

1 Bijal V. Vakil (CA State Bar No. 192878)
bvakil@whitecase.com
2 Shamita D. Etienne-Cummings (CA State Bar No. 202090)
setienne@whitecase.com
3 Henry Y. Huang (CA State Bar No. 252832)
henry.huang@whitecase.com
4 WHITE & CASE LLP
3000 El Camino Real
5 Two Palo Alto Square, Suite 900
Palo Alto, CA 94306-2109
6 Telephone: 650.213.0300
Facsimile: 650.213.8158
7

8 Attorneys for Plaintiff
Google LLC
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10 UNITED STATES DISTRICT COURT
11 NORTHERN DISTRICT OF CALIFORNIA
12

13 GOOGLE LLC,
14 Plaintiff,
15 v.
16 ECOFACTOR, INC.,
17 Defendant.
18

Case No. 5:21-cv-1468
**COMPLAINT FOR
DECLARATORY JUDGMENT**
DEMAND FOR JURY TRIAL
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1 Plaintiff Google LLC (“Google”), for its complaint against Defendant EcoFactor, Inc.
2 (“EcoFactor”), alleges:

3 **NATURE OF THE ACTION**

4 1. This is an action for declaratory judgment of non-infringement of U.S. Patent Nos.
5 8,019,567 (the “’567 patent”), 8,596,550 (the “’550 patent”), 8,886,488 (the “’488 patent”), and
6 10,612,983 (the “’983 patent”) (collectively, the “Asserted Patents,” attached as Exhibits 1-4,
7 respectively) against EcoFactor, pursuant to the Declaratory Judgment Act, 28 U.S.C. §§ 2201-
8 02, and the patent laws of the United States, 35 U.S.C. § 100 et seq., and for other relief the Court
9 deems just and proper.

10 2. Google requests this relief because EcoFactor has filed a complaint with the
11 International Trade Commission (“ITC”), Docket No. 3535, claiming that Google (among other
12 defendants) has infringed the Asserted Patents because Google designed, developed,
13 manufactured, tested, used, offered for sale, sold, and/or imported “smart thermostats, smart
14 HVAC systems, smart HVAC control systems, and components thereof.” A true and correct copy
15 of EcoFactor’s public ITC complaint is attached as Exhibit 5. The products asserted in the ITC
16 Investigation are the Nest Thermostat and the Nest Third Generation Learning Thermostat
17 (“Accused Products”).

18 3. An actual and justiciable controversy therefore exists under 28 U.S.C. §§ 2201-
19 2202 between Google and EcoFactor as to whether Google is infringing or has infringed the
20 Asserted Patents.

21 **THE PARTIES**

22 4. Plaintiff Google LLC is a subsidiary of Alphabet Inc. with its principal place of
23 business located at 1600 Amphitheatre Parkway, Mountain View, California 94043.

24 5. Upon information and belief, Defendant EcoFactor, Inc. is a privately held
25 company organized under Delaware's laws, with a principal place of business at 441 California
26 Avenue, Number 2, Palo Alto, CA 94301.

27 **JURISDICTION AND VENUE**

28 6. Google files this complaint against EcoFactor pursuant to the patent laws of the

1 United States, Title 35 of the United States Code, with a specific remedy sought based upon the
2 laws authorizing actions for declaratory judgment in the federal courts of the United States, 28
3 U.S.C. §§ 2201 and 2202, and under the patent laws of the United States, 35 U.S.C. §§ 1-390.

4 7. This Court has subject matter jurisdiction over this action, which arises under the
5 United States' patent laws, pursuant to 28 U.S.C. §§ 1331, 1338(a), and 2201(a).

6 8. This Court has personal jurisdiction over EcoFactor, which has its principal place
7 of business in Palo Alto, California.

8 9. Venue in this District is proper under 28 U.S.C. §§ 1391(b) because EcoFactor
9 resides in this District, and also because EcoFactor is subject to personal jurisdiction in this
10 District, and a substantial part of the events giving rise to Google's declaratory judgment claim of
11 non-infringement (such as the development of Nest thermostats) occurred in this District.

12 **INTRADISTRICT ASSIGNMENT**

13 10. Pursuant to Civil L.R. 3-2(c) and 3-5(b), this is an Intellectual Property Rights
14 Action subject to assignment on a district-wide basis.

15 **FACTUAL BACKGROUND**

16 11. Google's headquarters at 1600 Amphitheatre Parkway, Mountain View, CA 94043
17 are located in this District. Google's mission is to organize the world's information and make it
18 universally accessible and useful. Over the past two decades, in service of that mission, Google
19 has become one of the world's most innovative technology companies.

20 12. EcoFactor's identification of allegedly infringing products originated at Nest Labs
21 that launched in 2010 in Palo Alto. The founders of Nest sought to save the planet while saving
22 consumers money with their energy usage. After merging with the Google family of companies
23 in 2014, the Nest product division has continued to operate primarily in the San Francisco Bay
24 Area. The vast majority of technical and business activities related to Nest have occurred and
25 continue to occur in this District.

26 13. EcoFactor filed an earlier lawsuit against Google at the International Trade
27 Commission asserting patents related to the Asserted Patents. *See In the matter of Certain Smart*
28 *Thermostats, Smart HVAC Systems and Components Thereof*, Investigation No. 337-TA-1185

1 (ITC, filed Nov. 22, 2019) (the “1185 Investigation”). The 1185 Investigation confirmed that the
2 venue at the center of the allegations is this District because EcoFactor’s witnesses, Google’s
3 source code (and the review of such source code), and Google’s U.S. witnesses are all located in
4 this District.

5 14. Google’s Accused Products do not directly or indirectly infringe any asserted
6 claim of the Asserted Patents, either literally or under the doctrine of equivalents. Google has not
7 caused, directed, requested, or facilitated any such infringement, and it did not have any specific
8 intent to do so.

9 **COUNT I:**

10 **DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE ’567 PATENT**

11 15. Google hereby restates and incorporates by reference the allegations set forth in
12 paragraphs 1 through 14 of this Complaint as if fully set forth herein.

13 16. EcoFactor claims to own all right, title, and interest in the ’567 patent by
14 assignment.

15 17. In its ITC complaint, EcoFactor alleges that Google directly and indirectly
16 infringes the ’567 patent. *See, e.g.*, Ex. 5 ¶ 100.

17 18. The Accused Products do not include or practice multiple claim limitations of the
18 claims of the ’567 patent, including, but not limited to: “evaluating changes in the operational
19 efficiency of an HVAC system over time,” “at least one HVAC control system,” “receiv[ing]
20 temperature measurements from at least a first structure,” “receiv[ing] status of [an] HVAC
21 system,” “receiv[ing] measurements of outside temperatures,” “compar[ing] said temperature
22 measurements from said first structure,” “compar[ing] the inside temperature of said first
23 structure and the outside temperature over time to derive an estimation for the rate of change in
24 inside temperature of said first structure,” “compar[ing] an inside temperature recorded inside the
25 first structure with said estimation for the rate of change in inside temperature of said first
26 structure to determine whether the operational efficiency of the HVAC system has decreased over
27 time,” “analyz[ing] the changes in the operational efficiency over time to suggest a cause of
28 degradation,” “compar[ing] [] temperature measurements from [a] first HVAC system and [a]

1 second HVAC system and said outside temperature measurements over time to determine the
2 relative efficiency of the first HVAC system and the second HVAC system,” “comparing with
3 one or more processors said temperature measurements from said first structure with outside
4 temperature measurements over time to derive expected temperature measurements of a rate of
5 change in inside temperature,” and “compar[ing] an inside temperature recorded inside the first
6 structure with said expected temperature measurements to determine whether the operational
7 efficiency of the HVAC system has decreased.”

8 19. An actual and justiciable controversy therefore exists between Google and
9 EcoFactor regarding whether any of the accused devices have infringed any of the asserted claims
10 of the '567 patent. A judicial declaration is necessary to determine the parties' respective rights
11 regarding the '567 patent.

12 20. Google seeks a judgment declaring that Google does not directly or indirectly
13 infringe any asserted claims of the '567 patent, either literally or under the doctrine of
14 equivalents.

15 **COUNT II:**

16 **DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '550 PATENT**

17 21. Google hereby restates and incorporates by reference the allegations set forth in
18 paragraphs 1 through 14 of this Complaint as if fully set forth herein.

19 22. EcoFactor claims to own all right, title, and interest in the '550 patent by
20 assignment.

21 23. In its ITC complaint, EcoFactor alleges that Google directly and indirectly
22 infringes the '550 patent. *See, e.g.*, Ex. 5 ¶ 102.

23 24. The Accused Products do not include or practice multiple claim limitations of the
24 claims of the '550 patent, including, but not limited to: “detecting manual changes to the setpoint
25 for a thermostatic controller,” “using the stored data to predict a rate of change of temperatures
26 inside the structure in response to at least changes in outside temperatures,” “calculating []
27 scheduled programming of setpoints in the thermostatic controller based on the predicted rate of
28 change,” “generating with one or more computer processors, a difference value based on

1 comparing an actual setpoint at the first time for said thermostatic controller to the first automated
2 setpoint for said thermostatic controller,” “detecting a manual change to the first automated
3 setpoint by determining whether said actual setpoint and said first automated setpoint are the
4 same or different based on said difference value,” “[a] method for incorporating manual changes
5 to the setpoint for a thermostatic controller into long-term programming of said thermostatic
6 controller,” “compar[ing] the actual setpoint at the first time for said thermostatic controller to the
7 first automated setpoint for said thermostatic controller,” and “detecting a manual change to the
8 first automated setpoint by determining whether said actual setpoint and said automated setpoint
9 are the same or different.”

10 25. An actual and justiciable controversy therefore exists between Google and
11 EcoFactor regarding whether any of the accused devices have infringed any of the asserted claims
12 of the '550 patent. A judicial declaration is necessary to determine the parties' respective rights
13 regarding the '550 patent.

14 26. Google seeks a judgment declaring that Google does not directly or indirectly
15 infringe any asserted claims of the '550 patent, either literally or under the doctrine of
16 equivalents.

17 **COUNT III:**

18 **DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '488 PATENT**

19 27. Google hereby restates and incorporates by reference the allegations set forth in
20 paragraphs 1 through 14 of this Complaint as if fully set forth herein.

21 28. EcoFactor claims to own all right, title, and interest in the '488 patent by
22 assignment.

23 29. In its ITC complaint, EcoFactor alleges that Google directly and indirectly
24 infringes the '488 patent. *See, e.g.*, Ex. 5 ¶ 103.

25 30. The Accused Products do not include or practice multiple claim limitations of the
26 claims of the '488 patent, including, but not limited to: “calculating a value for the operational
27 efficiency of [an HVAC] system,” “at least one HVAC control system,” “receiv[ing] inside
28 temperature measurements,” “computer hardware that is configured to receive outside

1 temperature measurements,” “calculat[ing] [] one or more predicted rates of change in said inside
2 temperature measurements at said first location based on the status of the HVAC system,”
3 “relat[ing] said one or more predicted rates of change to said outside temperature measurements,”
4 “compar[ing] [] at least one predicted temperature based on the one or more predicted rates of
5 change with an actual inside temperature measurement,” and “said programmable thermostat is a
6 source for current data regarding temperature inside said location.”

7 31. An actual and justiciable controversy therefore exists between Google and
8 EcoFactor regarding whether any of the accused devices have infringed any of the asserted claims
9 of the '488 patent. A judicial declaration is necessary to determine the parties' respective rights
10 regarding the '488 patent.

11 32. Google seeks a judgment declaring that Google does not directly or indirectly
12 infringe any asserted claims of the '488 patent, either literally or under the doctrine of
13 equivalents.

14 **COUNT IV:**

15 **DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '983 PATENT**

16 33. Google hereby restates and incorporates by reference the allegations set forth in
17 paragraphs 1 through 14 of this Complaint as if fully set forth herein.

18 34. EcoFactor claims to own all right, title, and interest in the '983 patent by
19 assignment.

20 35. In its ITC complaint, EcoFactor alleges that Google directly and indirectly
21 infringes the '983 patent. *See, e.g.*, Ex. 5 ¶ 101.

22 36. The Accused Products do not include or practice multiple claim limitations of the
23 claims of the '983 patent, including, but not limited to: “receiv[ing] a first data from at least one
24 sensor, wherein the first data from the at least one sensor includes a measurement of at least one
25 characteristic of the user’s building,” “predict[ing], based at least in on the first data from the
26 sensor, the second data from the network connection, and the first temperature setpoint, the time
27 necessary for the HVAC system to operate in order to reach the temperature value by the time
28 value,” “a measurement of the current temperature and humidity of the building by the sensor,” “a

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SILICON VALLEY

1 measurement of the current outdoor temperature,” “analyzing the stored historical values of the
2 first data and second data,” and “calculat[ing] a performance characteristic of the HVAC system
3 based at least on the historical values of the first data and second data.”

4 37. An actual and justiciable controversy therefore exists between Google and
5 EcoFactor regarding whether any of the accused devices have infringed any of the asserted claims
6 of the '983 patent. A judicial declaration is necessary to determine the parties' respective rights
7 regarding the '983 patent.

8 38. Google seeks a judgment declaring that Google does not directly or indirectly
9 infringe any asserted claims of the '983 patent, either literally or under the doctrine of
10 equivalents.

11 **PRAYER FOR RELIEF**

12 WHEREFORE, Google prays for judgment as follows:

13 A. Declaring that Google Accused Products do not directly or indirectly infringe any
14 asserted claims of the '567 patent, either literally or under the doctrine of equivalents;

15 B. Declaring that Google Accused Products do not directly or indirectly infringe any
16 asserted claims of the '550 patent, either literally or under the doctrine of equivalents;

17 C. Declaring that Google Accused Products do not directly or indirectly infringe any
18 asserted claims of the '488 patent, either literally or under the doctrine of equivalents;

19 D. Declaring that Google Accused Products do not directly or indirectly infringe any
20 asserted claims of the '983 patent, either literally or under the doctrine of equivalents;

21 E. Declaring that judgment be entered in favor of Google and against EcoFactor on
22 Google's claims;

23 F. Finding that this is an exceptional case under 35 U.S.C. § 285;

24 G. Awarding Google its costs and attorneys' fees in connection with this action; and

25 H. Awarding Google such other and further relief as the Court deems just and proper.

26 **JURY DEMAND**

27 Pursuant to Federal Rule of Civil Procedure 38 and Civil Local Rule 3-6, Google demands
28 a jury trial on all issues and claims so triable.

Dated: March 1, 2021

Respectfully submitted,

By: /s/Bijal V. Vakil
Bijal V. Vakil

Bijal V. Vakil (CA State Bar No. 192878)
bvakil@whitecase.com
Shamita D. Etienne-Cummings
(CA State Bar No. 202090)
setienne@whitecase.com
Henry Y. Huang (CA State Bar No. 252832)
henry.huang@whitecase.com
WHITE & CASE LLP
3000 El Camino Real
Two Palo Alto Square, Suite 900
Palo Alto, CA 94306-2109
Telephone: 650.213.0300
Facsimile: 650.213.8158

Attorneys for Plaintiff
Google LLC

WHITE & CASE LLP
ATTORNEYS AT LAW
SILICON VALLEY

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