## 3-D Ride Photography... Without the Glasses!

While the increase in popularity of 3- D video the past few years has been dramatic, the display form that requires its viewers to put on 3-D glasses is experiencing a resurgence after more than 60 years in the marketplace.

Image+, a provider of ride photography systems headquartered in Stadskanaal, Netherlands, introduced a product that has never been seen before in the attractions industry: 3-D ride photography.

The company rolled the system out at Theme Park and Resort Slagharen in the Netherlands. Guests are photographed with a custom-made 3-D camera, and within a few seconds those images are converted into 3-D and shown on 3-D monitors. The real perk comes when the 3-D effect can be viewed *without* the need for 3-D glasses. Then, if the guest wants the photo, it is printed in 3-D by a specialized printer.

The system, called "3D for Fun," is a joint effort between Image+ and two science centers—the Vision Center of the Noorderlijke Hogeschool Leeuwarden in the Netherlands, and the HochSchule Emden in Germany.

Jan Bijl, founder and managing director of Image+, says the groundwork for this system was laid a few years ago with the development of the 3-D WowX monitor by Philips. This monitor showed marked improvement in 3-D while not requiring viewers to wear 3-D glasses.

3-D camera on Ripsaw Falls flume ride at Theme Park Slagharen (above); Cadcam drawing (left) of the support system for Slagharen's that allows them

two 3-D cameras that allows them to be properly aligned

Bijl explains why making people wear 3-D glasses is such a huge impediment to the enjoyment of 3-D, especially in ride photography. "It's all about emotion," he says, "and when I have to ask people to put on glasses to have this emotion, I ask them to cross a border, because that whole [process] and the time lost spoils the impact—it takes away from the spontaneity. They need to immediately see the effect without having to put glasses on."

Slagharen is piloting the system on a flume ride while Image+ continues to make improvements, like testing new algorithms to speed up the 10 seconds it currently takes for the image to be processed and displayed.

Of course, a ride photo is just a flat sheet of paper and can't project movement like a video display, so how does it deliver a 3-D image without the use of polarized 3-D glasses? "Your eyes are fooled, so to speak, and each eye falls onto a different look on the picture, and that causes the 3-D effect," says Bijl. "One eye is forced to a certain lens and the other eye is forced to another lens, and that produces a depth effect. So, you see the water drops from the flume coming up in front of you and see yourself seated behind the drops and the flume itself behind you."

He asserts that ride photography truly needs a new product to energize it. "When you go back in early days, you could pick up your photo in half an hour's time," he explains. "Then you saw major breakthroughs in production sales when they were able to produce photos faster. Then sales dropped, so we have to either lower the price or come up with a completely new kind of product."

Bijl acknowledges that there are one or two challenges 3-D ride photography must overcome, like the cost of 3-D printers, which are currently around \$29,000 each. Another major obstacle is the fact that 3-D ride photos are more expensive than standard photos. "But all that will change," he says confidently. www.image-plus-digital.com

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