

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE LLC,  
Petitioner

v.

ECOFACITOR, INC.,  
Patent Owner

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IPR2022-00538  
Patent No. 9,194,597

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**PATENT OWNER'S SUR-REPLY**

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Exhibits

Exhibit No.	Description
2001	<i>Google, LLC f/k/a Google Inc. v. EcoFactor, Inc.</i> , 4-21-cv-03220 (N.D. Cal. April 30, 2021), Dkt. 1 (Complaint)
2002	<i>Google, LLC f/k/a Google Inc. v. EcoFactor, Inc.</i> , 4-21-cv-03220 (N.D. Cal. Aug. 3, 2021), Dkt. 30 (Joint Case Management Statement)
2003	<i>Google, LLC f/k/a Google Inc. v. EcoFactor, Inc.</i> , 4-21-cv-03220 (N.D. Cal. April 7, 2022), Dkt. 72 (Amended Scheduling Order)
2004	<i>Google, LLC f/k/a Google Inc. v. EcoFactor, Inc.</i> , 4-21-cv-03220 (N.D. Cal. April 13, 2022), Dkt. 73 (Amended Scheduling Order)
2005	Google's Oct. 19, 2021, Invalidity Contentions in <i>Google, LLC f/k/a Google Inc. v. EcoFactor, Inc.</i> , 4-21-cv-03220 (N.D. Cal.)
2006	"Silicon Valley's Home Court: Patent Trends in the Northern District of California." White & Case Newsflash (Mar. 18, 2020).
2007	U.S. Patent No. 10,018,371
2008	Expert Declaration of John A. Palmer
2009	Curriculum Vitae of John A. Palmer
2010	April 6, 2021, Deposition Transcripts of Mr. Rajendra Shah, IPR2021-01218.
2011	337-TA-1258 International Trade Commission Investigation, Order No. 18 - Construing the Terms of the Asserted Claims
2012	October 10, 2022, Deposition Transcripts of Mr. Rajendra Shah, IPR2022-00538.
2013	October 13, 2022, Deposition Transcripts of Mr. Rajendra Shah, IPR2022-00473.
2014	Petitioner Google's Reply in IPR2022-00473
2015	January 6, 2023, Deposition of Dr. John A. Palmer, IPR2022-00473

## I. INTRODUCTION

Patent Owner EcoFactor submits this sur-reply in response to Petitioner's Reply. Petitioner fails to demonstrate that the challenged claims 1-24 of U.S. Patent No. 9,194,597 (the '597 patent) (Ex. 1001) under the one ground of unpatentability set forth. Petitioner and its expert maintain their fundamental misunderstanding of the Ehlers '330 reference and its teachings regarding thermal gain. As noted in the Patent Owner Response ("POR"), thermal gain is the addition of thermal heat, not the increase of an inside temperature. Thus, the Ehlers '330 reference and its system do not teach the claimed invention of the '597 patent. Petitioner and its expert ignore this, and instead use improper hindsight to create the claims of the '597 patent out of the prior art.

Petitioner and its expert further fail to show that the combination of Ehlers '330, the knowledge of a person of ordinary skill in the art ("POSITA"), and Wruck teaches calculating automated setpoints. Ehlers '330 shows ramping and recovery time, but not calculating "automated setpoints at a first time" as claimed by the '597 patent.

Finally, Petitioner's mapping of various claim limitations is inconsistent. Petitioner points to certain features of Ehlers '330 as being the "automated setpoint at a first time" for claim element [1e], but points to entirely different features of Ehlers '330 as being the "setpoint at the first time" for claim element [1h].

## **II. LEVEL OF A PERSON OF ORDINARY SKILL IN THE ART (POSITA)**

The Board should adopt Patent Owner’s proposed level of skill in the art. POR at 4-7; Ex. 2008, ¶¶26-28. Petitioner asserts that Dr. Palmer’s opinions are not based on the ITC determination. Reply at 8. But this is wrong, as Dr. Palmer specifically indicated that the ITC determination “informed” and “affirmed [his] position.” Ex. 1026, 22:7-17. Moreover, this is in stark contrast to Petitioner’s expert, Mr. Shah, who did not consider the ITC determination because Petitioner did not inform him of it. Ex. 2010, 11:13-12:19.

## **III. CREDIBILITY OF DR. PALMER**

While Petitioner does not seek exclusion of Dr. Palmer’s testimony, the Reply does argue that Mr. Shah’s testimony is more credible than Dr. Palmer. Reply at 8-9. But Petitioner cannot meaningfully challenge Dr. Palmer’s expertise in HVAC systems. Dr. Palmer’s experience with thermal modeling for cooling systems makes him particularly well suited for this proceeding. For example, Dr. Palmer is co-inventor of U.S. Patent No. 5,838,881, titled “System and method for mitigation of streaming electrification in power transformers by intelligent cooling system control,” which claims a “system comprising a power transformer having a cooling system” and which issued in November 1998. Ex. 2008 at 3. In his patent, Dr. Palmer describes improvements to “thermal models” applied to “cooling systems,” which enable heat exchangers and pumps to provide cooling rates at a lower flow rate. Dr.

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