

UNITED STATES PATENT AND
TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

OPTICIS CO., LTD

Petitioner,

v.

INNEOS LLC,

Patent Owner.

Case No. IPR2023-01256
U.S. Patent No. 7,198,416

**DECLARATION OF CURTIS RAY IN SUPPORT OF PATENT OWNER'S
RESPONSE TO PETITION**

I, Curtis Ray, hereby declare and state the following:

1. I am over the age of 18 years, I am a citizen of the United States, and I have personal knowledge of the facts recited herein and could testify competently thereto.
2. I worked at the predecessors to Inneos, including Blaze, Aduro, and ONP, starting in 1999. During the time period associated with the conception and reduction to practice of U.S. Patent No. 7,198,416 (“the ’416 Patent”), July 2003 to February 2004, I was the Chief Operating Officer. I no longer work at Inneos.
3. I am a co-inventor on the ’416 Patent. EX1001.
4. During prosecution of the ’416 Patent, I submitted two declarations attesting to activities surrounding the conception and reduction of the invention of the ’416 Patent (“Prior Declarations”). EX1002 p. 74–116, 43–44. I understand that this declaration will be submitted in support of Inneos’ Patent Owner Response to the Petition for *Inter Partes* Review of the ’416 Patent. My Prior Declarations are true and accurate reflections of my personal experience with the conception and reduction to practice of the ’416 Patent. This declaration is to provide supplemental evidence related to our efforts to reduce the ’416 Patent to practice. This declaration should be read as supplementing and complementing my Prior Declarations.
5. Among the supporting exhibits that were submitted during prosecution is a screenshot showing a Windows file explorer window showing the Zemax optical design files associated with the reduction to practice of the ’416 Patent, with the file names “Single Lens LX4 coupler1” and “Single Lens LX4 coupler1.SES.” EX1002 p. 83. The first is a Zemax file that allows an image to be rendered. The other .SES file contains data

that allows the ZMX file to render. I took this screenshot, which was incorporated into my Prior Declarations. EX1002 p. 83. Based on the screenshot, I can see that the files were last modified on January 9, 2004, and saved in the Design subfolder in the Optical Layout folder. The contents of the files, however, were not submitted with my Prior Declarations.

6. Recently, Inneos contacted me to confirm the contents of the files that were submitted during prosecution. At my direction, Scott Fluegel opened the “Single Lens LX4 coupler1” ZMX file I originally created when I worked at Aduro in 2003. Although it has the same name and the same contents, it is now saved in Inneos’ system under an updated file structure that organizes the files under “Single Lens Designs.” EX2043.

7. I confirmed the contents of the files are the same as the files identified in my Prior Declarations. Mr. Fluegel showed me the metadata from the files. The modified date shows January 9, 2004. EX2043. These are the files I worked on to figure out if the ’416 Patent would work. It is apparent from the 3-D modeling of the lens that this model relates to the ’416 Patent. The 3-D rendering is of one of the radial lenses and the focusing lens, showing the optical path of the laser with a particular wavelength and numerical aperture.

8. The Zemax software requires certain material data to operate. In the 20 years since the file was first created and last modified, the material data of the software has changed. So, when Mr. Fluegel opened the “Single Lens LX4 coupler1” file at my direction on April 19, 2024, the software reported an error message that its data was outside the operable range and that it was unable to use the model’s 1300nm wavelength because it is outside the material range. When he clicked OK, the software allowed us to view the

original file. At my direction, he changed the wavelength from the impermissible 1300nm to 850nm, and the software generated a clear view of the model. EX2042.

9. At my direction, Mr. Fluegel opened the “1: 3D Layout” window to view the model. The software automatically populated the day’s date in the window. *See* EX2042. The metadata for the file shows it was last modified on January 9, 2004, as seen in the screenshot submitted as a part of the file history, EX1002 p.83, and re-confirmed by me today, EX2043.

10. Between July and October, 2003, I worked with Mr. Grann and Mr. Peters to figure out a way to house the optical components of the invention in an integrated unit that could be feasibly manufactured. EX2027–2031, EX2033, EX2044. Although I was confident it would work, I could not figure out why. In fact, I often referred to the concept as the “wonder why,” a fact reflected in the file folder system of some of the mechanical designs I modeled at that time. EX2044. To that end, I generated many mechanical models of an integrated housing unit using a software called ProE, as shown in EX2027–2031.

11. On October 16, 2003, I sent an email to Mr. Grann with the subject line, “Aduro mux disclosure.” Attached to the email were the first draft of the invention disclosure form and five of my mechanical models pasted as images into Word documents. EX2032.

12. On April 19, 2024, I met with Mr. Fluegel over a video chat to confirm which files contain the mechanical models seen in EX2027–EX2031. Mr. Fluegel shared his screen. At my direction, Mr. Fluegel opened the folders that now contain the mechanical models. Based on the attached screenshot of the folder that contains the mechanical models, the last “Date

modified” is October 16, 2003, which aligns with my recollection of the time period during which I worked to reduce the invention to practice. EX2033; EX2044.

13. In late October and early November of 2003, Mr. Grann and I continued testing mechanical and optical modeling to prepare a second draft of “Report of Possible Subject Invention.” EX1002 p. 95–105 (“Rev 1”). Rev 1 contains edits resulting from our continued testing. For example, as a result of the testing, we added language to reflect additional embodiments. EX1002 p. 95.

14. On or about January 13, 2004, the Aduro team held a meeting to discuss various to-do items and strategic decisions related to the company, including the invention that became the ’416 Patent. In a January 13, 2004, email I attached a spreadsheet that contained Aduro’s to-do list. EX2035.

15. Among the tasks to be discussed at the January 13, 2004, meeting was “New optic for Mux, same as current, Bar[r]el Optic.” This notation is seen in cells 35A, 36B, and 37B. The notation refers to ideas for a potential mechanical housing unit for the multiplexing invention ultimately disclosed in the ’416 Patent. The notation “Same as current” (cell 36B) refers to the mechanical design previously developed for a construction used in U.S. Patent Number 6,396,978. Using a pre-existing mechanical design would have been cost-effective because we already owned the mold machine to create the necessary housing for the optical components. By contrast, “Bar[r]el Optic” (37B) refers to a mechanical design option that would have required purchasing a new and cost-prohibitive mold machine. A “barrel optic” is seen in Figures 5 and 6 of the ’416 Patent as one embodiment of the invention. *See* EX1001.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on this 23th day of April, 2024.

By: 
Curtis Ray