

# REVIEW

## INCREASING AUTOCAD'S FUNCTIONALITY

FOUR DRAFTING UTILITIES THAT WON'T BREAK YOUR BUDGET

DAVID BYRNES

As power users are fond of proclaiming, AutoCAD doesn't begin to show its real strengths until you start customizing it. Despite the amazing power that comes in the red and white box, AutoCAD's tools are general in nature. As users gain experience, they must either bear with repeating the same steps over and over again or start customizing the program until it works more like they do. Not all of those users have either the time, the inclination, or the expertise to do their own customization, and so they rely on the wide range of third-party applications available for the program. The majority of these programs are designed for so-called vertical applications: extremely sophisticated add-ons are available for architects and engineers, mechanical designers, GIS specialists, etc.

Another arena for third-party software is in general, or horizontal, applications. This month, *CADalyst* looks at four such programs that expand on AutoCAD's basic functionality. Three of these programs enhance AutoCAD's hatching and linetype creation; the fourth offers nothing less than a whole new way of creating two-dimensional drawings with AutoCAD.

AutoCAD comes with 53 hatch patterns, more than half of which are architectural patterns pulled from AutoCAD AEC

Architectural, which was withdrawn from the market. Two of the programs under review, Patterns from Automated Drafting Systems and 100+ Hatch Pattern Library from CompugraphX, add 100 or more new patterns to AutoCAD's library and make their use transparent to the user. (In both cases, more than 100 of the patterns are geological; I hadn't realized there were so many geologists using AutoCAD!).

Any competent AutoCAD user can create hatch patterns fairly easily. Creating linetypes is much more limited, however. Although defining linetypes is one of the easiest types of customization, AutoCAD limits you to dots and dashes. Most AutoCAD users need more than this and end up creating broken linetypes and inserting their own symbols into the spaces.

Two of the programs reviewed here allow the creation of much more complex linetypes. 100+ Hatch Pattern Library includes a number of custom linetypes such as fences and railway tracks in its set of utilities. AutoLINE from Automated Drafting Systems is an amazingly powerful ADS (AutoCAD Development System) application that generates 100 complex linetypes from railway tracks to walking footprints; like AutoCAD itself, it really takes off when you start customizing it.

The last program reviewed offers a completely different method of two-dimensional drafting in AutoCAD. Perhaps coordinate systems are not the most intuitive way to lay out a drawing, especially for users who have spent time at the drawing board. LYNELINE from Graphic Data is a construction line program that automates regular AutoCAD commands and features into a very workable alternative to coordinate entry.

All four programs are priced reasonably, considering what they let you do in AutoCAD, and will enhance almost any AutoCAD installation.

AUTOMATED DRAFTING SYSTEMS

### AutoLINE v4.01

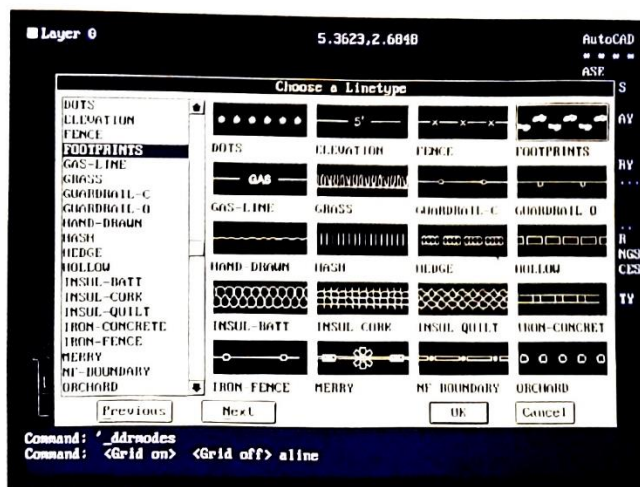
#### Pros: Fast

and powerful; linetypes act just like AutoCAD linetypes.

**Cons:** Requires key number linked to AutoCAD serial number. **Address:** 516 S.E. Morrison, Suite 305, Portland OR 97214 **Phone:** (503) 232-8420 or (800) 546-3897, fax (503) 232-6107 **List**

**price:** \$349 (ALINE Lite, \$149)

Circle 231



Twenty of the 100 predefined linetypes in AutoLINE from Automated Drafting Systems.



AutoLINE from Automated Drafting Systems is a powerful ADS program of great depth and versatility. The program comes with 100 linetypes that run the gamut from simple double-line walls to walking feet. AutoLINE has been around for a long time. Currently at version 4.01, the program is designed for AutoCAD Release 12 (DOS, Windows, DEC, and Sun), but appendixes to the manual tell you how to set it up for Releases 10 and 11. Automated Drafting Systems also offers an AutoLISP-based version of the program called



ALINE Lite, which includes all linetypes, but not the ADS-based utilities, for \$149.

AutoLINE uses an authorization code, a copy-protection method with which AutoCAD users are becoming more and more familiar. AME (the Advanced Modeling Extension) uses one, as do some third-party applications, such as Image Systems' CAD Overlay ESP. (If companies must have copy protection, this is as benign a way to implement it as any; it's certainly preferable to key disks or dongles.)

The program uses dialog boxes exclusively and offers comprehensive on-line

help. You start the program by entering **ALINE** and then selecting a linetype, either by typing its name into an edit box, selecting it from an icon menu, or picking an existing AutoLINE entity and copying it. Next, you draw new lines (actually AutoCAD polylines) or convert existing lines to AutoLINE entities. You can also change AutoLINE entities back to AutoCAD ones.

Although the program comes with 100 predefined linetypes, this is only the beginning. As is true with AutoCAD, the real power of AutoLINE is apparent once you begin customizing it: It lets you create

your own custom linetype definitions and add them to its catalog.

Once you create or convert them, AutoLINE entities become blocks. In order to edit them or change their linetype scales, you can temporarily convert them to their original polylines and then reconvert them. Although this may seem tedious, it's very quick and easy to accomplish. An advantage of this method is that once you make the blocks, changing LTSCALE has no effect on AutoLINE entities that are already in the drawing.

AutoLINE includes a batch utility that converts AutoCAD lines, arcs, or polylines on a layer-by-layer basis for any number of drawings. A batch dialog box option helps ensure consistency by letting you assign the current linetype-by-layer settings to all drawings you want to convert.

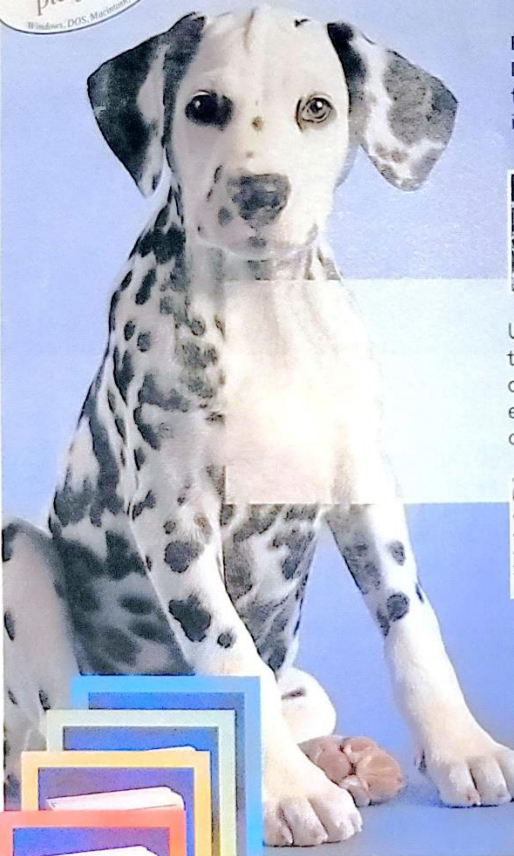
AutoLINE comes with an exhaustive 42-page manual that contains full descriptions of the program's functions, appendixes that illustrate all the supplied blocks used in the linetypes, directions for using AutoLISP to create your own linetypes, a listing of error messages, and a catalog of all supplied linetypes. AutoLINE is one of the greatest AutoCAD utilities I've encountered. It's fast, powerful, flexible, and—best of all—works just like AutoCAD. Highly Recommended.



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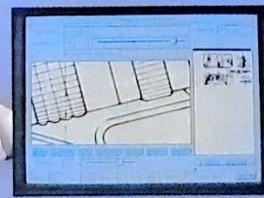
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Circle 39

## AUTOMATED DRAFTING SYSTEMS Patterns v4.0

**Pros:** Extensive range of patterns; utilities allow fitting patterns to hatch outlines; slick hatch-editing routines.  
**Cons:** Minimal documentation. **Address:** 516 S.E. Morrison, Suite 305, Portland OR 97214 **Phone:** (503) 232-8420 or (800) 546-3897, fax (503)

232-6107 **List price:** \$149

Circle 232

Patterns v4.0 from Automated Drafting Systems is a collection of hatch patterns for AutoCAD Releases 10, 11, and 12. Although it is optimized for Release 12, additional files support the earlier releases.

ADS's Patterns comes with 99 geological and 140 "architectural" hatch patterns beyond AutoCAD's 53 standard patterns. The hatches are of a uniformly high quality, and the package includes a couple of slick routines for revising patterns and restoring them as blocks.

When you load the program, the installation routine asks on which pull-down