

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

ECOFACITOR, INC.,
Patent Owner.

IPR2022-00538
Patent 9,194,597 B2

Before SCOTT B. HOWARD, PAUL J. KORNICZKY, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

DOUGAL, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

Petitioner, Google LLC, requests that we institute an *inter partes* review to challenge the patentability of claims 1–24 (the “challenged claims”) of U.S. Patent 9,194,597 B2 (Ex. 1001, “the ’597 patent”). Paper 1 (“Petition” or “Pet.”). Patent Owner, EcoFactor, Inc., argues that Petitioner’s request is deficient and should not be granted. Paper 6 (“Preliminary Response” or “Prelim. Resp.”).

Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we grant the Petition and institute an *inter partes* review.¹

B. *Related Matters*

The parties identify the following related district court litigation: *Google, LLC f/k/a Google Inc. v. EcoFactor, Inc.*, No. 4:21-cv-03220 (N.D. Cal.); and *EcoFactor, Inc. v. ecobee, Inc.*, No. 6:21-cv-00428 (W.D. Tex.). Pet. 5; Paper 4, 2. Petitioner also notes that it “is in the process of filing petitions for inter partes review challenging all claims of the other three patents [involved in the *Google v. EcoFactor* litigation referenced *supra*].” Pet. 72–73.

C. *The ’597 Patent*

The ’597 patent is entitled “System, Method and Apparatus for Identifying Manual Inputs to and Adaptive Programming of a Thermostat.” Ex. 1001, code (54). The ’597 patent explains that programmable

¹ Our findings and conclusions at this stage are preliminary, and thus, no final determinations are made.

thermostats can “enhance comfort as compared to manually changing setpoints using a non-programmable thermostat,” but “[i]f the temperatures programmed into a thermostat do not accurately reflect the preferences of the occupants, those occupants are likely to resort to manual overrides of the programmed settings.” *Id.* at 1:25–28, 1:60–2:8. Techniques disclosed in the ’597 patent detect manual changes to the setpoint for a thermostatic controller and then incorporate those manual changes into the long-term programming of the thermostatic controller. *Id.*, Abstr.

The ’597 patent explains that most thermostats do not record manual inputs locally, and also do not recognize or transmit the fact that a manual override has occurred. *Id.* at 5:45–48. Moreover, frequent changes in setpoints may be automatically initiated by thermostat algorithms, making it difficult to infer a manual override from the mere fact that a setpoint has changed. *Id.* at 5:47–53. Figure 7, reproduced below, illustrates a method for detecting the occurrence of a manual override. *Id.* at 5:54–55.

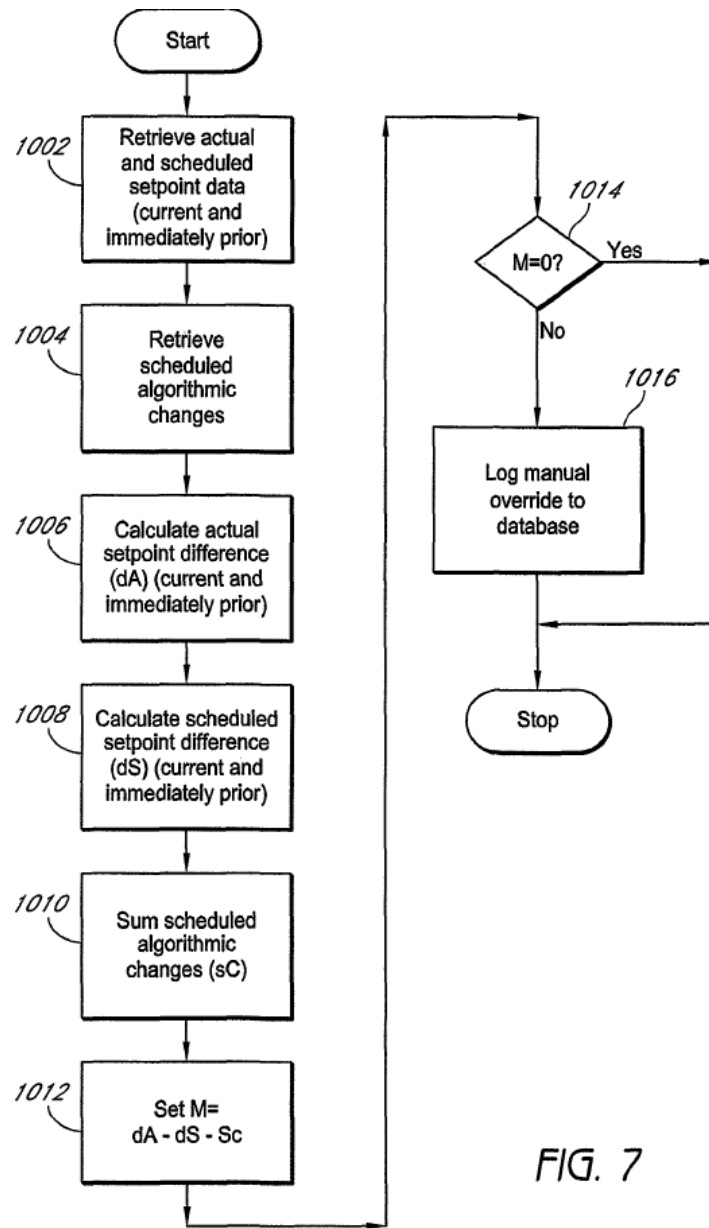


FIG. 7

At step 1002 illustrated in Figure 7, a server associated with the thermostat (e.g., a thermostat management server) retrieves setpoint data used to infer the occurrence of a manual override from one or more databases. *Id.* at 3:61–63, 5:55–6:19. At step 1004, the server retrieves any scheduled automated setpoint changes. *Id.* Such changes may include algorithmic changes intended to reduce energy consumption. *Id.*

At step 1006, the server calculates the setpoint difference. *Id.* At step 1008, the server calculates the scheduled setpoint difference. *Id.* At step 1010, the server evaluates and sums all active algorithms and other server-initiated strategies to determine their net effect on the setpoint. *Id.* For example, if one algorithm has increased setpoint by 2 degrees as a short-term energy savings measure, but another algorithm has decreased the setpoint by one degree to compensate for expected subjective reactions to weather conditions, the net algorithmic effect is +1 degree. *Id.*

At step 1012, the server calculates the value for M, where M is equal to the difference between actual setpoints dA, less the difference between scheduled setpoints dS, less the aggregate of algorithmic change sC. *Id.* at 6:20–30. At step 1014, the server evaluates the difference—if the difference equals zero, the server concludes that no manual override has occurred; however, if the difference is non-zero, the server concludes that a manual override has occurred, and at step 1016, the server logs the override to the database(s). *Id.*

After a manual override has been recognized, it can be used to either make short-term changes to the thermostat, or to alter long-term changes to interpretive rules and to setpoint scheduling for the thermostat. *Id.* at 2:37–42. Figure 8, reproduced below, illustrates a process of interpreting manual overrides and making short-term thermostat changes in response thereto. *Id.* at 2:37–42, 6:31–32.

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.