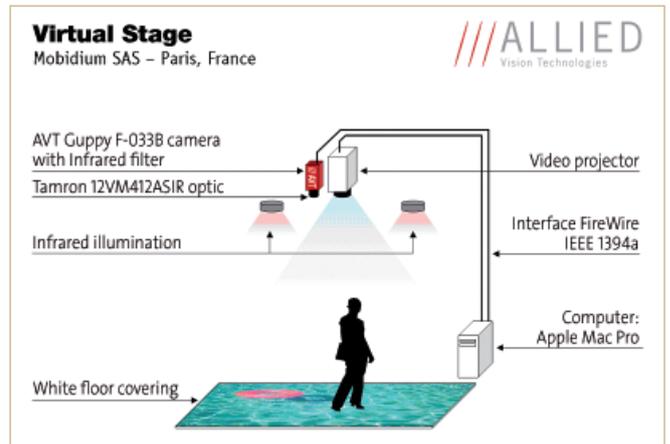


► Advertising in the 3rd dimension

STEMMER IMAGING are pleased to present an advertising application which has been made possible using STEMMER IMAGING supplied products. The application has been produced by Mobidium, a company that specialises in interactive video solutions. With the 'Virtual Stage', advertisers have access to a way of getting their message across: the floor. This innovative application uses the latest digital imaging techniques and cameras from Allied Vision Technologies to transmit advertising messages in an original, eye catching and interactive way.

Anybody can now walk on water! Visitors to VISION, the industrial image processing trade fair in Stuttgart, were able to see this new application in action. On the Allied Vision Technologies stand, the digital camera manufacturer presented visitors with their first view of the Virtual Stage, a totally new and spectacular multimedia application: The image of a water surface is projected onto the floor and when a person then steps on this image, it will react just like real water. Walking over this virtual water pool, the visitor sets off ripples on the water surface or makes virtual goldfish flee. Change



of image: The virtual pool turns into a pile of leaves. While the visitor walks over the image, he makes the leaves fly around him with striking realism.

► A new advertising medium

As romantic as they may seem, these aquatic or autumnal effects are only two examples of the possibilities offered by interactive projections: The images and animations can be individually customized to set the perfect scene for a brand, logo or product on either floors or walls.

This technology mainly addresses the needs of advertisers looking for new advertising media: The Virtual Stage is able to attract the attention of people who are oversaturated with information by making the consumer participate in the message transmitted onto the floor. Whether at a trade fair, a commercial convention, a press conference or at the point of sale, the product in question is presented in an effective and innovative way.

The Virtual Stage is produced by Mobidium, a French company that specialises in developing and marketing entertaining and intuitive interactive multimedia animations. The secret of the virtual floor lies in the use of the latest image processing technologies providing an immediate and realistic level of interactivity. The movements of a person walking over the floor are analysed in real time and the projected image is modified almost instantly by the computer.

► FACTS

Industrial sector: **Multimedia**
Task: **Interactive advertising**
System integrator: **Mobidium**

Imaging components supplied by STEMMER IMAGING:

- | | |
|---|--------------------------------------|
| <input type="checkbox"/> Illumination | <input type="checkbox"/> Acquisition |
| <input checked="" type="checkbox"/> Optics | <input type="checkbox"/> Software |
| <input checked="" type="checkbox"/> Cameras | <input type="checkbox"/> Systems |
| <input type="checkbox"/> Cabling | <input type="checkbox"/> Accessories |

► OUR PARTNER MOBIDIUM

Mobidium (www.mobidium.fr) is a service provider specialising in expert consulting, interactive, innovative and creative products and solutions for perspective representation, event management and design. The company provides creative, technical or operation consulting services and support for projects aiming to create new, innovative animation technologies. Products: Sensitive Floor, Sensitive Wall, Sensitive Table, CORE, Intuiface, interactive Multi-touch tables and more.



► An innovative image processing technology

The Virtual Stage is based entirely on the use of the very latest real-time image acquisition and processing techniques. The floor is just a horizontal screen and does not contain any sensor. An image is projected onto the floor by a projector that is suspended from the ceiling and connected to an Apple Mac Pro. Then, a digital camera, which is also suspended and connected to the same PC, detects the presence and motion of a person on the projected image. This information is analysed in real time by the image processing software, which has been developed by Mobidium. Using the position and motion of the person, the program determines the appropriate modifications to the projected image, so that when the visitor steps into the virtual pool, the applications generates ripples in water or the movement of fish in the opposite direction.

The image produced on the floor can be larger or smaller depending on the projection height. Large surfaces can be covered by

joining several floor 'regions' together in a mosaic, thus forming one single large image.

Throughout the development of this system, Mobidium was supported by the french subsidiary of STEMMER IMAGING, the French leader in industrial image processing. "The precise localisation of the person on the floor, as well as the rapidity of image acquisition, transmission and processing are all crucial to the success of this kind of application", explains Patrice Etienne, Managing Director of Mobidium. The camera therefore plays a crucial role in the system's ability to react instantly to the visitor's interactions. "To create a multi region 'mosaic', the system must also be able to cope with the same number of cameras as regions on the floor".

► Guppy is watching you!

On the recommendation of STEMMER IMAGING Mobidium selected one of the Guppy series of digital camera by Allied Vision Technologies. The AVT Guppy uses the FireWire interface to capture and transmit images at a rate of 58 frames per second and with a resolution of 0.3 megapixels (VGA). The monochrome camera is equipped with an infrared filter which, in combination with appropriate infrared illumination, prevents potential interference due to

any changing ambient light conditions. "The Guppy is perfectly suited for the Virtual Stage", says Patrice Etienne with delight. "This professional camera guarantees reliable operation and high image quality. Besides, it's FireWire interface is ideal for multi-camera operation and is perfectly compatible with the Mac computers we use".

► A new growth market

The Virtual Stage can be used for large events such as trade fairs, conventions or fashion shows. Recently for example, it has been used at the anniversary celebrations of Aramco, the Saudi-Arabian oil company, at PR events related to the merger of the SUEZ and GDF groups. It was also used when the latest model of the HTC Diamond Touch mobile phone was launched. The cosmetic company Clarins has also used the Virtual Stage to present its products.

In addition to these unique applications, a simple, turn-key version of the system is available for permanent use at the point of sale, to attract the customers' attention to a brand, a special offer or a specific product in a targeted manner.

In a world oversaturated with advertising messages, the Virtual Stage is an example of how the clever use of digital image processing can help advertisers attract consumers' attention, allowing them to stand out from their competitors by transmitting their messages in an entertaining and interactive way. The Virtual Stage is an example of how industrial image processing can go beyond the traditional production line automation application and enter new and promising markets, such as the marketing and advertising sector.

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