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Pepper Ghost

An old magician's trick is digitized to project hologram-like effects. BY R.J. KING

Rukmal Fernando never stopped pursuing innovation, even when demand for his design services plummeted 80 percent due to the global financial crisis in 2008. "We kept our design team in place and kept working with emerging technology," says Fernando, president of Breeze Design Studio in Birmingham's Rail District.

A multifaceted visual communications firm, Breeze Design Studio works directly for clients or as part of an advertising and marketing team. Globally, the company is a leader in video mapping, where the exterior architectural elements of a building are mapped using digital cameras. Once all of the details are merged using computer software, Fernando and his team can project 3-D-like images on the surface of a structure to make it take on the appearance of a fashion model, a museum, or an automobile.

"We've done more than 100 video mapping projects globally, and it's just starting to catch on in the United States," Fernando says. "We did two BMW launches and a Porsche launch in Asia. We're also getting some traction with Pepper Ghost, our new hologram-like offering."

The special effect harks back to an illusion technique called Pepper's Ghost, first used by magicians and theater producers in the 1930s. By using light and glass, reflected objects can be made to appear as ghostly translucent images. Anyone who has visited the Haunted Mansion at a Walt Disney theme park, where ghouls and goblins seem to dance in a physical ballroom, is familiar with Pepper's Ghost.

Bringing the illusion technique to the modern day, Breeze Design Studio places a thin computer screen in the top of a display box outfitted with glass panes. The result is a 3-D-like image that appears to float or move within the interior space. By reflecting an image of fish swimming in the ocean, for example, people peering into the display case can easily mistake the projection for an expensive aquarium.

"It's sort of a poor man's version of a hologram," Fernando says. "The largest one we've done is 47 inches (diagonal). We're beginning to rent them out to hotels, auto dealerships, jewelry stores, trade shows, and restaurants."

The studio can create content or use a client's existing assets — like a commercial, a video, or photos — to create illusions within the display case. In one instance, Fernando and his team used a commercial for the Lincoln MKZ to make it seem as if the sedan was driving down a virtual road. The vehicle changes colors, as well.

In another version, a Ford SUV looks like it is climbing a mountain. "We rent the display box for a few hundred dollars a month, and if you have an existing commercial, there's no reason to spend thousands of dollars on a major production," Fernando says. He suggests a fine jewelry



» **SPECIAL EFFECT** Rukmal Fernando, president of Breeze Design Studio in Birmingham, with a display box equipped with the hologram-like image of a fashion model. Called Pepper Ghost, the technology is aimed at display merchants and others.

store could use the technology to display a diamond necklace in a store window, with no fear of a possible theft.

"In England, a government office for licenses uses a virtual receptionist and touch screen technology to provide answers to routine questions," Fernando says. "I think it's the wave of the future. More and more, you're seeing routine tasks become automated." **db**