF file is being created all of the buttons will be grayed out (disabled) so that they cannot be pushed except the 'DXF Export' button. This button will change to 'Cancel'. This can be used to stop very long exports when problems may exist in the drawing being exported. Here is what the main screen will look like during an export:



If the export completes successfully you will see this screen IF it has not been disabled during a prior export operation. To disable this screen from showing again just check the "Don't Show This Anymore" checkbox.



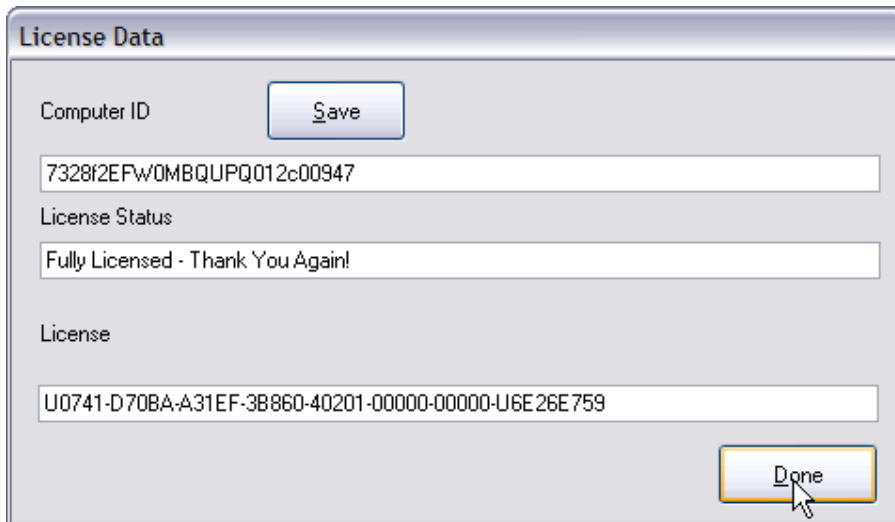
If you push the 'Cancel' button a warning message box will pop up to remind you that the DXF file was not successfully created since the export was cancelled.



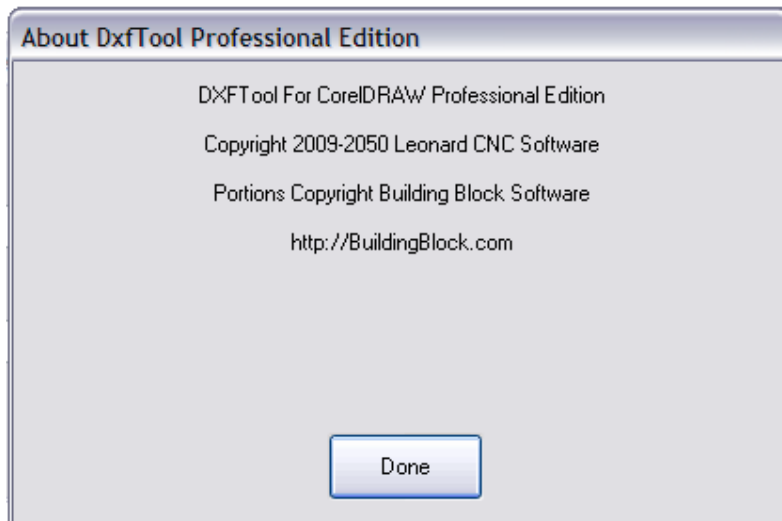
The 'Units' radio buttons select Inch (Imperial), MM (Millimeter metric) or CM (Centimeter metric) as the drawing units to be used in the the DXF file.



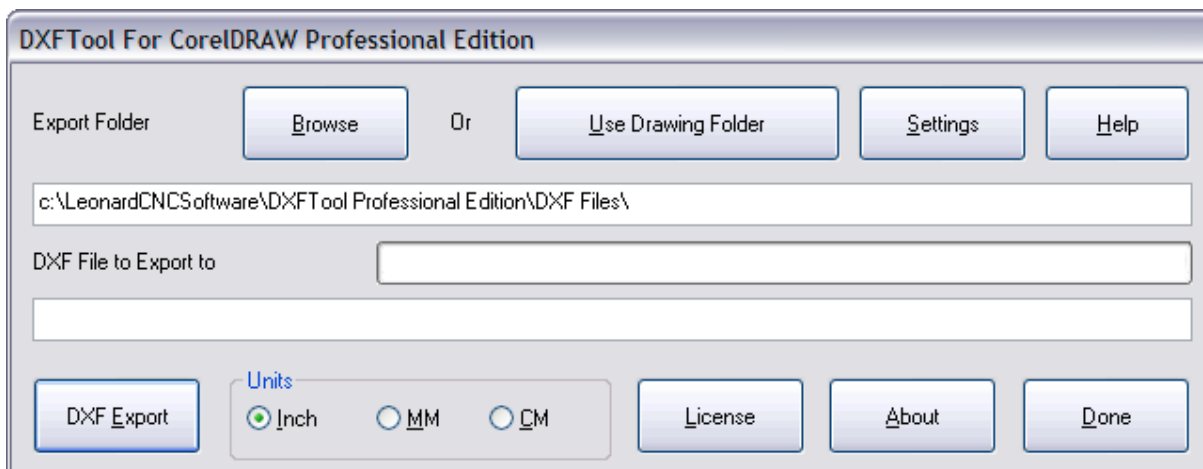
The 'License' button displays the license dialog.



The 'About' button will display a dialog that gives information about the DXFTool Professional Edition.



The 'Done' button closes the DXFTool Professional Edition dialog.



DXFTool For CorelDRAW Professional Edition

Support is available through email and at our CNC software forum
<http://www.leonardcncsoftware.com/phpBB3/>

Contact us on the web at <http://www.leonardcncsoftware.com>

Portions of the DXFTool Professional Edition are copyright Building Block Software - <http://BuildingBlock.com>
- This is a world class computational geometry library that we are also using in our full CAD / CAM program DragonCNC. This library enables us to write solutions beyond what the CorelDRAW Object Model can do in VBA. Please inquire as to any custom programming for CorelDRAW that you may need.

New language translations are being added as they are requested. If you want support for your native language, please inquire and mention if you can assist with translations of the user interface and the help file / manual.

Reseller arrangements are available. Please inquire.

Bulk / Site licenses are available and the technology inside the DXFTool can be licensed for use in your own systems. A non-competition agreement is necessary for this.

DXFTool For CorelDRAW Professional Edition

This release of the DXFTool Professional Edition (1.0) has the following enhancements added to the functionality of the DXFTool Standard Edition. The original LINE / ARC export is maintained and we have added:

Polylines.

Polyarcs.

4 types of circle optimization.

Large ARC detection and optimization.

Tuning parameters to control the polyline and polyarc exports.

Fix layer names to AutoCAD R14 standards.

CorelDRAW symbols are exported as simple shapes.

Comments may be added to the DXF file. The comment will show the ENTITY type and the CorelDRAW shape name and number.

UNIX style (line feed only) formatting for the DXF file is available.

The Professional Edition release 1.1 has the following fixes and changes:

Improved handing of small fonts.

Improved error detection during processing.

CorelDRAW X5 support was added.

The Professional Edition release 1.2 has the following fixes and changes:

Added a new export type which is Lines Only. 'Line Only' is a LINE segment export that has a single straight line where possible.

Improved processing to prevent open curves in the DXF files that are created.

Added color support for export. The AutoCAD Standard Color Index is built in and other color palettes can be mapped to DXF color numbers. Colors may be exported to one layer per color

Enhanced Windows 7 support including 64 bit. This is to correct an installation bug for installing with the 32 bit CorelDRAW running on Windows 7. Support for native 64 bit CorelDRAW X6 will be added in the next release.

Improved debugging system for better user support.

Selected object export now works correctly and also maintains all selections between exports

The curve directions for outline and island portions of shapes may be individually set to Clockwise or Counterclockwise. In the case of an upper case 'O' the the outside is the outline and the inside is the island.

DXF Point support. All shapes on a designated layer are exported as DXF POINT entities.

CorelDRAW X6 support was added.

The Professional Edition release 1.3 has the following fixes and changes:

CorelDRAW X6.1 upgrade is now supported.

Native 64 bit version is now available.

The 30 export limit in the evaluation has been removed

The Professional Edition release 1.4 has the following fixes and changes:

CorelDRAW X6.2 upgrade is now supported.

New installer to insure Windows 8 compatibility

The Professional Edition release 1.5 has the following fixes and changes:

Support for multiple user accounts with the same license

Single folder install for all versions

Single installer for all versions

Dongle option to allow use on multiple computers (one at a time)

Added support for Home and Student X6

Added support for Technical Suite X6