

## 4D-Vision® Ltd. - A better way to see the world

4D-Vision® Limited was established in August 1998 with the aim of developing, marketing and producing new techniques, products and applications for autostereoscopic imaging. So far, the company has been extremely successful, its research resulting in the registering of twenty-seven patents for an autostereoscopic technique for projecting visual images. 4D-Vision's techniques project images in 3D, which helps observers view large stretches of terrain or even gain a unique insight into the internal working of the human body. One technique in particular projects a variety of visual perspectives, thus presenting the observer or observers with information that they can analyse without having to use additional viewing apparatus. During the Photokina exhibition in Cologne on 20 September 2000, Armin Grasnack, CEO at 4D-Vision, launched the first real 3D movie sequence using methods developed by the company. The success of the sequence was immediate, attracting the interest of 3D specialists around the world. It proved a major step towards the company's vision of becoming market leader in the area of spatial representation and establishing 3D-TV worldwide by 2010.

As regards to 4D-Vision's technique there are eight or more privileged points of perspective that come into play. Information in separate parts of a specific point of perspective becomes visible at a particular positioning of the eyes, while from a different position, other information from a different perspective becomes visible. This occurs due to the directions of expansion over the screen being dependent on the wavelength of the selected perspective, in line with the technique of 4D-Vision®. The combination of this partial information into the whole of the points of perspective is represented by the subpixels of a viewing apparatus. According to this technique the generation of the necessary points of perspective can be rationalised in this way; although the eight or so perspectives are necessary, this requires nowhere near as much as eight times the effort. Therefore it becomes possible to create the perspective where autostereoscopic depictions of images can show images in motion in real-time. (see illustration)

Besides enabling the company to achieve its objective of establishing 3D-TV worldwide, the power of 3D representation in line with the 4D-Vision® technique has opened up a practically limitless field in many areas of day-to-day life, e.g. advertising and marketing. With the installation of attractive "Points of Sales" or "Points of Interests" at exhibitions, fairs etc. and by using large-size 3D displays, a message aimed at potential consumers does come across much more effectively. This is due to the new 4D method transferring a greater amount of information through realistic representation.

