

Glasses-free 3D displays for any consumer device: Physicist nominated as a finalist for the European Inventor Award 2024

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/EINPresswire.com/ --- American-based inventor David Fattal and his team have created a 'glasses-free 3D' that provides the appearance of real depth both into and out of phone, tablet and PC screens



- Users can switch seamlessly between the 3D view and 2D and back again without any type of additional equipment, boosting gaming and education and further enhancing human communication

- Fattal is a finalist in the 'Non-EPO Countries' category, competing against a Brazilian and a Japanese team. The winners will be announced during the Award ceremony on 9 July in Malta

- Voting for the [Popular Prize](#), awarded by the public, is open as of today

As remote work and communication become increasingly prevalent, the quest to replicate the immediacy and impact of in-person interactions has led to remarkable advancements. The development in this field has been astounding from video calling to team chat functions and the Metaverse, but nothing comes close to a face-to-face chat. Inspired by the hologram of a princess in a popular science-fantasy film, David Fattal and his team at Leia Inc. have taken this tool to its next level with genuine 3D viewing on any kind of display-based device, without the need for 3D glasses. This innovation is making communication more natural and realistic, and it is also being used in education and entertainment apps. In recognition of this work, United States-based David Fattal and his team are finalists in the 'Non-EPO Countries' category of the European Inventor Award 2024.

Making magic with light

Fattal's 3D Lightfield system is made up of a thin sheet of glass or plastic situated directly under the regular LCD display. Using trapped light similar to fibre optics and targeted reflection, the Lightfield 3D system creates a spectrum of slightly different versions of the screen image projected across the front of the screen. An eye-tracking camera ensures the eyes receive two

different versions of the screen image, giving the brain the illusion of depth, just as it is seen in real life.

"I was working in the lab and suddenly, there was a fire drill, and since we had been working on the sample for the entire day, I didn't want to leave it in the lab, so I just took it with me outside. We all gathered around and it turned out that the sunlight was being coupled on the edge of the sample, creating a myriad of beautiful light, multiple colours going in all directions", explained Fattal. "This is when I had the picture of this forest of light rays and I thought I could pair it with an LCD to have a really convincing display," he added, explaining his moment of inspiration.

3D projecting into the future

Currently, the 3D Lightfield technology is found mainly on Leia Inc.'s own Lume Pad tablets, the first of which was released in 2021, but there are significant plans in place to roll the technology out to other original equipment manufacturers. Continental AG have already announced that the technology will soon be available on their "Continental 3D display" advanced motor vehicle dashboards indicating an even wider potential market than previously assumed.

David Fattal and his team have been named as one of three finalists in the "Non-EPO Countries" category of this year's European Inventor Award, recognising outstanding inventors with inventions patented in Europe. The other finalists in this category are a Brazilian team led by Fernando Catalano and Micael Carmo, for reducing noise and carbon emissions in air travel, and Masato Sagawa from Japan for his contributions to developing superior permanent magnets. The EPO will announce the winners of the different categories during a ceremony livestreamed here from Malta on 9 July 2024. In addition, the EPO will reveal the Popular Prize winner, chosen by [online public vote](#). Voting will remain open until the day of the ceremony.

Find more information about the invention's impact, the technology and the inventors' stories here (<https://tinyurl.com/epo-news>).

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About the European Inventor Award

The European Inventor Award is one of Europe's most prestigious innovation prizes. Launched by the EPO in 2006, the award honours individuals and teams, who have come up with solutions to some of the biggest challenges of our time. The European Inventor Award jury consists of inventors who are all former finalists. To judge proposals, the independent panel draws on their wealth of technical, business, and intellectual property expertise. In 2024, the jury is chaired by Wolfgang M. Heckl. All inventors must have been granted a European patent for their invention. Read more here on the various categories, prizes, selection criteria and livestream ceremony to

be held on 9 July in Malta.

About the EPO

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