PROFILE

NAME: Southpaw Enterprises
LOCATION: Dayton, OH
FOUNDED: 1978
WEBSITE: southpaw.com

CHALLENGE

Provide therapists who serve clients with mental and emotional disabilities such as Autism or Alzheimer's disease with flexible projection technology to create individualized multi-sensory environments that are comforting, relaxing and calming.

SOLUTION

The Epson LightScene delivers an adjustable base allowing a therapist to pan, tilt or rotate projected images 360 degrees. LightScene uses solid-state laser technology without a mercury halide lamp, for low-maintenance, cool-to-the-touch safety.

Simple Pleasures

Epson LightScene Enhances Multi-Sensory Environments

From audible and visual to taste, tactile and even proprioceptive, we are constantly inundated with stimulants from the world around us. Frequent exposure to various stimuli at a young age typically results in more efficient responses—understanding how things look and feel, personal preferences, and how people and situations relate to one another. These basic elements can help control decision making, and eventually leads to behavior driven by the unconscious mind. However, it's not always easy for everyone to learn and adapt to these different stimuli.

Imagine a calm place with pleasant surroundings and soothing stimuli where one can feel at peace, full of joy. For most, that calming place may be a cool forest or a beach at sunset. But an autistic child may need something far simpler—a place where he or she can focus on interactive panels and comforting tactile objects, or pictures of familiar objects displayed in a favorite color.

In the 1970s, therapists in the Netherlands invented such a place, the *Snoezelen room*, also known as a multi-sensory environment. A place for all ages that encourages relaxation, stimulation, development and therapy, *Snoezelen rooms* were developed for those with mental or emotional disabilities such as Autism or Alzheimer's disease.

Founded in 1978 to manufacture and distribute specialized equipment for occupational therapists, Southpaw is the only

American manufacturer of equipment for these rooms. In 2009, Tom Marshall joined Southpaw as director of sales and training for multi-sensory environments, to help establish the company's own multi-sensory product line. Marshall recently introduced a new video system leveraging the new Epson LightScene accent lighting laser projector.

Now, for the first time, therapists have virtually unlimited flexibility in choosing images that are most pleasing and calming to their clients. And with the LightScene's unique form factor and brilliant light source, they can project this personalized material exactly where a disabled client may best be able to gaze, showing crisp, colorful images on virtually any material anywhere in the room.

> ***The Epson LightScene offers a low-maintenance, laser light source solution, while remaining cool to the touch and safe for the therapist to handle.***

Quiet Time

The original multi-sensory rooms were simply quiet places where people who were hypersensitive to stimuli could go to relax and feel in control. Created by Dutch occupational therapist Ad Verheul and music teacher Jan Hulsegge, they aligned with the practice of sensory integration therapy, pioneered by A. Jean Ayres in the 1960s and '70s.

Soon other occupational therapists (or OTs) began building and using these rooms, and they began bringing in simple devices their clients could focus on and feel calmer. By the 1980s, companies in the United Kingdom began manufacturing equipment specifically for these rooms, including colored tubes that generate bubbles, vibration pads, fiber optic lights, and weighted blankets. American companies began importing and distributing their products.

> ***"We really like the sharpness of the LightScene images."***
>
> —TOM MARSHALL, DIRECTOR OF SALES AND TRAINING FOR MULTI-SENSORY ENVIRONMENTS, SOUTHPAW

Since their conception, multi-sensory rooms have evolved and implementation has expanded into a multitude of applications. What was once a specialist niche therapy is now a commonplace in schools, hospitals, long term care facilities, dementia care units, mental health facilities, churches, community centers, community pools, rehabilitation facilities, and in many households.

"I think of my dad," Marshall explains. "Near the end of his life he would startle easily, because he had a lot of stress just trying to compensate for an inability to see and hear."

As a therapeutic space, the multi-sensory environment has several important characteristics.

First, it's separated from the sounds and sights of the outside world. Lighting levels are reduced, and it includes devices that produce simple stimuli.

Second, it is normally used with one client at a time, usually for about 30 minutes. "We want control of every bit of stimuli in that room, so we can manage that one person's behavior," Marshall says.

Third, as much as possible, the client has the ability to choose the stimuli he or she prefers. The equipment in the room may stimulate sight, hearing, smell, the vestibular system (which orientates the body to gravity), proprioception (the perception of movement and spatial orientation), and touch via texture, vibration and pressure.

The client may or may not be profoundly disabled. "Someone could be mild on, say, the autism spectrum but not have the same sensory filters that most people do," Marshall explains. And while these rooms benefit those who are overly-stimulated, "sometimes you'll have a child who doesn't sleep well at night, or who may be drowsy from medication. But once in the sensory room, the therapist can bring that child up or down to a reasonable level of attention, ready to go back into the classroom."

"We give clients the opportunity to seek out whatever stimuli interests them, and there may be one particular item that sooths or calms them, gives them joy," Marshall explains. "But every client is different, so there are different items in the room to appeal to their different needs." Sensory rooms are most often built in schools, nursing homes, various types of residential facilities and in sheltered workshops. For facilities without a dedicated room, such as hospitals, Southpaw offers mobile versions of its equipment. Oftentimes parents buy equipment that may appeal to a person with Autism Spectrum Disorder or disabled child.

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The Video System

Projection has long been a staple in these sensory environments, but the devices have been very simple. Until recently, Southpaw offered just three projection devices: one that projects spots of light to simulate the night sky, and two more that use special effect wheels that slowly rotate, creating moving images of clouds, flowers, shapes, or liquid-based colors.

One reason that Southpaw has stayed with these simple projectors is that the therapists need moveable, flexible systems. "We don't tell clients where to direct their gaze or where to go within the room, and some may not be able to look in a given

direction," Marshall explains. "So, we need to be able to move the image around, to get their attention and motivate them to explore the room."

For example, if someone is lying on a vibration mat on the floor, "we want to throw the image on the ceiling. Or for someone who is very withdrawn, we may shine an image at their feet, and then move it away to try to get them to move." Up until now, there hasn't been a digital projector capable of moving easily in these ways while in use.

The Epson LightScene comes standard with a base that allows the therapist to pan, tilt, or rotate it 360 degrees. And since LightScene leverages solid-state laser technology without a mercury-halide lamp, it offers a low-maintenance, laser light source solution, while remaining cool to the touch and safe for the therapist to handle.

Typically, Southpaw will mount the LightScene on one of their mobile cabinets, or Rovers, that may also hold a stereo system and vibration control unit, bubble tubes or other gear. Since the LightScene includes powered optical zoom, plus powered focus, it's even easier to put the image exactly where the therapist wants.

Working with occupational therapist Linda Messbauer, who often consults with Southpaw, Marshall has designed a simple video player which will be preloaded with a number of looped videos and allow the therapist to create more. "We looked at soothing images with a lot of primary colors, and we have created videos of running water, clouds, and abstract shapes derived from nature," he explains.

With the LightScene and the new Southpaw video player, therapists will be also be able to load their own images. Some children with ASD, for example, are fascinated by trains. Alzheimer's patients may find comfort in photos of their families, pets or particular periods of their lives. The new player will connect to the LightScene with an HDMI cable and, critically, connect wirelessly to Southpaw interactive controllers.

One controller, the Interactive Super Switch, uses large, colored buttons to allow clients to control a variety of stimuli in the sensory room, which the therapist presets. Used with the video player, it allows a simple push-button choice of any of eight looped videos.

With another, the Power Cube, the client selects from preset effects or videos simply by turning an 8-inch or 11-inch foam cube. Turn the cube so the yellow side is up, video number one will play; green side up, video number two will play, and so on. It's a simple way to give someone control who may not have the coordination to push a button.

"We really like the sharpness of the LightScene images," Marshall says. "For people with ASD and with certain mental health issues, including Alzheimer's, the worst thing you can do is show any kind of distorted image. With LightScene, the image is always very clear, and the colors are crisp and bright."

The views and opinions expressed in this article are those of the individual. Individuals were not compensated for this article.