D appendix

Additional Tools for Collaboration

In addition to the programming and customizing tools that are used by a single user at a computer workstation, there are numerous tools that are encountered only in collaborative environments, where the workspace extends beyond the individual and the individual computer. You may be familiar with some of these tools. In this appendix, we briefly introduce more of these tools, so that readers may enter a collaborative environment with some understanding of these processes. These tools are not necessary for the completion of any independent drawing, but they belong in your repertoire of techniques.

CAD Standards

The CAD Standards feature is important in work environments where drawings from one organization may be used in other organizations or departments. Using CAD Standards files allows quick checking and modifying of drawings to ensure that externally created or outsourced drawings use standards compatible with standards in place for drawings created in-house. AutoCAD's CAD Standards feature requires the use of a drawing standards file. This can be any drawing that uses the desired standards, including layer definitions and properties, dimension styles, text styles, and linetypes. To understand the issues involved, imagine that in Your Company, Inc. all drawings have a standard layer (we'll call it Layer1) that is red. To support this practice, a certain Drawing A has been defined as a CAD Standards file (saved with a .dws extension). Your Company receives Drawing B from Their Company. Drawing B and Drawing A both have a layer called Layer1, but in Their Company, Layer1 is yellow. As Your Company's CAD expert, you must ensure that Drawing B complies with Your Company's standards. You proceed as follows:

- ✔ Open ***Drawing B.***
- ✔ Select the **Manage** tab **>** **CAD Standards** panel **>** **Configure** tool from the ribbon.

  This opens the ***Configure Standards*** *dialog box.*

- ✔ Click the <+> button to add a Standards file.
- ✔ From the **Select Standards file** dialog box, select **Drawing A.dws** as the CAD Standards file.
- ✔ In the **Configure Standards** dialog box, click the **Check Standards** button.
  This opens a dialog box that shows you any discrepancies between Drawing A.dws and Drawing B.
- ✔ Pick the **Fix** button to alter Layer1 in Drawing B to match the standard of Drawing A.

Now that Drawing A is defined as a Standards file for Drawing B, whenever you try to change a property in Drawing B and it does not match a standard, you will get a *Standards Violation* notification in the lower right corner of your screen. You can use the blue link to run a standards check and fix the problem, or you can ignore and close the message.

Layer Translation

Layer translation is closely related to CAD Standards checking. It works similarly but addresses only layers and allows you to adjust the layers in any drawing to match layers in another drawing. You are not restricted to using drawings that have been defined as Standards files but can use any drawing to shape any other drawing. Properties that can be matched are all the properties that define layers. To translate Layer1 properties in Drawing A to Layer1 properties in Drawing B:

- ✔ Open ***Drawing B.***
- ✔ Select the **Manage** tab **> CAD Standards** panel **> Layer Translator** tool from the ribbon.
  *This opens the **Layer Translator.** Layers in the current drawing are shown in the **Translate From** panel. There is nothing in the **Translate To** panel until we load a drawing.*
- ✔ Click **Load.**
  *This opens a **Select Drawing File** dialog box. You can select a drawing, a template drawing, or a CAD Standards drawing file.*
- ✔ Navigate to the folder where Drawing A is located.
- ✔ Select **Drawing A.**
  Notice that this can be any drawing. It does not have to be a .dws drawing.
- ✔ Click **Open.**
  *Layers from Drawing A are now listed in the **Translate To** panel.*
- ✔ Highlight **Layer1** in both panels.
- ✔ Click **Map.**
  *The proposed translation shows in the **Layer Translations Mapping** panel.*
- ✔ Click **Translate.**
- ✔ Click **Yes** to save or **No** to eliminate the old layer information in Drawing B.

Management of Named Objects

When managing multiple drawings from different sources, you are likely to encounter the problem of duplicate definitions. For example, what happens when a drawing that is externally referenced or block-inserted has layers, linetypes, text styles, dimension styles, blocks, or views with names that are the same as those in the current drawing? Good question. In the case of blocked drawings, name definitions in the current drawing override those in the inserted block, regardless of its origin. In the case of Xrefed drawings, named objects are given special designations that eliminate the duplication. For example, if Drawing B is attached to Drawing A and both have a layer called FLOOR, a new layer called B|FLOOR is created in A.

Sheet Set Management

Most industrial design projects involve not one drawing but a set of drawings detailing different views or different aspects of a single design. When a design project is to be communicated to a client or a consultant, it is likely to be represented by a whole set of related drawings. Sets of drawings like these, called *sheet sets,* may be created manually by saving particular layouts from individual drawings and then assembling all the relevant layouts and views in a single location. This process can become quite complex, especially when the individual drawings are on different computers and rely on external references, font files, plot files, and so on that may reside in different locations. To facilitate the creation of sheet sets, AutoCAD includes a system called the **Sheet Set Manager.** Through this interface, layouts from individual drawings are collected into a new drawing. Here, layouts can easily be organized into categories and subsets so that the sheet set presents a coherent design concept. One sheet of the set may be designated as the title sheet, and this may display a table showing the organizational hierarchy of the complete sheet set. Sheets in the sheet set are given numbers and designations shown in standard symbol blocks that update automatically if the number and organization of the sheet set changes. Consider the following workflow:

- Create drawings in model space.
- In each drawing, create layouts with a design presentation image.
- Using the **Sheet Set Manager,** collect layouts from all relevant drawings into a single set.
- Create a title sheet listing all layouts (sheets) and showing how they are organized.
- Create a sheet set package that contains the sheet set and all files required to view the set, all organized through the **Sheet Set Manager.**
- Archive the sheet set.
- eTransmit the sheet set to a client or consultant.