

The Missing User Interface

AUTOCAD ENHANCEMENT

by Chris Morton

It's interesting what truly useful software one can find on the electronic bulletin boards (BBSs). This was the case with ProtoCALL, an AutoCAD front-end I recently found in CompuServe's Auto-desk Forum. Created by Engineered Services of Greenville, South Carolina, ProtoCALL has gone from a shareware program with a few rough edges to a full-blown commercial product with the current release, Version 5.5A. Distribution is being handled by Manitou Marketing, also of Greenville.

INTERFACE FRUSTRATION

As an AutoCAD reseller and consultant, I get feedback from users indicating they're often frustrated with the lack of intuitiveness in AutoCAD's opening menu. This menu dates back to very early releases of AutoCAD and begs for a better user interface. Many operators soon find they require more information to be displayed about various drawings, AutoLISP routines, blocks, and slide files. A database of company-related information for each drawing has long been on many users' wish lists.

You may have experienced this situation yourself: using AutoCAD as shipped, you select "Edit an EXISTING Drawing", but quickly discover you can't remember the name of the drawing you want to edit. You cancel the command, shell out to DOS, run a directory listing to find the name, and (sometime later) return to AutoCAD's menu. As an alternative to this recurring exercise in inefficiency, you might reach for the list of drawing names you printed earlier in the week instead, but it's usually outdated and doesn't contain enough information about drawings to really be useful anyway. Minutes tick away.

ProtoCALL answers all of these needs, and many more. Upon making a call to AutoCAD from a batch file (which may easily be tied into an overall system menu package), ProtoCALL intercepts AutoCAD's menu and instead displays a full-size box containing sorted drawing names (by name, date, or size) pulled from a user-designated default subdirectory in the screen's lower portion (Figure 1). Various DOS file maintenance procedures may be initiated from within this box, including renaming, copying, moving, and/or deleting multiple files (Figure 2). New directories may even be created on the fly.

Highlighting a drawing name with a pointing device or the cursor movement keys and pressing another function key, you now have full editing access to a user-customizable database in the upper third of the display box, which contains descriptive fields for each of your drawings. Another function key controls a pull-down menu (Figure 3), from which you may search for drawings matching selected criteria (Figure 4). When one is found, ProtoCALL loads it into the AutoCAD drawing editor upon your command. Drawings may also be loaded by simply highlighting a drawing from those listed in the lower portion of the screen.

A QUICK TOUR

Here's a typical scenario: your drawings are labeled with a project number and you can't seem to remember which one you need to check revisions on. Since you recall working on it when your regional manager called Tuesday afternoon, you display and sort drawings by their creation dates in ProtoCALL. Still not sure, you highlight a possible choice and hit the hot-



Figure 1.



Figure 2.

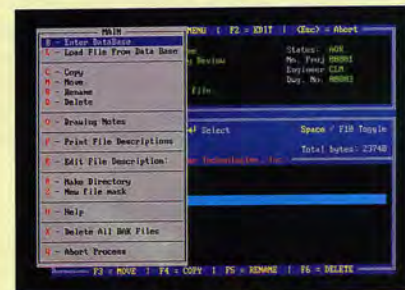


Figure 3.



Figure 4.

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key combination that calls up AutoVue, an optional third party AutoCAD viewing utility from Cimmetry Systems, St. Laurent, Quebec, Canada. (ProtoCALL has also been tested with other similar viewing program utilities.) Without wasting a lot of extra time (which is considerable when loading AutoCAD 386), you've visually verified you have the proper drawing and then quit AutoVue.

Loading the drawing into the AutoCAD drawing editor from ProtoCALL, you need to insert several predrawn blocks at various points. From within AutoCAD's "File" pull-down (or from the sidebar with optional customization), you select the added "Insert a Drawing" command (Figure 5). Another full-screen display box comes up; this time you are shown a user-specified default subdirectory containing your block drawings. Except for the database information, the same file maintenance commands are available, with an editable description adjacent to each block drawing name.

After the block insertion, you reference a drawing that was earlier made into an AutoCAD slide (.SLD). Moving again to the "File" pull-down, choose "View a Slide." When you're shown a listing from a default subdirectory where your *.SLD files are located, you simply highlight your choice, quickly view it, and then return to the drawing editor.

A program is now required to perform a series of complex editing manipulations within the drawing editor. Select "Load a LISP Routine" from the "File" pull-down to display your sorted AutoLISP programs (Figure 6). Like the other ProtoCALL displays, each file has an editable description so you can quickly reference exactly what it does.

Attempting to load AV.LISP, AutoCAD returns an error on its Command: line. From the LOADLSP display, you press another hot-key combination to call up an external text editor, such as QEDIT, TED, or LISPMEMO (the last one being part of the ProtoCALL set), and quickly fix the problem. You quit the editor, reselect the AutoLISP program, and this time it loads without a hitch!

With the drawing completed, select "Save & Select a New Drawing" from AutoCAD's "File" pull-down. As an added precaution, ProtoCALL prompts you to save the first drawing prior to choosing a new one. Your screen now matches the opening display (shown in Figure 1), saving time in choosing the next drawing.

INSTALLATION

Although ProtoCALL's installation program prompts for various defaults, additional custom configuration can be somewhat tricky if you're not familiar with AutoCAD's .PGP, .MNU, and .MNX files. As with any complex software a solid knowledge of DOS, including path commands and batch-file creation, is essential for efficient PC

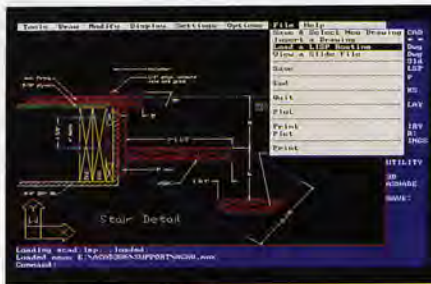


Figure 5.

use. You may wish to brush up on customization by referring to AutoCAD's *Installation & Performance Guide and Reference Manual* prior to tackling the installation on your own. (If you're simply not comfortable with AutoCAD customization at any level, most authorized resellers provide this service for a fee.)

While ProtoCALL's installation does modify the ACAD.PGP, ACAD.MNU, and additional *.MNU files as prompted, it doesn't know to also eliminate compiled *.MNX files—these should be renamed for safekeeping prior to enacting the installation program. It also doesn't create a batch file from which to run ProtoCALL, call ADI drivers, and initialize AutoCAD with your choice of hardware configuration and default drawing subdirectory, although the manual provides a short discussion on this topic.

DOCUMENTATION

ProtoCALL is shipped with a 26-page manual. While the existing documentation provides enough information to get started with ProtoCALL, Engineered Services wants to make the program more marketable by appealing to AutoCAD novices who may not have prior experience in batch file creation and AutoCAD customization. In short, the revised manual promises to be more explicit, with actual screen shots also scheduled for inclusion.

OTHER FEATURES

From the opening display or the "Save & Select New Drawing" screen, entirely new drawings may be started by simply typing in a drawing name from the keyboard. (With this release, ProtoCALL relies on AutoCAD to check for pre-existing drawings with the same name you've input; this will be changed in the next release for simplification purposes.) Next, you're prompted with the option to insert title block information into the new drawing, and then for the drawing database information (Figure 7).

Through a customizable AutoLISP program and a D-size prototype drawing provided, a custom title block data can be automatically inserted into the new drawing, complete with company name, address, date, and other attributes. You can also create additional prototypes of varying sizes based on the drawing that ships with ProtoCALL;



Figure 6.



Figure 7.

the program will prompt for sheet sizes and units of measure as you begin new drawings.

For those users who still need a printed list of drawings with their corresponding descriptions, ProtoCALL provides a hot-key combination to do this. Optionally, users may generate a printout from the pull-down menu, which also provides a quick method of eliminating *.BAK files (see Figure 3).

If the drawing database doesn't provide enough data about your drawings, you can call up the text editor from within ProtoCALL displays and create a 50-character notation field for any of your drawings. Finally, for those who are running on a network, ProtoCALL provides lockout features that make drawings inaccessible if they're in use.

To quote the *AutoCAD Sourcebook* (Que Corporation, Carmel, Indiana), "Autodesk has actively supported and encouraged the development of products that augment, enhance, or extend AutoCAD's capabilities..." For both new and experienced operators, ProtoCALL meets all three criteria. While this first commercial iteration of ProtoCALL needs a bit of fine detailing, it enhances any AutoCAD system as it stands and is well worth the modest investment.

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