

ILDA BEAM BRUSH STANDARD: INTRODUCTION

ONE OF THE LIMITATIONS OF REPRESENTATIONAL LASER GRAPHICS is that the beam width is almost always a single size. In other words, it is not usually possible to draw with a larger "brush" than the normal, unmodified beam size.

By projecting through mildly textured glass or similar lumia effects, an enlarged beam can be achieved. Many companies do this; Laser Images' excellent work comes especially to mind. And for one company at least, enlarged beams are more than an effect, they are a necessity. With AVI's striking ChromaDepth 3D process, enlarging the beam is often necessary to maximize the three-dimensional effect.

However, the lumia technique does not permit control of intra-image beam width. This puts laser at a disadvantage compared with other media. If the laser beam is to be a true brush, not only its position and color must be controlled, but also its size.

Doing this opens up a new level of realism. Phenomena such as clouds and smoke can be drawn with true wispieness rather than hard edges. Objects appearing in the background can be slightly out of focus to help emphasize their depth. Subtle touches such as the blush of a woman's cheek are easily done with a single stroke. Even area fill becomes possible with a wide brush and a few strokes.

The Beam Brush Standard

In the last five to ten years, major advances in laser graphics have included the widespread adoption of 3D databases and RGB intra-image color. Pangolin believes one of the next advances will be intra-image beam sizing. To support this, we are developing a computer system which includes "beam brush" capability. This is a relatively trivial software task, requiring just one or two more bytes per point and one or two additional output channels. We believe that not only our own system, but many others can easily incorporate beam size control.

The problem is the sizing device – or more specifically, in the many ways to control sizing. We feel it would benefit the entire laser industry to set standards on how this is handled, in advance of the new technology. With these standards, all sizing-capable projectors would

