

EXHIBIT B-29

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Invalidity Contentions: U.S. Patent No. 10,534,382

W.D. Tex., Case Nos. 6:20-cv-00075-ADA, 6:20-cv-00078, 6:20-cv-00080¹

REPRESENTATIVE CLAIM LIMITATION: “wherein the at least one setting of the HVAC system comprises whether the HVAC system is operating in a cooling mode or a heating mode”

ASSERTED CLAIMS: This limitation is present in the following Asserted Claims: ’382 patent claim 9.

CLOSURE: To the extent Plaintiff alleges that any anticipatory reference identified in Exhibit A does not disclose any portion of the above limitation, the following exemplary pincites show that those allegedly missing portions would have been obvious to one of ordinary skill in the art at the time the alleged invention was made in light of the prior art references identified in the table below. Moreover, it would have been obvious to combine any anticipatory reference identified in Exhibit A with any one or more of the following references for at least the reasons explained in the prior document of Defendants’ Invalidity Contentions or as identified herein. All emphasis added unless otherwise indicated.

Reference	Disclosure*
demand response enabling technology development” (“Arens”)	<p><i>Arens discloses “wherein the at least one setting of the HVAC system comprises whether the HVAC system is operating in a cooling mode or a heating mode.”</i></p> <p>“The data we want to save are:</p> <p>- Input from real sensors:</p> <ul style="list-style-type: none"> o Temperature measurement of all the different areas o On/Off status of all the appliances o Consumption of all the appliances

¹ These contentions are being served by defendants in the following actions: *EcoFactor, Inc. v. Google LLC*, No. 6:20-cv-00075-ADA; *EcoFactor, Inc. v. Ecobee, Inc.*, No. 6:20-cv-00078-ADA; and *EcoFactor, Inc. v. Vivint, Inc.*, No. 6:20-cv-00080-ADA.

To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrase in the Asserted Claims, Defendants are not proposing any such contentions as alternative constructions of those terms or phrases. Various positions put forth in this document are predicated on Plaintiff’s incorrectly and overly broad interpretation of the claims as evidenced by its Invalidity Contentions provided to Defendants. Those positions are not intended to and do not necessarily reflect Defendants’ interpretation of the true and proper scope of Plaintiff’s claims, and Defendants reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

Reference	Disclosure*
	<ul style="list-style-type: none"> o Occupancy of all the areas o Weather station: anemometer, pyranometer (both global and diffuse radiation) - Output to real actuators: o Price indicator lights on non-controllable appliances o On/Off order of the controllable appliances, especially Heat and Cooling o LCD screen to display information” <p>Arens at p. 68.</p>
5. Patent No. 2004/0117330 (Ehlers”)	<p><i>Ehlers discloses “wherein the at least one setting of the HVAC system comprises whether the HVAC system is operating in a cooling mode or a heating mode.”</i></p> <p>“All changes made at the thermostat 1.30D can be communicated to the gateway node 1.10D or be received during a poll of the thermostat 1.30D. In one embodiment, the following functions can be accessible directly from the thermostat 1.30D:</p> <ul style="list-style-type: none"> View current temperature. View current heating or cooling setpoint. Override heating and cooling setpoints. Resume scheduled heating and cooling setpoints. <p>View Heat/Cool/Auto mode.</p> <ul style="list-style-type: none"> Change Heat/Cool/Auto mode. Activate/deactivate the fan.” <p>Ehlers at [0153]-[0160].</p>

Reference	Disclosure*
5. Patent No. 8,196,185 (Geadelmann)	<p><i>Geadelmann discloses “wherein the at least one setting of the HVAC system comprises whether the HVAC system is operating in a cooling mode or a heating mode.”</i></p> <p><i>See, e.g., 5:4-18.</i> In some instances, web server 38 of building control appliance 12 may be adapted to provide a Summary web page (see FIG. 3B), via first port 14, that displays information pertaining to one or more of the thermostats. In some cases, the Summary web page may include information pertaining to two or more thermostats. This may include, for example, two or more of first thermostat 26, second thermostat 28, third thermostat 30 and/or fourth thermostat 32. The particular information that is displayed may be customized for a particular user and/or user class. Controller 36 may be adapted to receive sensor information from the thermostats via second network 20. In some cases, controller 36 may be programmed with a control algorithm that issues commands to the thermostats via second network 20 to activate or deactivate HVAC equipment that is connected to the thermostats.</p> <p><i>See, e.g., 5:35-64.</i> A variety of information may be displayed on the Summary web page. Examples of information include but are not limited to one or more of a thermostat identifier for one or more of the thermostats, a current inside temperature reported by one or more of the thermostats, a current outside temperature, a current set point for one or more of the thermostats, a schedule related parameter for one or more of the thermostats, a humidity related parameter that is reported by one or more of the thermostats, a current operating mode of HVAC equipment that is connected to one or more of the thermostats, an alarm related parameter for one or more of the thermostats, a discharge air temperature of HVAC equipment that is connected to one or more of the thermostats, a plenum related pressure of HVAC equipment that is connected to one or more of the thermostats, a relay output related parameter of HVAC equipment that is connected to one or more of the thermostats, a lockout status of HVAC equipment that is connected to one or more of the thermostats; a fan switch status of HVAC equipment that is connected to one or more of the thermostats, a throttle range of HVAC equipment that is connected to one or more of the thermostats, an integral time of the control algorithm used to control the HVAC equipment that is connected to one or more of the thermostats, a derivative time of the control algorithm used to control the HVAC equipment that is connected to one or more of the thermostats, and an anticipator authority of the control algorithm used to control the HVAC equipment that is connected to one or more of the thermostats. These are only examples, and it is contemplated that any Suitable information may be included on the Summary web page, as desired.</p> <p><i>See, e.g., 11:52-60.</i> Under General tab 332, as shown, web page 334 includes a pane 336 that provides information regarding thermostat 316 (which is labeled as T7350). As can be seen, pane 336 provides a user with information regarding one or more of thermostat status, current temperature, Schedule mode, operating mode, discharge temperature, relative humidity, terminal load, lockout status and fan Switch status. Clicking</p>

Reference

Disclosure*

on Set points & Fans tab 334 may cause web server 38 (FIG. 3) to serve up a web page 338, as shown in FIG. 3D.

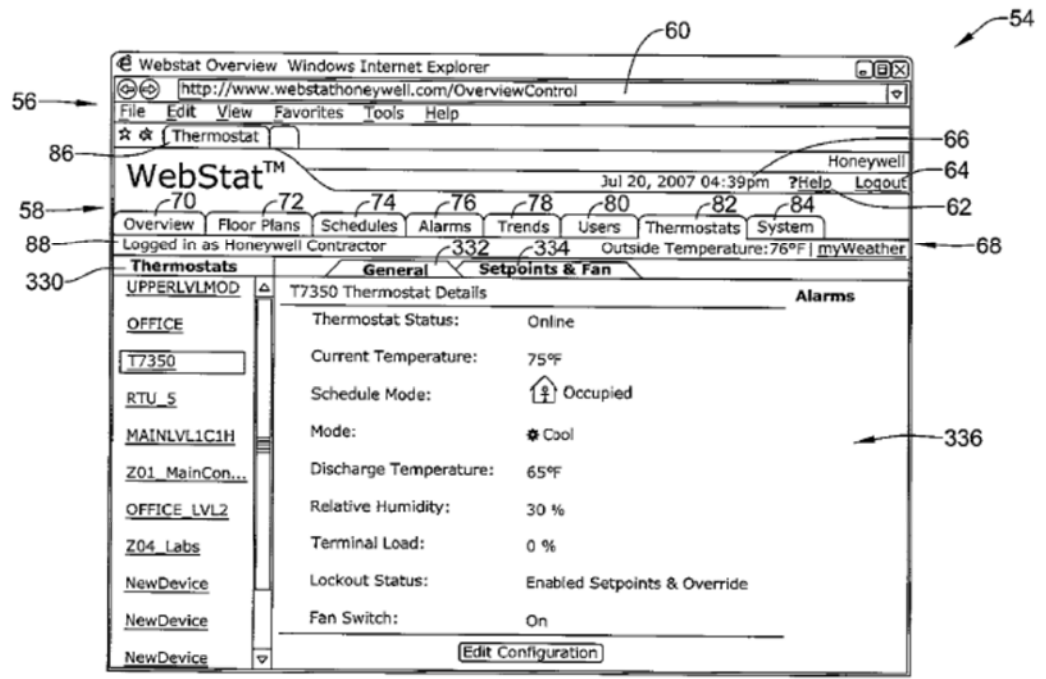


Figure 3C