### UNITED STATES PATENT AND TRADEMARK OFFICE

## BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC, and ECOBEE TECHNOLOGIES ULC,

Petitioner,

v.

ECOFACTOR, INC.

(record) Patent Owner.

IPR2022-00538<sup>1</sup> Patent No. 9,194,597

## **PETITIONER'S REPLY**

proceeding.

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<sup>&</sup>lt;sup>1</sup> IPR2022-01461 (ecobee Technologies ULC) has been joined with this

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V.	V. Ehlers '330 Teaches Rates of Change of Inside Temperature (POR, 10- 19)9				
١	/I.	Ground 1: The Combination of Ehlers '330, The Knowledge of a POSITA, and Wruck Renders Obvious Claims 1-24 (POR, 19-34). 			
	A.	Claim element [1d] ("using the stored data to predict changes in temperature inside the structure in response to at least changes in outside temperatures") (POR, 19-25)			
		1. Example 117			
		2. Example 220			
		3. Example 320			
	B.	Claim element [1e] ("calculating with at least one computer, scheduled programming of the thermostatic controller for one or more times to control the heating ventilation and air conditioning system, the scheduled programming comprising at least a first automated setpoint at a first time") (POR, 25-27)			
	C.	Claim element [1h] ("generating with the at least one computer, a difference value based on comparing at least one of the actual setpoints at the first time for the thermostatic controller to the first automated setpoint for the thermostatic controller; detecting a manual change to the first automated setpoint by determining whether the at least one of the actual setpoint and first automated setpoint are the same or different based on the difference value") (POR, 28-40)27			

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	D.	Claim element [9e] ("calculating scheduled programming of setpoints in the thermostatic controller based on the predicted rate of change, the scheduled programming comprising at least a first automated setpoint at a first time and a second automated setpoint at a second time to control the heating ventilation and air conditioning system") (POR, 31-33)
VII.	CON	CLUSION
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## **TABLE OF EXHIBITS**

Exhibit No.	Description
1001	U.S. Patent No. 9,194,597 ("the 597 patent").
1002	Declaration of Rajendra Shah.
1003	C.V. of Rajendra Shah.
1004	U.S. Patent App. Pub. 2004/0117330 ("Ehlers '330").
1005	U.S. Patent App. Pub. 2005/0040250 A1 ("Wruck").
1006	Excerpt from <i>The Industrial Electronics Handbook</i> , Irwin, J.D. ed. CRC Press and IEEE Press, 1997, pp. 59-60.
1007	Horan, T, <i>Control Systems and Applications for HVAC/R</i> , Prentice-Hall, Inc., 1997.
1008	Levenhagen, J, HVAC Controls and Systems, McGraw-Hill, Inc., 1993.
1009	File History of Application No. 14/082,675.
1010	U.S. Patent No. 8,751,186 B2 ("the '186 patent").
1011	Exhibit number not used.
1012	U.S. Patent No. 6,789,739 (" <b>Rosen</b> ").

1013	WO 2007/128783 A1 (" <b>McNulty</b> ").
1014	U.S. Pat. App. Pub. 2005/0171645 ("Oswald").
1015	U.S. Patent No. 5,943,554 ("Charles").
1016	U.S. Patent No. 6,029,092 ("Stein").
1017	ITC Inv. No. 337-TA-1185, Public Version of April 20, 2021 Initial Determination.
1018	Google, LLC f/k/a Google Inc. v. EcoFactor, Inc., 4-21-cv-03220 (N.D. Cal.), Answer (July 13, 2021).
1019	Google, LLC f/k/a Google Inc. v. EcoFactor, Inc., 4-21-cv-03220 (N.D. Cal.), Scheduling Order (August 11, 2021).
1020	Security People, Inc. v. Ojmar US, LLC, 14-cv-04968-HSG (N.D. Cal.), Order (May 29, 2015).
1021	Reply Declaration of Rajendra Shah.
1022	Excerpts from December 16, 2022 Deposition of Dr. John Palmer in <i>EcoFactor, Inc. v. ecobee, Inc.</i> , Case No. 6:21-cv-00428 (W.D. Tex.).
1023	Transcript of January 6, 2023 Deposition of John A. Palmer in IPR2022-00473.
1024	Transcript of August 27, 2021 Deposition of Dr. John Palmer in IPR2020-01504.
1025	Email between Counsel for Petitioner and EcoFactor.
1026	Transcript of April 29, 2022 Deposition of Dr. John Palmer in IPR2021-00982.
1027	Transcript of January 10, 2023 Deposition of Dr John A. Palmer.
1028	U.S. Patent No. 8,131,497 (" <b>the '497 patent</b> ").

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