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## **IAA innovation: WayRay brings immersion experience to Holographic True Augmented Reality via new Deep Reality Display®**

**WayRay's new Deep Reality Display® will replace the traditional car dashboard with a new immersive holographic display that can show different parts of the virtual image at different distances. With the Deep Reality Display, the virtual world meets the real one and safely blends the future with the present.**

**Zurich, September 6, 2021** – At the IAA Mobility 2021, the deep-tech company WayRay is showcasing what the automotive future will look like from the perspective of the driver and passengers. With the help of its Deep Reality Display®, a new generation of Holographic True AR™ Displays, WayRay is turning the entire windshield into a virtual world where information about the vehicle, navigation, infotainment and the surroundings can be shown whilst blending perfectly with the real world.

Deep Reality Display® can show different parts of the virtual image at different distances. The display will have near-field information providing all necessary dashboard elements on it placed at a comfortable distance from the driver's eyes that is easy to "read" in the city or highway. Speaking of a far-field — it includes the immersive True AR™ multiple depth planes full of AR applications from on-ground navigation to infotainment and gaming content. This breakthrough feature further reduces disparity errors between the virtual image and the real world and results in an even more impressive and safe user experience. The technology is on the show with live demos at the IAA Mobility 2021 in Munich this week.

WayRay's Deep Reality Display® transforms the way drivers and passengers perceive the world when looking through any glass surface and radically improves the driving experience. It also revolutionises the internal design potential of vehicles which no longer need a physical dashboard. With the HUD industry valued at \$866 million in 2020 and projected to reach \$3.37 billion by 2025, it is clearly set to be a massive part of the automotive industry.

“Deep Reality Display® is an extremely important realization of WayRay’s most cutting edge technologies which will be rolled out commercially and at scale by the beginning of 2023. It is completely reshaping both the driver and the passenger experience, turning moments in our cars into more enjoyable, comfortable and safe adventures. The launch of this technology is an important milestone that brings us closer to our global mission – to make any transparent surface a window into the virtual world,” — said **WayRay Founder and CEO, Vitaly Ponomarev**, while outlining his vision.

### **State-of-the-art technologies connect vehicles with the surrounding environment in real time**

The Deep Reality Display® is a result of extensive research by WayRay. The Laser Unit creates a red-green-blue (RGB) light beam going through the special optic fiber to the Picture Generating Unit (PGU) with a unique optical system. It has a much lower volume than other technologies on the market and fits in any vehicle — roughly 3 liters compared to traditional Head-Up Displays (HUDs) with a volume of roughly 18 liters. Passing the PGU, the light beam allies the Holo-windshield, a key component of the Deep Reality Display®. It consists of Holographic Optical Elements (HOEs) recorded on a customized photopolymer and functional layers that meet the automotive requirements for glazing. Unlike traditional HUDs, WayRay’s technology is also immune to bright sunligh.

### **Benefits for drivers and passengers**

For drivers, the Deep Reality Display® means an extra focus on the road with the advanced driver-assistance system, plus subtle entertainment features with no distractions. The system ensures that the driver is only shown selective True AR™ apps, most suitable to the traffic situation and context at the exact moment. When the driver is safe and stationary, the Deep Reality Display® will also be able to show them entertaining AR applications, journeys, and surroundings-related content. In autonomous vehicles — the driver and passenger can immediately see whether the autopilot has identified a source of danger and quickly intervene accordingly.

For passengers, it offers a significantly enhanced in-car entertainment opportunity, with games as a new type of entertainment that can now be implemented with a never-before-experienced level of immersion, passengers becoming virtual characters perfectly interacting with the digitally-augmented real world.

### **Leading international partners on board**

WayRay’s highly innovative and unique technology was developed in close collaboration with exclusive partners of international stature. To develop the transparent photopolymer film for the volume Holographic Optical Elements (vHOEs), WayRay has exclusively partnered with one of the world's leading suppliers of high-tech polymer materials Covestro AG, based in Leverkusen, Germany. AGP eGlass, a premier global leader in designing and manufacturing high-tech automotive glazing based in Ghent, Belgium, is responsible for integrating this special thin layer in the curved windshield glass lamination, which enables the full potential of vHOEs.

## **Visit WayRay at the IAA**

You are invited to visit WayRay at the IAA at booth B41/B1 and test the Deep Reality Display® live. Interviews with Vitaly Ponomarev can be arranged via [kristina.mueller@wayray.com](mailto:kristina.mueller@wayray.com).

## **More info about Deep Reality Display®:**

Digital Brochure — <https://wayray.com/presskit/DRD>

WayRay's IAA landing page — <https://wayray.com/?IAA-2021>

## **About WayRay**

Founded in 2012, WayRay is a deep-tech company headquartered in Zurich. By controlling the entire research and development process itself — from product concept to prototype testing — it has evolved from a startup to a full-scale manufacturer. WayRay's goal is to create a future where every transparent surface is a window into the virtual world. WayRay employs about 250 people worldwide and has offices in Switzerland, Russia and the USA. In three rounds of funding, WayRay has received about \$100 million from Alibaba Group, Porsche AG, Hyundai Motor, JVCKENWOOD, China Merchants Capital and other investors. WayRay is partnering with world-wide leading industry partners such as Covestro and the AGP Group.