

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC

Petitioner

v.

ECOFACITOR, INC.

(record) Patent Owner

Inter Partes Review No.: (Unassigned)

Patent No. 8,596,550

PETITION FOR INTER PARTES REVIEW

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TABLE OF EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 8,596,550 (“the ’550 patent”).
1002	Declaration of David M. Auslander.
1003	C.V. of David M. Auslander.
1004	U.S. Patent App. Pub. 2004/0117330 (“Ehlers ’330”).
1005	U.S. Patent App. Pub. 2005/0040250 A1 (“Wruck”).
1006	<i>Exhibit number not used.</i>
1007	<i>Exhibit number not used.</i>
1008	File History of Application No. 12/778,052.
1009	U.S. Patent App. Pub. 2005/0171645 (“Oswald”).
1010	U.S. Patent No. 5,934,554 (“Charles”).
1011	U.S. Patent No. 6,029,092 (“Stein”).
1012	ITC Inv. No. 337-TA-1258, Order No. 18, Construing the Terms of the Asserted Claims of the Patents at Issue (Sept. 1, 2021).
1013	<i>ecobee, Inc. v. EcoFactor, Inc.</i> , 1-21-cv-00323 (D. Del.), Answer (May 5, 2021).
1014	<i>ecobee, Inc. v. EcoFactor, Inc.</i> , 1-21-cv-00323 (D. Del.), Scheduling Order (October 14, 2021).
1015	Horan, T, <i>Control Systems and Applications for HVAC/R</i> , Prentice-Hall, Inc., 1997.
1016	Levenhagen, J, <i>HVAC Control and Systems</i> , McGraw-Hill, Inc., 1993.

1017	U.S. Patent No. 8,751,186 B2 (“the ’186 patent”).
1018	Excerpt from McDaniel, G, <i>IBM Dictionary of Computing</i> , McGraw-Hill, Inc., 1993, p. 165.
1019	U.S. Patent No. 7,784,704 (“Harter”).
1020	Excerpt from <i>Dictionary of Scientific and Technical Terms</i> , 5th ed., McGraw-Hill, Inc., 1994, p. 62.
1021	Excerpt from <i>The Industrial Electronics Handbook</i> , Irwin, J.D. ed. CRC Press and IEEE Press, 1997, pp. 59-60.
1022	<i>Exhibit number not used.</i>
1023	Comparison Document – ecobee Petition filed in IPR2022-00983 vs. Present Petition

I. INTRODUCTION

Petitioner respectfully requests *inter partes* review under 35 U.S.C. § 311 of claims 1-16 of U.S. Pat. No. 8,596,550 (“the ’550 patent”).

II. SUMMARY OF THE ’550 PATENT

A. The Claimed Subject Matter

The ’550 patent relates to controlling climate control systems, such as heating and cooling (“HVAC”) systems. (Ex. 1001, Abstract, 1:18-2:18, 3:48-67, 4:8-32)(Ex. 1002, ¶28). HVAC systems have, for decades, been controlled by thermostats. (Ex. 1001, 1:18-2:17)(Ex. 1002, ¶29). Thermostats are typically wall-mounted units with internal temperature sensors, which allow a user to set a target temperature. (Ex. 1002, ¶29). The target temperature, or “setpoint,” is compared against the actual temperature, and the HVAC system is essentially switched on or off to maintain the setpoint temperature. (Ex. 1002, ¶29).

“Programmable thermostats have been available for more than 20 years,” as the ’550 patent notes. (Ex. 1001, 1:18-19). They “offer two types of advantages” over non-programmable devices. (Ex. 1001, 1:19-41)(Ex. 1002, ¶30). First, “programmable thermostats can save energy ... because they automate the process of reducing conditioning during times when the space is unoccupied, or while occupants are sleeping, and thus reduce energy consumption.” (Ex. 1001, 1:19-25). Second, “programmable thermostats can also enhance comfort.... For example.... A programmable thermostat allows homeowners to anticipate [a] desired result by

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