EXHIBIT B-34

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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-00080[1]

PRESENTATIVE CLAIM LIMITATION: "the one or more processors with circuitry and code designed to execute instructions to receive a nd data from a network connection, wherein the second data from the network connection is collected from a source external to the building and prises outdoor temperature, wherein the second data from the network connection is received via the Internet"

ERTED CLAIMS: This limitation is present in the following Asserted Claims: '382 patent claims 17, 18, 20.

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

Reference	Disclosure*
emand response enabling nology development" ("Arens")	*Arens discloses "the one or more processors with circuitry and code designed to execute instructions to receive a second data from a network connection, wherein the second data from the network connection is collected from a source external to the building and comprises outdoor temperature, wherein the second data from the network connection is received via the Internet."* "We want to save sets of data during the real-time test of the DR system in Summer 05 in order to analyze them later. These data will be stored in a database located on a server of UC Berkeley. They will be stored in the laptop in the house, thus the controller should rely on access to them for processing (even for learning). The data we want to save are:

e 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 ctor, Inc. v. Vivint, Inc., No. 6:20-cv-00080-ADA.

e 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 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 gement 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 dants reserve the right to adopt claim construction positions that differ from or even conflict with various positions put forth in this document.

Reference	Disclosure*
	- Input from real sensors: o Temperature measurement of all the different areas o On/Off status of all the appliances o Consumption of all the appliances 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 - Input or output of simulated components: o Price information from the price generator Solution We can use a MySQL database located on a server at UC Berkeley to store the data. All the required software is free and familiar for many of us. We have to: o define the database organization (see next pages) o write the PHP code to operate the database. o and incorporate a "recorder" in the laptop that will send the collected data to the database at regular intervals (e.g. 1 hour). The recorder should be integrated in the Java code of the controller in order to have access to all

Reference	Disclosure*
	data (thus it should be programmed in Java). The first job of the recorder could be to store on the laptop, in temporary files such as text or XML files, the last set of data used by the controller, and a second function could be to communicate the data of theses files to the database before erasing them. Or if the laptop has enough resources, the recorder could keep the data in RAM." Arens at p. 68. "Initially, we installed three T-mote Sky motes, and continued adding and relocating motes until we had 13 motes installed in the house. Figure 6 below shows a plan of the house with the final configuration of distributed indoor sensors (motion, air temperature, globe temperature, relative humidity, power sensing) and **outdoor weather station**. All motes were battery-powered except for one ac-powered repeater mote, and the base mote connected to a Tablet PC. All battery-powered motes transmitted battery voltage data as well as sensor data… **To measure outdoor weather conditions, we installed a mote with four sensors in a weather-tight box on the roof of the house near the chimney**. An anemometer and wind vane measured wind speed and direction. Two pyranometers (LI-COR LI-200) measure solar radiation. One measures total horizontal radiation and the other, shielded from direct normal solar radiation by a narrow metal band, measures global diffuse radiation. The difference is the direct radiation on the horizontal. See Appendix C for details on the weather station. Another mote was installed under the eave of the roof, with three sensors: an on-board relative humidity sensor and two temperature sensors. **One temperature sensor was located under the eave of the roof and the other exposed to solar and night sky radiation. Combinations of these climate measurements are expected to prove useful in devising future demand-responsive control algorithms**." Arens at pp. 15-16. "**The weather station consists of five main components, a Moteiv T-mote Sky mote for broadcasting weather data wirelessly to a host controller, two pyranometers for measuring global and diffuse radiation, an anemometer and a wind vane**. An auxiliary circuit board attached onto the mote provides amplification for the radiation sensors and circuitry for the wind vane." Arens at p. 45. *See* Arens FIG. 6 on p. 15.

Reference	Disclosure*
	"Data Collection Persistent data collection is important for both operational and experimental reasons. Operationally, the learning functions of the system will have to use historical data that have been collected for algorithms to characterize the system's physical characteristics and the occupant preferences and patterns. Experimentally, we need a complete historical record to verify system operation, track bugs, and to tune and validate our simulation model. To satisfy these two needs, we developed a database system that collects sensor data and system events. **The data is first collected locally via a base mote connected to a laptop computer and then transmitted via Internet to a server in our lab**. We thus can review any aspect of the operation and also keep track of current operation of the system .This [sic] is crucial for our initial implementations so that problems can be detected quickly and so researchers do not have to travel to implementation sites any more than is necessary." Arens at p. 12.
S. Patent No. 2004/0117330 hlers")	*Ehlers discloses "the one or more processors with circuitry and code designed to execute instructions to receive a second data from a network connection, wherein the second data from the network connection is collected from a source external to the building and comprises outdoor temperature, wherein the second data from the network connection is received via the Internet."* "As explained above and more fully described below, **the system 1.02 may also include an advanced thermostat device 1.30D.** The system 1.02 may have the ability to sense the current indoor temperature and could be **enhanced to include at a minimum**, humidity sensing, **outside temperature**, UV intensity, wind direction and speed, relative humidity, wet bulb thermometer, dew point and **local weather forecast data** or encoded signals as well as other analog or digital inputs used in the calculation of and maintenance of occupant comfort. In its basic form, the system 1.02 will manage the indoor air temperature. Using the optional enhanced system inputs, the system 1.02 may also manage the air quality and humidity at the site by controlling the operation of the appropriate heating, filtration, conditioning and cooling equipment in conjunction with damper and fresh air input ducts, electrostatic filters and ionization devices to maximize comfort and indoor air quality. The system 1.02 may manage its operation of the available environmental conditioning resources to maintain the optimum temperature, humidity and air quality conditions based on user defined minimum and maximum values for comfort indices and price of energy indices. In a more elaborate implementation, the system 1.02 may also have the ability to switch energy types e.g., electric versus

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