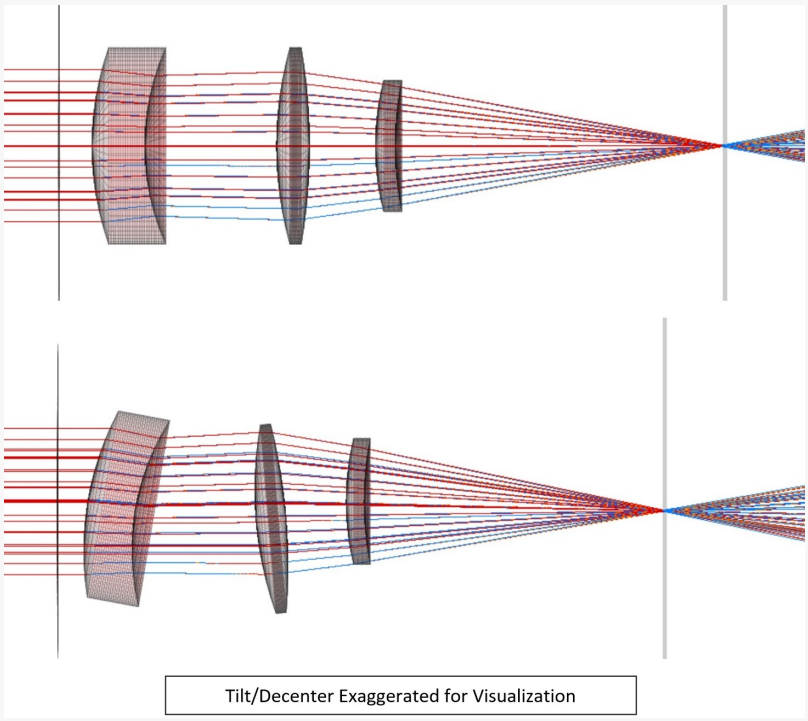
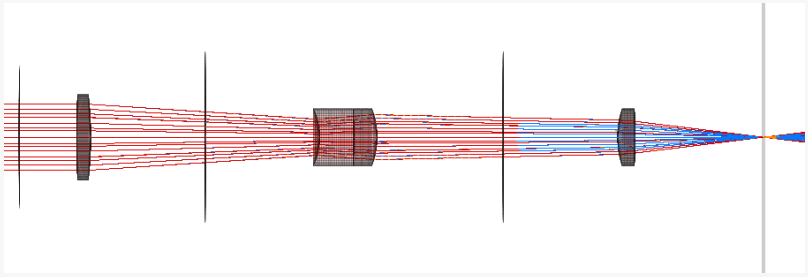
Tilt & Decenter is not just for Tolerancing, New Arbitrary Geometry Capabilities in E x H reTORT v2.2 Ray Tracer

v2.2 of the reTORT Ray Tracer adds tilt and decentering functionality to this state-of-the-art ray tracer tool, tailored to enhance rapid design and prototyping

STATE COLLEGE, PENNSYLVANIA, UNITED STATES, June 17, 2021 /EINPresswire.com/ -- E x H, Inc. is very proud to announce release of v2.2 of its increasingly popular reTORT Ray Tracer. Coupled with the included GEMSIF computational framework, reTORT allows the speedy design of complex optical lens systems, both traditional symmetrical lenses and optical systems of arbitrary or freeform geometry.



Exaggerated Tilt and Decenter for Visualization

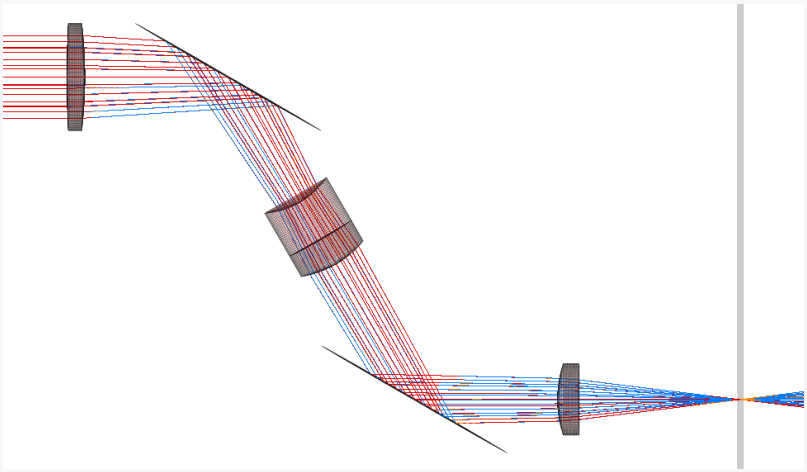

Optimize your axial optical system in a single lens stack to start

The reTORT Ray Tracer now includes tilt and decentering functionality to support tolerancing analysis and arbitrary model geometry. It is also the only ray tracer on the market to include native support for gradient index lenses and the addition of metasurfaces. reTORT allows optical lens designers to design highly complex homogeneous lens systems better and faster. But reTORT also provides the capability to utilize the most advanced design technologies to further reduce size and weight while at the same time increasing performance.

With all of these features, reTORT not only provides general purpose optical design. Its ability to support rapid design and prototyping in now enhanced further.

E x H is quickly leading the pack in making the power of geometrical and transformational optics available to every optical lens system designer, university researcher and student.

Tilting and decentering is important for tolerancing analysis. But combined with E x H's GEMSIF computational framework, tilting and decentering become an even more useful design tools when you're using the reTORT ray tracer.



Easily move lens stack elements to fit your geometry constraints

Set up and optimize your model quickly as an axial design in a reTORT/GEMSIF lens stack. Now, do you need to guide a laser source around corners to fit limited space availability, for example to implement additive metal technology? Just use the tilt and decenter functions to make that lens stack non-axial, insert mirrors or prisms as objects where needed, and focus the laser energy where it is needed. Run our fast global optimization to fine-tune and adjust the design for the contributions to power loss and aberrations added by the additional objects. You now have completed a complex design in record time.

> "v2.2 of the reTORT Ray Tracer adds tilt & decentering functionality to this state-of-the-art ray tracer, tailored to enhance rapid prototyping and with native support for GRIN lenses and metasurfaces."
>
> *Tom DiClemente, CEO*

Need to change your design? Quickly adjust properties, add objects and re-run the global optimization. With the proprietary global optimization that the E x H computational framework adds to the reTORT ray tracer, you can optimize in seconds. No more waiting hours for a global optimization to complete. No more yielding hundreds of possible optimized designs that must be sifted through. E x H provides one globally optimized solution in a fraction of the time of other ray tracers.

E x H makes quick design and prototyping to test your design approach fast and easy. E x H provides the tools. You provide the design skill and creativity.

Please visit the site to download v2.2 and update the version you are currently running.

For those who are not yet using our reTORT Ray Tracer, the same download link will provide you with a free two-week trial. Then visit our license pricing and ordering list at https://exhsw.com/retort-ray-tracer/#license-pricing when you decide to commit to the most

technologically advanced ray tracer available today.

About E x H, Inc.
We are dedicated to providing you with advanced optical system simulation tools. These tools allow you to design optical systems that are smaller, lighter, faster and have greater clarity than ever before. We have participated on multiple programs funded by DARPA that have allowed us to develop software on the leading edge of technology. Outside of the optical space, this same reTORT Ray Tracer was used to fast prototype the transformational optics that proved the concept for Isotropic Systems' high throughput, multi-beam satellite terminals (https://www.isotropicsystems.com/). This was a perfect example of using E x H tools for fast design and prototyping. On the business side, we have been backed by Gran Sasso Ventures (https://www.gsvlp.com/), the same venture capitalists that funded collaboration software firm Compoze Software, now a part of Oracle [ORCL:NYSE], and multitouch technology inventor FingerWorks, the driver of touch screen technology and now a part of Apple [AAPL:NASDAQ]. E x H is at the forefront of transformation optics.

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