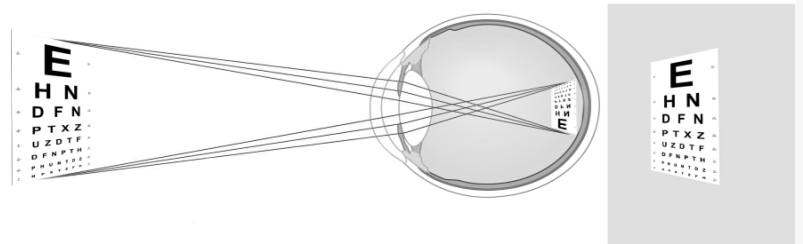


InventionHome® Inventor Creates Corrective Lens and 3D Printing Method to Help Correct Vision Distortion due to Warping

MONROEVILLE, PA, USA, March 19, 2024 /EINPresswire.com/ -- David Rand of Millinocket, ME is the creator of unWarp, a corrective lens and process created by a specialized 3D printer that utilizes optical coherence tomography (OCT) scans and subjective data from a virtually corrected Amsler grid. A qualified technician working with an ophthalmologist and/or an optometrist combine laboratory measurements of the retina and other eye surfaces, then combine that data with subjective input from the patient's virtual correction to an Amsler grid for creating a custom lens that will undistort vision which has been distorted (i.e., warped) due to undulations in the retina caused by a number of eye diseases including, but not limited to, epiretinal membrane, puckering of the retina, and macular degeneration. The created lens must be comprised of a non-rotating lens—current scleral contact lenses are the best solution to keep the unwarp freeform optic fix tracking with the eye and on axis.

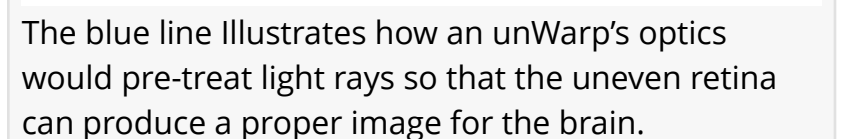
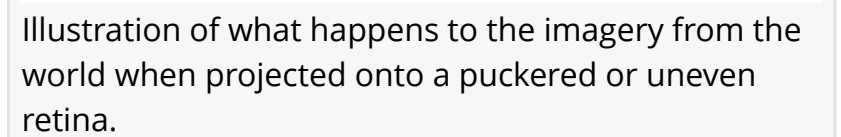
The retina is scanned and mapped using Ocular Coherence Tomography (OCT) or other topographical measuring devices like A-scan (Amplitude Scan), OptoMap, Fluorescein Angiography, or other fine three-dimensional measuring tools. The lens could one day be inserted as a replacement lens to the patient's biologically native lens, and could be correctable over time if necessary; however, that technology is still in development, and scientists are attempting to pursue a solution. One scientist has attempted to make a pair of glasses, but as



The way a normal eye functions with the brain and the environment.

The lens may be 3D printed polymer, created from a 3D printed mold from other lens materials, or through other three-dimensional processes. This lens may also be made conventionally, but with potentially less accuracy. By 3D printing, the lens can pick up more corrective details derived from a map of the retinal surface inverted and reversed into free-form optics also called a wobbly lens, where, for example, convex bumps in the retina may become corrected by concave parts of the lens where it translates best to reverse the warped signal to the brain caused by the uneven, damaged retina.

The inventor of unWarp, Dave, has two warped retinas due to epiretinal membrane contraction causing puckering of the retinas. Dave pioneered a successful 30-year career as a visual effects artist, known for feature films such as Moanna, The Matrix Reloaded, Life of Pi, and many more; however, he first noticed an anomaly with his vision while working on the new Batman movie and thought it was an issue with the prescription contact lenses he was wearing. The issue



The blue line illustrates how an unWarp's optics would pre-treat light rays so that the uneven retina can produce a proper image for the brain.

turned out to be organic, despite feeling simply optical.

After four eye surgeries to hopefully arrest the fast-moving condition, Dave was forced into an early, heartbreaking retirement after a long and rewarding career in the industry due to the strain this condition put on his eyes when trying to focus on creating art. The subjective perspective of feeling like the condition was optical led him to believe an optical fix could be available, and he began interviewing optical physicists, ophthalmologists, optometrists, and scleral lens manufacturers. He originally had [InventionHome](#) do a patent search with the intent on finding who could help him and volunteer to be a test subject, but no one was working on it, so he asked the company to assist him with a patent for unWarp and help him find partners in the optics industry.

While there is no current cure for eye diseases like macular degeneration, several treatment methods are currently available. Epiretinal peel (which is what Dave has had done on both eyes), anti-VEGF injections, photodynamic therapy (PDT), laser therapy, and low vision aids can all contribute to helping people with warping make the most of their remaining vision. These treatments only focus on managing the symptoms and slowing down the progression of diseases. The unWarp lens and method ultimately aim to work toward alleviating distorted vision issues and deserve significant examination by the healthcare industry and manufacturers in this field.

David filed his Utility Patent with the United States Patent and Trademark Office (USPTO) and is working closely with InventionHome, a leading invention licensing firm, to sell or license the patent rights to his unWarp product. Ideal licensing candidates would be U.S. based product manufacturers or distributors looking to further develop and distribute this product innovation.

Companies interested in unWarp can contact InventionHome at member@inventionhome.com. Inventors currently looking for assistance in patenting, marketing, or licensing their invention can request information from InventionHome at info@inventionhome.com or by calling 1-866-844-6512.

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InventionHome
InventionHome

+1 866-844-6512
info@inventionhome.com

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