MEDIA ALERT

Enjoy football in 3D, immersed in the match

3D, 4K and 360° images will trigger a revolution in the world of video

Manufacturers of video cameras and screens are investing big time in the development of equipment supporting the latest video formats, such as 3D, (ultra HD) 4K and 360° video.

But new video formats also create numerous software challenges. Not only must new technologies be developed to capture those images; there is also a need for more efficient transportation of heavy 3D (multiview), 4K and 360° video files over the existing Internet infrastructure. And another question that needs to be answered is how those new video formats can help us create an optimal viewing experience.

These are challenges close to iMinds' heart. iMinds researchers at the universities of Brussels, Ghent, Hasselt and Leuven have closely collaborated in the past eighteen months to realize important breakthroughs in this domain. They recently shared their findings with a number of Flemish industrial partners. A few remarkable results:

iMinds researchers calculate high-performance images for multiview screens about 300 times faster

By means of autostereoscopic, multiview screens, one can watch video images from different perspectives by moving back and forth in front of the screen, without the need for any special glasses.

"In theory you would need a separate camera for each of those perspectives, which is impossible in practice. The Holografika screen we use for our experiments, for instance, can accommodate some seventy views," says **Jan Aelterman (iMinds - IPI - Ghent University)**. "Those views are captured by a limited number of cameras and the transitions between them are calculated mathematically. But this requires massive amounts of processing power and time: a whopping 181 hours for a 45 second video. Thanks to iMinds, these calculations can now be processed 300 times faster. What used to take 181 hours, is now done in 37 minutes."

"Furthermore, our approach allows for more flexibility in terms of camera set-up and provides higher-quality transitions between viewing angles," adds **Steven Maesen (iMinds - EDM - Hasselt University)**.

"Holografika is pioneering 3D Light Field display technology. Our HoloVizio system pushes 3D to its limits, providing the natural 3D experience that people expect," concludes **Tibor Balogh, CEO of Holografika**. "Supplying the iMinds teams with our state-of-the-art 3D equipment has been an exciting journey – as their research into 3D will soon make this technology available towards a broader audience."

About iMinds

iMinds is Flanders' digital research center.
Building on the expertise of our 850+ researchers at 5 Flemish universities, we conduct strategic and applied research in areas such as ICT, Media and Health.

We translate digital know-how into real-life products and services together with our research partners.

And support young entrepreneurs and start-ups in the successful market introduction of their ideas.

About Holografika

Holografika Ltd. is a Hungarian 3D display company developing proprietary holographic technologies and HoloVizio™ 3D displays. Holografika offers a high-end solution for the glassless, true 3D visualization. The patented light field technology provides a natural 3D view in a wide FOV with a continuous horizontal motion parallax unlike other 3D visualisation solutions. It can also serve as a basis for future 3D television, free of eye-fatigue or headaches, frequently encountered while watching other 3D technologies.