ProVector 3.0

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Our Amazing Artist Discovers that Drawing can be Fun *AND* Productive.

There are two types of 2D graphics that can be created on a computer. The first is represented by programs like TrueBrilliance and DPaint. These are called ''paint programs'', and their output is very colorful. What they lack, no matter how good they are, is clarity when you either reduce their size or when they are enlarged. Edges are seen to exhibit that class one nightmare,.. the dreaded jaggies. Even when the edges are anti-aliased in a painting program (smoothed into surrounding colors), it only trades a definitive bluriness for a hoped-for sharp edge.

Drawing programs differ greatly from painting programs. Instead of storing the image's pixels when a graphic is saved, a drawing program saves the vectors or directions that the lines contain. Because of this, no matter how large or how small the graphic may become, it always has the same ''resolution'' independent of both printer and screen. You may still see jaggies on the screen, but this is because the screen is incapable of resolving the image as it really exists.

When printed out on paper (or when imaged on special slide/film cameras capable of displaying the truth in vector images) the jaggies can become 100% invisible. The only way that anything like this can be achieved in a painting program is to work in screen sizes that require ridiculous amounts of memory to sustain huge images, and then to display them on extremely expensive monitors that support these resolutions (and the computers and graphics cards that deliver appropriate scan rates to drive the monitors, with which the Amiga has a problem).

ProVector

ProVector, now in its third incarnation, is a drawing program (like its name) which allows you to work in vector rather than pixel formats. This latest version supports AGA Amigas as well as all the rest, so drawings can exhibit fill ranges which include up to 256 colors or shades of gray. There are three separate, yet integrated, modules that make up the program: RexxRequest, PSImport, StylusTracer, and ProVector 3.

RexxRequest

ARexx is both a language and a handshaking capability that allows Amiga software packages to speak with each other, so that actions taken in one program can effect and utilize another. Most of the higher end Amiga painting and drawing software is ARexx compatible, and ProVector 3 is no exception. ARexx scripts can act like magic buttons that automate loads of processes which would otherwise clutter up tool boxes and add chaos to any interface.

PSImport

ProVector has the unique ability to allow for the importation and visual display, as well as the editing, of PostScript files. Text objects, gradient fills, and clipping paths (masks) are all supported. The resultant images can be saved out as PostScript, D2D, Adobe Illustrator, and IFF formats.

StylusTracer

If I was to choose only a single reason why you might want to investigate PV3, it just might be the StylusTracer module. I have used just
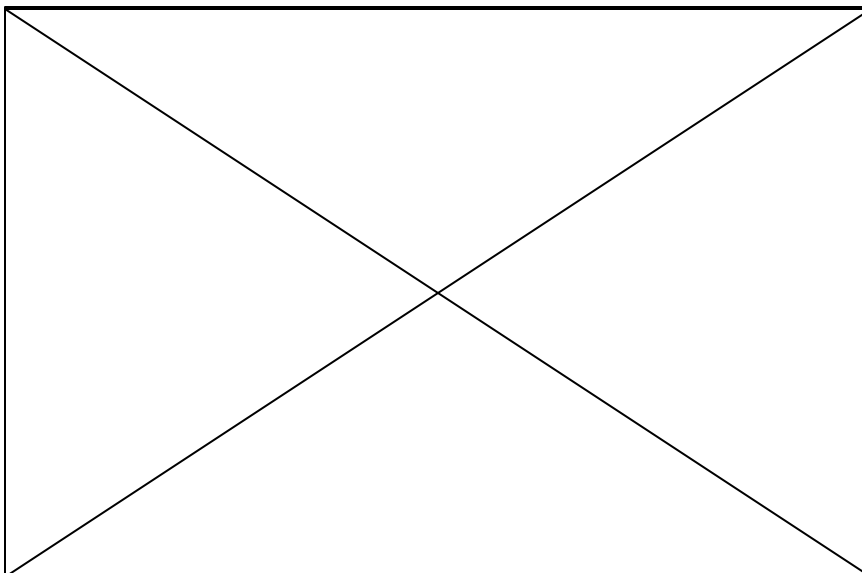

Figure 1. With PV3's Blend mode, any number of transitional stepped graphics can be generated between any two vector objects.

about all of the tracers on the market, on the Amiga and elsewhere. Tracers perform the function of turning bitmapped graphics into vector graphics. StylusTracer is the best one that I have ever used.

I spent many hours attempting to translate a few pen and ink illustrations and logos that I designed into vector graphics with other programs, always with unsatisfying results. StylusTracer gave me the results that I required, and did so in a minimal amount of time. You can also use Tracer's on-board drawing tools to create a vector graphic from scratch. This module is very fast considering the complexity of the calculations it must perform. Results are absolutely first rate.

PV3, the main program

Aside from the expected drawing tools, PV3 lists a good many advances over its previous version. Chief among these is its support of AGA architecture. Smooth 256 color gradients are now possible with this new added feature. The interface looks much cleaner and up to date than the last version as well.

Of note are the new gradient fill options, which should be addictive enough for you to play with for a long while. These are accessed through a newly designed requester that lists both Fill and Line options. The gradients themselves fall into four groups: Conic, Linear, Radial, and Shape. Each of these is open to any of six transitions, as well as being addressable as to either color or gray scale percentages. PV3 adds both HP-GL and Adobe Illustrator file formats. Extremely anti-aliased 24-bit output has also been added so that you can port the PV3 graphics into a paint program and combine the best of both worlds.

Text manipulations are a first priority interest of vector graphics users, and PV3 comes to the table with extensive text creation and manipulation capabilities. One of my favorite uses of the program is to create lines of text (yes, you can have more than one line composed at a time), translate the
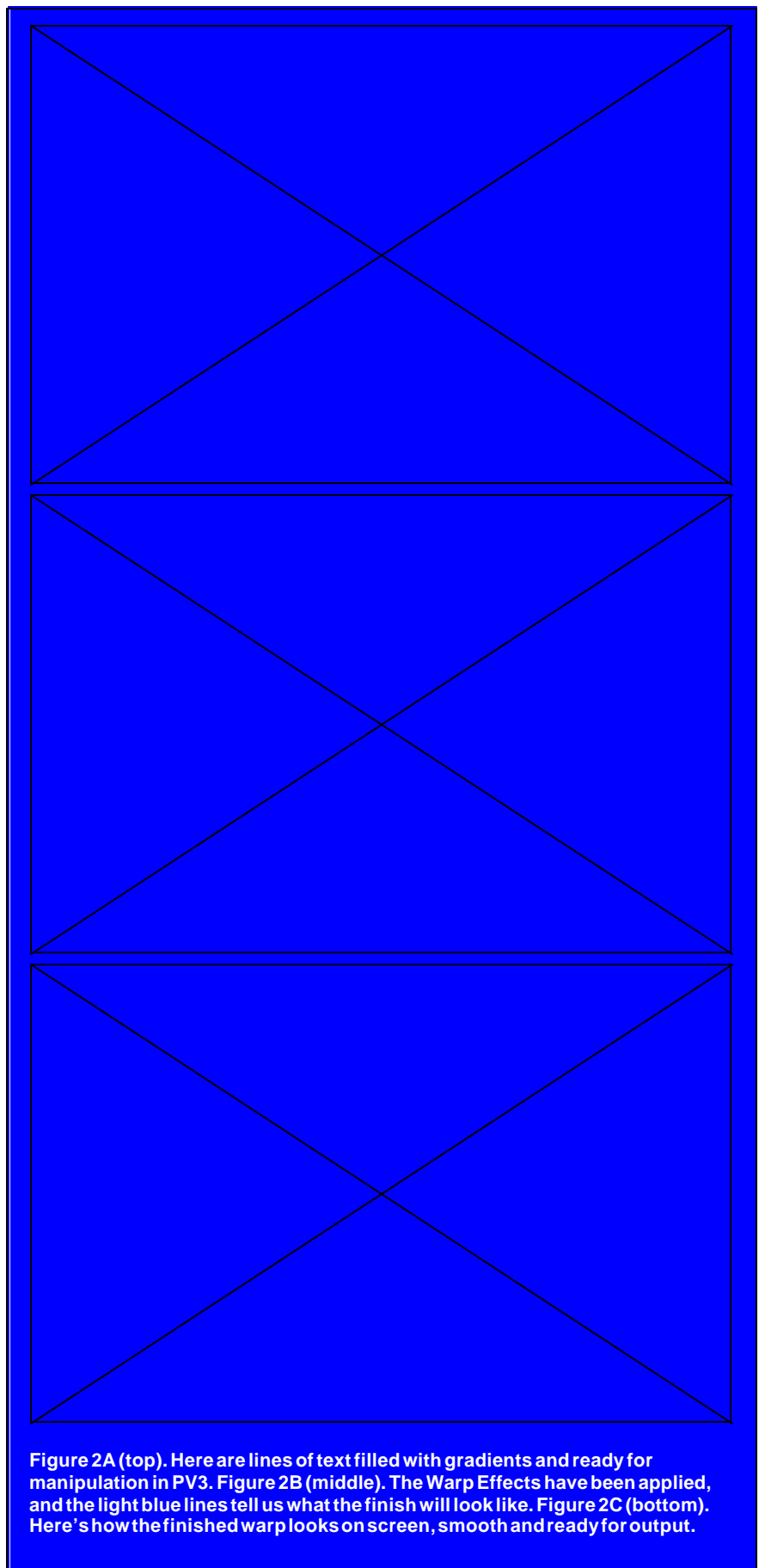

Figure 2A (top). Here are lines of text filled with gradients and ready for manipulation in PV3. Figure 2B (middle). The Warp Effects have been applied, and the light blue lines tell us what the finish will look like. Figure 2C (bottom). Here's how the finished warp looks on screen, smooth and ready for output.
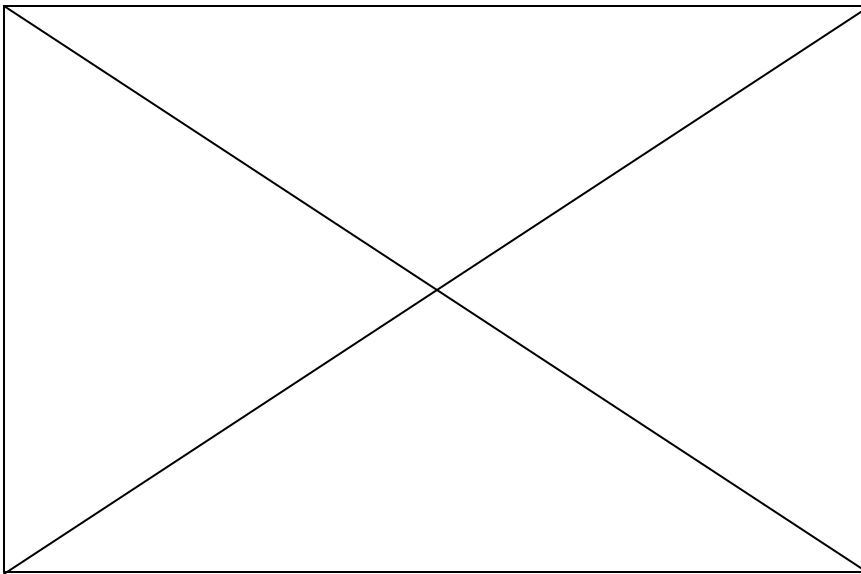
Figure 3. No other software that I used, on any platform, could translate this bitmap into a vector graphic. PV3's Tracing module did it with ease, and allowed me to then manipulate it further with the Warper Effect.

objects between two selected key-framed objects on the screen. All of the PV3 effects options work flawlessly.

Drawing

There are four basic drawing tools or methods in PV3: freehand curves, line/curve tool, polygon, and ellipse. No matter which you use, the shape is written to the screen as a series of controllable Bezier curves. What makes ProVector an easier to manipulate drawing program is the way that its Bezier curves can be controlled. Instead of the standard linear adjustment points, ProVector's Beziers are controlled by an adjustment button that shows its connection to both ends of the curve. This makes controlling the length and curvature much easier. Bezier curves are an example of an engineer's drawing method, and artists brought into computer graphics from the traditional media, as I was, need intuitive grasps on the new tools. In ProVector, this need is accounted for.

letters to objects, and then to alter the entire shape by applying the new effects tools.

Oh, didn't I tell you about the effects tools yet? Well, allow me to rectify that oversight. The effects tools operate on any vector based object on the PV3 screen. They include Skew, Mirror, Warp, perspective, and Blend. Two of these deserve a fuller explanation.

Warp is my favorite. Selecting an object and then applying a warp to it gives you maximum control over both the object and any data it contains. A text object, for instance, is a rectangular area that encompasses the entire text object block. Altering the control points around the block with the Warp effect produces text that flows in any pseudo 3D perspective you could ever desire (not that we should neglect the fact that PV3 also allows you to wrap text on a curve when needed).

The Blend tool, like its counterpart in other Amiga vector graphics software, allows you to create any number of in-between morphed
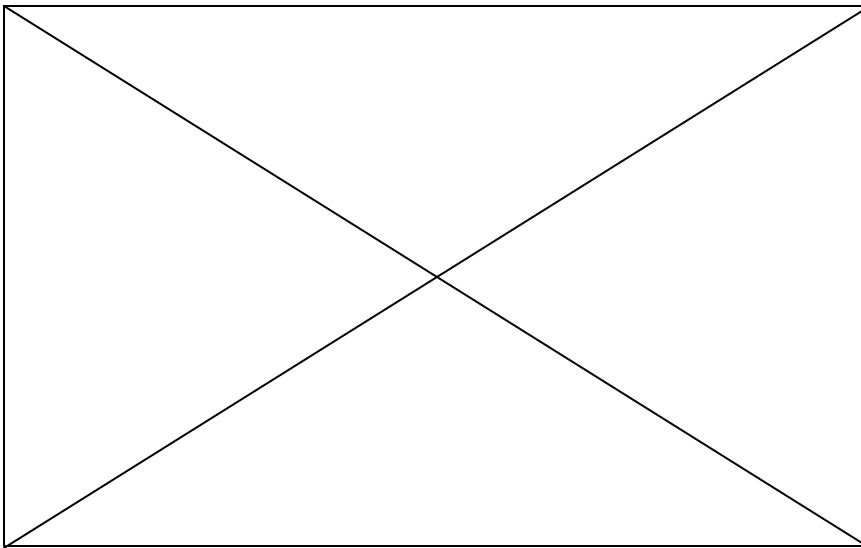
Conclusion

For those of you crying alligator tears about the lack of Amiga vector graphics software of high quality still being upgraded, Stylus replies by putting their development where their PR is... in the marketplace. The program comes with both an older manual for the 2.1 edition of the software, as well as razor-edge updated docs in easily accessible AmigaGuide files on the disk. This software goes where even Adobe Illustrator fears to tread, and with a little support from the Amiga community, it'll go even further.

That's all for now kids. Enjoy! And, oh yes, see you in ROMulan space.

Figure 4. After exporting this symbol and writing it to a 24 bit file, it was imported into Digital Creations' TrueBrilliance where the background was added. A true marriage of vector and bitmap methods, thanks in large part to ProVector3.

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