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10	UNITED STATES D	
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13	GOOGLE LLC,	Case No. 5:22-cv-0162
14 15	Plaintiff,	GOOGLE LLC'S COMPLAINT FOR DECLARATORY
15	V.	JUDGMENT
17	ECOFACTOR, INC., Defendant.	DEMAND FOR JURY TRIAL
18	Defendant.	
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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	8,131,497 ("'497 Patent), 8,423,322 ("'322 Patent"), 8,498,753 ("'753 Patent") and 10,018,371		
6	("'371 Patent") (collectively, the "Asserted Patents," attached as Exhibits 1-4, respectively) against		
7	EcoFactor, pursuant to the Declaratory Judgment Act, 28 U.S.C. §§ 2201-02, and the patent laws		
8	of the United States, 35 U.S.C. § 100 et seq., and for any and all other relief the Court deems just		
9	and proper.		
10	2. Google requests this relief because EcoFactor alleges that Google's smart		
11	thermostat products, including the Nest Thermostat, Nest E and the Nest Generation Learning		
12	Thermostat, 3rd Gen (the "Accused Products") infringes the Asserted Patents. See Exhibit 5 (W.D.		
13	Tex. Complaint, no.6:22-cv-00032, D.I. 1)		
14	3. An actual and justiciable controversy therefore exists under 28 U.S.C. §§ 2201-2202		
15	between Google and EcoFactor as to whether Google is infringing or has infringed the Asserted		
16	Patents.		
17	THE PARTIES		
18	4. Plaintiff Google LLC is a subsidiary of Alphabet Inc. with its principal place of		
19	business located at 1600 Amphitheatre Parkway, Mountain View, California 94043.		
20	5. Upon information and belief, Defendant EcoFactor, Inc. is a privately held company		
21	organized under Delaware's laws, with a principal place of business in the Northern District of		
22	California, specifically at 441 California Avenue, Number 2, Palo Alto, California 94301.		
23	JURISDICTION AND VENUE		
24	6. Google files this complaint against EcoFactor pursuant to the patent laws of the		
25	United States, Title 35 of the United States Code, with a specific remedy sought based upon the		
26	laws authorizing actions for declaratory judgment in the federal courts of the United States, 28		
27	U.S.C. §§ 2201 and 2202, and under the patent laws of the United States, 35 U.S.C. §§ 1-390.		
28	7. This Court has subject matter jurisdiction over this action, which arises under the		

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1	United States' patent laws, pursuant to 28 U.S.C. §§ 1331, 1338(a), and 2201(a).	
2	8. This Court has personal jurisdiction over EcoFactor, which has its principal place	
3	of business in Palo Alto, California.	
4	9. Venue in this District is proper under 28 U.S.C. §§ 1391(b) because EcoFactor	
5	resides in this District, and also because EcoFactor is subject to personal jurisdiction in this District,	
6	and a substantial part of the events giving rise to Google's declaratory judgment claim of non-	
7	infringement (such as the development and sale of its thermostats) occurred in this District.	
8	INTRADISTRICT ASSIGNMENT	
9	10. Pursuant to Civil L.R. 3-2(c) and 3-5(b), this is an Intellectual Property Rights	
10	Action subject to assignment on a district-wide basis.	
11	FACTUAL BACKGROUND	
12	11. Google's headquarters at 1600 Amphitheatre Parkway, Mountain View, California	
13	94043 are located in this District. Google's mission is to organize the world's information and	
14	make it universally accessible and useful. Over the past two decades, in service of that mission,	
15	Google has become one of the world's most innovative technology companies.	
16	12. EcoFactor asserted its patents against allegedly infringing products that originated	
17	at Nest Labs that launched in 2010 in Palo Alto. The founders of Nest sought to save the planet	
18	while saving consumers money with their energy usage. After merging with the Google family of	
19	companies in 2014, the Nest product division has continued to operate primarily in the San	
20	Francisco Bay Area. The vast majority of technical and business activities related to Nest have	
21	occurred and continue to occur in this District. All management decisions regarding Nest are made	
22	in this District.	
23	13. Starting in late 2019, EcoFactor has conducted a patent litigation campaign against	
24	Google and other smart thermostat manufacturers, such as ecobee and Vivint. In addition to raising	
25	allegations of infringement against Google in this District in two cases (Google LLC v. EcoFactor,	
26	Inc., Case no. 5:21-cv-01468 and Google LLC v. EcoFactor, Inc., Case No. 5:21-cv-03220),	
27	EcoFactor also filed actions against Google in the International Trade Commission (the "ITC"), the	

28 District of Massachusetts and the Western District of Texas.

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1 14. On October 23, 2019, EcoFactor filed a complaint against Google at the ITC, 2 asserting the same Asserted Patents that are the subject of this action. See In the matter of Certain 3 Smart Thermostats, Smart HVAC Systems and Components Thereof, Investigation No. 337-TA-4 1185 (ITC) (the "1185 Investigation"). On November 12, 2019, EcoFactor sued Google in the 5 District of Massachusetts, again asserting the Asserted Patents. See EcoFactor, Inc. v. Google LLC, No. 1:19-cv-12322-DJC (D. Mass.). The D. Mass. case was statutorily stayed on February 19, 6 7 2020. The ITC instituted the 1185 investigation on November 22, 2019. The 1185 Investigation 8 confirmed that the venue at the center of the allegations is in this District because EcoFactor's 9 witnesses, Google's proprietary and confidential source code (and the inspection of such source 10 code), and Google's U.S. witnesses are all located in this District. On April 20, 2021, the ITC 11 issued an initial determination in the 1185 Investigation, finding no violation by Google or any 12 other respondents. The Commission affirmed the initial determination. See In the matter of Certain 13 Smart Thermostats, Smart HVAC Systems and Components Thereof, Investigation No. 337-TA-14 1185, EDIS D.I. 747359, Jan. 20, 2021. EcoFactor filed an appeal of the Commission's findings 15 to the Federal Circuit on September 22, 2021 (EcoFactor, Inc. v. ITC, Fed. Cir., No. 21-2339, D.I. 16 1). EcoFactor sought dismissal of its appeal on December 28, 2021 (*EcoFactor, Inc. v. ITC*, Fed. 17 Cir., No. 21-2339, D.I. 23).

18 15. While the District of Massachusetts case was statutorily stayed, EcoFactor refused
19 to engage in the required joint process to advise the Court on the status of the 1185 investigation
20 and unilaterally dismissed the case on January 10, 2022. EcoFactor then filed suit on these same
21 four Asserted Patents in the Western District of Texas the same day. *See EcoFactor v. Google*,
22 Docket No. 6:22-cv-00032 (W.D. Tex.).

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

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COUNT I:

DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '497 PATENT

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1	17.	Google h	ereby restates and incorporates by reference the allegations set forth in
2	paragraphs 1 through 16 of this Complaint as if fully set forth herein.		
3	18.	EcoFacto	r claims to own all right, title, and interest in the '497 patent by assignment.
4	19.	In its W.I	D. Tex. complaint against Google, EcoFactor alleges that smart thermostat
5	systems infrir	nge the '49'	7 patent. See, e.g., Ex. 4, ¶¶ 29-37.
6	20. The Accused Products do not include or practice multiple claim limitations of the		
7	claims of the	'497 patent	including, but not limited to, having:
8		i.	a system for calculating a value for the operational efficiency of a
9			heating, ventilation, and air conditioning (HVAC) system;
10		ii.	a HVAC control system that receives temperature measurements and
11			databases that store temperature measurements received by the HVAC
12			control system;
13		iii.	processors that receive outside temperature measurements or that
14			calculate rates of change in temperature measurement received by the
15			HVAC control system when the HVAC system is "on" or calculate the
16			rates of change in temperature measurements received by the HVAC
17			control system when the HVAC system is "off," or that relate the
18			calculated rates of change to the outside temperature measurements.
19	21.	An actua	and justiciable controversy therefore exists between Google and
20	EcoFactor regarding whether any of the Accused Products infringe any of the asserted claims of		
21	the '497 patent. A judicial declaration is necessary to determine the parties' respective rights		
22	regarding the '497 patent.		
23	22. Google seeks a judgment declaring that Google does not directly or indirectly		
24	infringe any asserted claims of the '497 patent, either literally or under the doctrine of equivalents.		
25			<u>COUNT II:</u>
26	DECLAR	ATORY J	UDGMENT OF NON-INFRINGEMENT OF THE '322 PATENT
27	23.	Google h	ereby restates and incorporates by reference the allegations set forth in
28	paragraphs 1	through 22	of this Complaint as if fully set forth herein.

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1	24. EcoFac	tor claims to own all right, title, and interest in the '322 patent by assignment.	
2	25. In its W	D. Tex. complaint against Google, EcoFactor alleges that smart thermostat	
3	systems infringe the '3	22 patent. See, e.g., Ex. 2, ¶¶ 18-26.	
4	26. The Ac	cused Products do not include or practice multiple claim limitations of the	
5	claims of the '322 patent, including, but not limited to:		
6	i.	a system for evaluating changes in the operational efficiency of an	
7		HVAC system over time;	
8	ii.	an HVAC control system associated with a first structure that receives	
9		temperature measurements from a structure conditioned by at least one	
10		HVAC system and receives status of the HVAC system;	
11	iii.	processors that receive and compare measurements of outside	
12		temperatures with the temperature measurements received from the	
13		HVAC control system over time and compare the temperature	
14		measurements inside the structure at different times to determine a	
15		decrease in the operational efficiency of the HVAC system; and	
16	iv.	databases that store the inside temperature measurements over time.	
17	27. An act	ual and justiciable controversy therefore exists between Google and	
18	EcoFactor regarding whether any of the Accused Products have infringed any of the asserted claims		
19	of the '322 patent. A judicial declaration is necessary to determine the parties' respective rights		
20	regarding the '322 patent.		
21	28. Google seeks a judgment declaring that Google does not directly or indirectly		
22	infringe any asserted claims of the '322 patent, either literally or under the doctrine of equivalents.		
23	<u>COUNT III:</u>		
24	DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '753 PATENT		
25	29. Google	hereby restates and incorporates by reference the allegations set forth in	
26	paragraphs 1 through 2	28 of this Complaint as if fully set forth herein.	
27	30. EcoFac	tor claims to own all right, title, and interest in the '753 patent by assignment.	
28	31. In its W	D. Tex. complaint against Google, EcoFactor alleges that smart thermostat	

5 GOOGLE COMPLAINT FOR DECLARATORY JUDGMENT CASE NO. 5:22-CV-0162

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1	systems infring	ge the '753	patent. See, e.g., Ex. 6, ¶¶ 40-48.
2	32. The Accused Products do not include or practice multiple claim limitations of the		
3	claims of the '753 patent, including, but not limited to:		
4		i.	reducing the cycling time of a climate control system;
5		ii.	accessing stored data that includes historic internal temperature readings
6			taken within a structure and measurements relating to a plurality of
7			historic external temperatures outside the structure during a selected time
8			period;
9		iii.	determining the thermal performance values of the structure by
10			correlating the historic internal temperatures with the historic external
11			temperatures that both occur at a first time during the at least one selected
12			time period, and by correlating the historic internal temperatures with the
13			historic external temperatures that both occur at a second time during the
14			selected time period, wherein the thermal performance values indicate a
15			rate of change of temperature in the structure in response to changes in
16			outside temperatures;
17		iv.	storing the thermal performance values of the structure;
18		v.	retrieving a target time at which the structure is desired to reach a target
19			temperature;
20		vi.	acquiring a first internal temperature inside the structure at a third time
21			prior to the target time;
22		vii.	acquiring a first external temperature relating to a temperature outside
23			the structure at the third time prior to the target time;
24		viii.	obtaining a forecasted temperature that occurs outside the structure at the
25			target time;
26		ix.	retrieving the thermal performance values of the structure that indicate
27			the rate of change of temperature in the structure in response to changes
28			in outside temperatures;

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- x. retrieving the performance characteristic of a climate control system;
- xi. determining a first time prior to the target time at which the climate control system should turn on to reach the target temperature by the target time based on the thermal performance values of the structure, the performance characteristic of the climate control system, the first internal temperature, the first external temperature, and the forecasted temperature;
- 8 xii. calculating intermediate setpoints and setpoint target times that occur 9 between the first time and the target time based on the thermal 10 performance values of the structure, the performance characteristic of the 11 climate control system, the first internal temperature, the first external 12 temperature, and the forecasted temperature, wherein the intermediate 13 setpoints direct a thermostatic controller to change the actual temperature 14 inside the structure to the target temperature in a series of intermediate 15 steps;
- 16xiii.transmitting the intermediate setpoints to the thermostatic controller; and17xiv.setting the thermostatic controller with the intermediate setpoints to18control the climate control system.

An actual and justiciable controversy therefore exists between Google and
 EcoFactor regarding whether any of the Accused Products have infringed any of the asserted claims
 of the '753 patent. A judicial declaration is necessary to determine the parties' respective rights
 regarding the '753 patent.

34. Google seeks a judgment declaring that Google does not directly or indirectly
infringe any asserted claims of the '753 patent, either literally or under the doctrine of equivalents.

DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '371 PATENT

COUNT IV:

27 35. Google hereby restates and incorporates by reference the allegations set forth in
28 paragraphs 1 through 34 of this Complaint as if fully set forth herein.

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1	36. EcoFactor claims to own all right, title, and interest in the '371 patent by assignment.		
2	37. In its W.D. Tex. complaint against Google, EcoFactor alleges that smart thermostat		
3	systems infri	nge the '37	l patent. Ex. 8, ¶ 51-59.
4	38.	The Accu	used Products do not include or practice multiple claim limitations of the
5	claims of the	'371 patent	, including, but not limited to:
6		i.	detecting manual changes to one or more setpoints for a thermostatic
7			controller;
8		ii.	providing a thermostatic controller operatively connected to a heating
9			ventilation and air conditioning system, the one or more setpoints of the
10			heating ventilation and air conditioning system being manually
11			changeable;
12		iii.	calculating the scheduled programming of the thermostatic controller
13			for one or more times to control the heating ventilation and air
14			conditioning system, the scheduled programming comprising at least a
15			first automated setpoint at a first time;
16		iv.	recording, with the thermostatic controller, actual setpoints of the
17			heating ventilation and air condition system;
18		v.	communicating the actual setpoints from the one or more thermostatic
19			controllers to the at least one computer;
20		vi.	generating with the at least one computer, a difference value based on
21			comparing at least one of the actual setpoints at the first time for the
22			thermostatic controller to the first automated setpoint for the
23			thermostatic controller;
24		vii.	detecting a manual change to the first automated setpoint by
25			determining whether the at least one of the actual setpoints and the first
26	automated setpoint are the same or different based on the difference		automated setpoint are the same or different based on the difference
27	value; and		
28		viii.	logging the manual change to a database.
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1	39. An actual and justiciable controversy therefore exists between Google and		
2	EcoFactor regarding whether any of the Accused Products have infringed any of the asserted claims		
3	of the '371 patent. A judicial declaration is necessary to determine the parties' respective rights		
4	regarding the '371 patent.		
5	40. Google seeks a judgment declaring that Google does not directly or indirectly		
6	infringe any asserted claims of the '371 patent, either literally or under the doctrine of equivalents.		
7	PRAYER FOR RELIEF		
8	WHEREFORE, Google prays for judgment as follows:		
9	A. Declaring that Google Accused Products do not directly or indirectly infringe any		
10	asserted claims of the '497 patent, either literally or under the doctrine of equivalents;		
11	B. Declaring that Google Accused Products do not directly or indirectly infringe any		
12	asserted claims of the '322 patent, either literally or under the doctrine of equivalents;		
13	C. Declaring that Google Accused Products do not directly or indirectly infringe any		
14	asserted claims of the '753 patent, either literally or under the doctrine of equivalents;		
15	D. Declaring that Google Accused Products do not directly or indirectly infringe any		
16	asserted claims of the '371 patent, either literally or under the doctrine of equivalents;		
17	E. Declaring that judgment be entered in favor of Google and against EcoFactor on		
18	Google's claims;		
19	F. Finding that this is an exceptional case under 35 U.S.C. § 285;		
20	G. Awarding Google its costs and attorneys' fees in connection with this action; and		
21	H. Awarding Google such other and further relief as the Court deems just and proper.		
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24	Dated: January 10, 2022		
25	By: <u>/s/Bijal V. Vakil</u> Bijal V. Vakil		
26	Bijal V. Vakil (CA State Bar No. 192878)		
27	bijal.vakil@allenovery.com Shamita D. Etienne-Cummings (CA State Bar No. 202090)		
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6		
7	JURY DEMAI	<u>ND</u>
8	Pursuant to Federal Rule of Civil Procedure 38	and Civil Local Rule 3-6, Google demands
9	a jury trial on all issues and claims so triable.	
10	Dated: January 10, 2022 Res	pectfully submitted,
11		
12		<u>/s/Bijal V. Vakil</u> Bijal V. Vakil
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