

The CEDRA Corporation's COMMAND OF THE MONTH

A monthly information bulletin

January 2005

FEATURED COMMAND
CEDRA-DxfExport



Command Of The Month Debuts

To better serve its client base, The CEDRA Corporation, starting in January 2005, will be issuing on a monthly basis the Command Of The Month information bulletin. The objective of this bulletin is to:

- Inform users of new features introduced to the CEDRA-AVseries suite of software,
- Describe in detail certain commands which are felt of being of special interest to the general user community,
- Educate our users as to the full capabilities of our software,
- Present solutions to problems and special application conditions encountered by users, and/or
- Provide for a means of receiving from our users, requests for new additions, modifications and improvements to our software.

The CEDRA Corporation is continually improving and expanding its CEDRA-AVseries software. Over the past two years we have converted all of our software from the ArcView® GIS environment to first the ArcGIS® 8.x platform, and then recently to the ArcGIS 9.x environment.

Aside from changes that may be required due to ESRI modifications to their ArcView GIS and ArcGIS software, additions and modifications to CEDRA software are made as a result of (a) technology advances, (b) experiences in using the software in our own projects, and (c) requests that are submitted from our users. CEDRA users are encouraged to let us know of the need for spe-

cial commands and tools which they would like to have incorporated so as to facilitate their work. Many of the featured commands described in the Command Of The Month bulletin are a result of user requests.

In addition, from time to time we receive calls from users inquiring how our software can be used to address special application problem conditions that have been encountered in a project. The solution we provide, if it is felt of being of general user base interest, will be published in this bulletin.

Command Of The Month bulletin

This month's issue addresses how to create a DXF file.

The CEDRA-DxfExport Command

The need often arises to create a DXF file of an ArcMap document file or an ArcView project file for use by a CAD software package. The CEDRA-DxfExport software provides this capability and offers certain advantages over native ArcMap DXF exporting capabilities, as well as, other DXF exporting software which interface with ArcMap or ArcView.

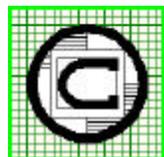
The CEDRA-DxfExport software is an integral command of all of the CEDRA-AVseries software. Thus, a user may create a DXF file right from within ArcMap or ArcView while working with any of the CEDRA-AVseries software.

Additionally, the CEDRA-DxfExport software is available as a stand-alone product. Product information is available on the web, www.cedra.com, via the DxfExport button which appears on the left side of our home page.

Creating a DXF file from within ArcMap

The CEDRA-ArcMap2DXF-Tools toolbar contains the [Create DXF File] command which enables the user to create a DXF file from within ArcMap. Unlike other DXF export utilities, which process only one theme at a time, the [Create DXF File] command processes all visible themes (shapefiles, personal geodatabases, enterprise geodatabases and coverages) in the current map. In addition, the [Create DXF File] command will process annotation features and graphic text elements. As such, a DXF file created by this utility can include features and text. In processing the visible feature and annotation layers in the map, note the following:

- When moving the cursor over the scroll down triangle of each menu combo box, the name of the menu combo box is displayed under it.
- The terms theme and layer are used interchangeably and they mean the same. The former is a term of ArcView GIS, while the latter is a term of ArcGIS.
- If a theme (layer) has selected features, then only the selected features will be processed. However,



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if there are no selected features, then all features in the layer will be processed. In either case, the features to be processed may include point, polyline and/or polygon features.

- If there are selected MARKER, PEN, FILL and/or TEXT graphic elements, then these graphic elements will also be processed, if the user so desires. That is, the user is asked whether the selected graphic elements should be processed, or not. If the view does not contain any selected graphic elements then no graphic elements will be processed. In exporting graphic elements note the following:
 - All of the selected Marker elements will be placed in a layer called GrapMrkr.
 - All of the selected Pen elements will be placed in a layer called GrapPen.
 - All of the selected Fill elements will be placed in a layer called GrapFill.
 - All of the selected Graphic Text elements will be placed in a layer called GrapText.

- The ability to export attributes is important because: (a) it enables the user to transfer non-graphic information (attributes) into the DXF file, thus maintaining the association of the non-graphic information with the feature, and (b) provides a mechanism for the user to maintain symbology and line styles.
- Regarding symbology and line styles; in the ArcGIS environment, classifications are based upon attributes. By exporting the attributes upon which the ArcGIS classifications are based, the user has the ability to regenerate the classifications in the system into which the DXF file is to be read. This, of course, is dependent upon the software which is reading said DXF file. That is, the software reading the DXF file has to have the ability to change symbology and line style using information stored in a "block".

Upon activation of the [Create DXF File] command, the dialog box of Figure 1 will appear, at which point the user can:

- The name of the ArcGIS layer will serve as the name of a layer in the DXF file.
- Non-alphanumeric characters in a layer name are converted to the underscore character (_).
- The user has the ability to select from a choice box, which appears in the Create DXF File dialog box, one or more attributes for inclusion in the DXF file, if so desired. Regarding the exporting of feature attributes, the following are noted:
 - The selected attributes appear as "blocks" in the DXF file.
 - These blocks will appear at the midpoint of the feature, and the name of the block will be B_xxxx, where xxxx denotes the name of the layer the feature resides in.
 - All of the attributes associated with the block will be listed vertically, one under the other.

- Control the name of the DXF file that is created. The Browse... button enables the user to use a standard file navigation dialog box to control the folder into which the DXF file is to be written, as well as the name of the DXF file.
- Specify whether the layer names are to be trimmed to eight (8) characters, or not. If a check appears in the square to the left of this parameter, the names of the visible layers that are processed will be trimmed to a maximum of eight characters, with the first eight characters of the layer name being used. If this option is chosen, attention should be paid to the names of the various layers in the ArcGIS document file to ascertain that no two layer names share the same first eight characters. If that is the case, then aliases should be used to make the proper distinction between the layers.

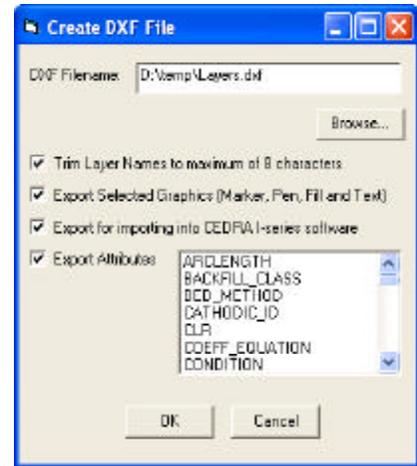


Figure 1
CEDRA-DxfExport Dialog Box

- Specify whether selected graphic elements are to be included in the DXF file creation, or not. If a check appears in the square to the left of this parameter, any graphic elements that are selected will be included in the creation of the DXF file.
 - Specify whether a DXF file for importing into the CEDRA I-series software is to be created or not.
 - Specify which attributes, if any, are to be included in the DXF file as "blocks". If a check appears in the square to the left of this parameter, all attributes which are selected in the choice box will be included in the DXF file as "blocks". There is no limit to the number of attributes that can be selected.
- Regarding the attribute selection list displayed in the CEDRA-DxfExport Dialog Box, it is noted that this list contains, in an alphabetical order, all attribute field names of all visible layers. Selected attributes that are not associated with a feature are ignored.
- Click the OK button to create the DXF file.

If you have a request for Command Of The Month, feel free to phone, fax or e-mail your request to The CEDRA Corporation.