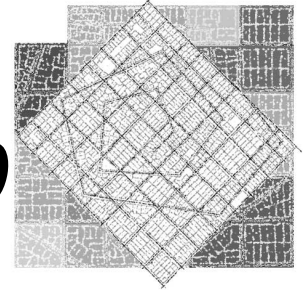


## **Appendix B**

# ***AutoCAD Map 2000i, and the Data Transformer Extension (dtX)***



This appendix includes information about new point releases of AutoCAD Map. AutoCAD Map 2000 is release 4.0 of AutoCAD Map. There is also a downloadable extension to AutoCAD Map called the dtX (for Data Transformer Extension), and a Release 4.5, called AutoCAD Map 2000i (for Internet).

### **The dtX**

Autodesk has released an extension for AutoCAD Map that can be downloaded from the Autodesk web site for a fee, called the dtX, or Data Transformer Extension. By the time you read this, the dtX may no longer be available, as it is also incorporated into the new 2000i release (for more information on 2000i, see the next section).

The dtX is a new import and export engine for Map that includes the ability to download new drivers from the Web (also for a fee) that will give you the ability to read and write more formats than those described in Chapter 6. As of this writing, you can buy and download drivers for VML and SDTS.

The dtX is in some ways more powerful, and in others less powerful, than the 4.0 import and export. For example, when importing with dtX, it can create only object data or attribute data, not external data links. However, you can get around this by using the ADEGENLINKS command to create links to an existing table of data, or the MAPOD2ASE command to create an entire external table of data. Alternatively, you can always just use the old commands, which the dtX does not replace.

The new commands in the dtX are MAPIMPORTENGINE and MAPEXPORTENGINE, referring to the fact that the dtX is an engine for import and export, and the actual formats supported are downloadable separately.

The dtX functions basically as follows. The dtX shows you a file “save as” (or open) dialog. From there, you can choose the type (from the list of types you have installed). When you select the file to be saved (exported) or opened (imported), it will then give you options for the conversion. For the most part the options are the same for all formats.

If you are exporting, the options include selection of objects to be exported, coordinate conversion, and the data to export with the objects. If it sounds very similar to the MAPEXPORT command you are used to from AutoCAD Map 2000 or before, that is because it is, although the UI has been updated and simplified.

If you are importing, the options work a little bit differently from what you are used to. You again have the coordinate conversion and data options. You also have the option of importing points from the foreign file as point objects or block objects. However, for Import, you now have the ability to control the options separately for each layer being imported from the external file. You can create layer mapping, and set data options, coordinate system options, and point options for each input layer individually. The Import Options dialog that appears when you run this command contains a table that allows you to set the options for each layer. The biggest tip for this dialog is to learn to use the right-click menu on the table for applying the changes you make to one layer to the entire column.

## **AutoCAD Map 2000i (R4.5)**

AutoCAD Map 2000i R4.5 is the new version of AutoCAD Map that is designed to work with Windows 2000, as well as be an upgrade from AutoCAD Map 2000 R4.0. For the most part, the changes between

AutoCAD Map 2000 and AutoCAD Map 2000i are relatively minor. However, several of them are obvious, and a couple of the not-so-obvious changes are quite useful.

The first thing you will notice upon opening R4.5 is the new AutoCAD Map Today window. This is a replacement of the R4.0 start-up dialog, as well as the New dialog. It is an Internet browser style window that in addition to fulfilling its duty as the file new/start-up dialog, also gives you the latest CAD and GIS news, and informs you of updates to AutoCAD Map. It includes links to the Autodesk web site that open in new browser windows (using your default of Internet Explorer or Netscape Navigator). You can customize what you see in the Today window, and you can even turn it off in OPTIONS, if you prefer the old style of dialogs.

The second obvious thing that is new in R4.5 is the new Open and Save dialogs for working with drawings. These now look like the Windows 2000 or Office 2000 dialogs for open and save. They work very similarly to the dialogs you are used to, with the exception that they have links down the left side to take you to common folders quickly and easily.

The MAPIMPORT and MAPEXPORT commands have changed, as well. These are identical to the dtX, previously described, with a few exceptions. First, they include support for ArcView Shape, ArcInfo Coverage, MicroStation DGN, MapInfo MIF/MID, and Arc/Info E00 out of the box. Second, they do replace the old MAPIMPORT and MAPEXPORT commands. If you call MAPIMPORT in R4.5, you will get only the new dtX-style dialogs.

However, you can access the old commands. They are not on the menus, but they are available. The “new” commands to get to the old functionality are MAPIMPORT4 and MAPEXPORT4. If you are going through Chapter 9 of this book, and wondering why the dialogs do not look right, you should probably try typing one of these commands instead of selecting the Map ➤ Tools ➤ Import (or Export) menu item.

Similar to the new import and export, the user interface for importing and exporting Autodesk MapGuide SDF files has been updated. For the most part, this update does not affect the functionality, but merely gives it a new interface. The one big change is that you can now import just part of an SDF file by entering a bounding window to define an area in the file. This is important because SDF files can be much larger than drawing files (for example, a single SDF file can contain 1 or more Gigabytes of data). This

new command allows you to essentially break a large SDF file into smaller pieces for import.

Finally, there are a few new commands that are extremely useful to mapping users. They are basically small utilities added to AutoCAD Map for R4.5.

First is MAPDIST. This is a replacement for the DIST command available to any AutoCAD user. DIST gives the distance and bearing between two points in CAD terms, but fails to take into account coordinate systems and great-circle calculations. If you have a coordinate system assigned, MAPDIST will give you much more accurate distance and bearing calculations, especially across long distances. If you do not have a coordinate system assigned, MAPDIST gives you the same information as DIST.


The second new utility in R4.5 is the coordinate system tracker, which you can turn on with the MAPTRACKCS command. The coordinate system tracker allows you to track the mouse coordinates in a different coordinate system than the current one. For example, if you are working in a drawing that is in a state plane coordinate system, you may want to see LL values. This command adds a small dockable pane that tracks the coordinates.

You can even type coordinates into the tracker in the other coordinate system, and it will convert them to the current coordinate system. This is very useful for digitizing points. For example, if you have a list of points in LL, you do not need to create a new drawing in LL to digitize them, and then query them into the current drawing—you can digitize them directly into the current drawing.

You can also initialize the coordinate system tracker with the coordinate system of an attached drawing very easily. Simply right click on the attached drawing in the project workspace, and select the Track Coordinates menu item.

A third new command is MAPCREATECENTROIDS. It is not available from the menus, so you need to know the command name. This command takes closed polylines (i.e., polygons) that have object data on them and creates new centroids somewhere inside them. It will move object data or data links from the closed polyline to the new centroid. This is very useful in case you want to clean the data before creating a topology—because cleaning closed polylines can hurt the attribute data.

All of the new commands follow the AutoCAD standard of using the UI (dialog-based) version of the command by default. To call the command-line-only interface, call the command with a dash preceding it. For example, -MAPIMPORT will show the command line.

 **NOTE:** MAPTRACKCS *only has a dialog version, and MAPDIST only has a command line version.*

AutoCAD Map 2000i R4.5 also contains various other new features—small changes mostly in existing commands that should make life easier for the user, including changes from AutoCAD 2000i. These include items such as a new HTML-based online Help system (the user's guide appears to be entirely online in this release!), and the installer has been updated to be better integrated with Windows 2000.

