

Petitioner's Demonstratives

**ECOBEE TECHNOLOGIES, ULC, *Petitioner*, v. ECOFACTOR, INC.,
*Patent Owner***

IPR2022-00969 and -00983
U.S. Patent No. 8,596,550

August 18, 2023 Oral Hearing

VENABLE LLP

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Exhibit 1024
ecobee v. EcoFactor
IPR2022-00969, -00983

Grounds

Ground	Claim(s)	Basis for Unpatentability (IPR2022-00983)
1	1-16	Ehlers in view of Wruck
2	9-16	Ehlers in view of Wruck and Harter

Ground	Claim(s)	Basis for Unpatentability (IPR2022-00969)
1	17-23	Ehlers in view of Wruck
2	17-23	Ols in view of Boait and Wruck

The '550 Patent

1. [1a] A method for detecting manual changes to the setpoint for a thermostatic controller comprising:
 - [1b] accessing stored data comprising a plurality of internal temperature measurements taken within a structure and a plurality of outside temperature measurements relating to temperatures outside the structure;
 - [1c] using the stored data to predict a rate of change of temperatures inside the structure in response to at least changes in outside temperatures;
 - [1d] calculating with one or more computer processors, scheduled programming of the thermostatic controller for one or more times based on the predicted rate of change, the scheduled programming comprising at least a first automated setpoint at a first time;
 - [1e] generating with one or more computer processors, a difference value based on comparing an actual setpoint at the first time for said thermostatic controller to the first automated setpoint for said thermostatic controller;
 - [1e] detecting a manual change to the first automated setpoint by determining whether said actual setpoint and said first automated setpoint are the same or different based on said difference value; and
 - [1f] logging said manual change to a database associated with the thermostatic controller.

The '550 Patent

9. [9a] A method for incorporating manual changes to the setpoint for a thermostatic controller into long-term programming of said thermostatic controller comprising:

[9b] accessing stored data comprising a plurality of internal temperature measurements taken within a structure and a plurality of outside temperature measurements relating to temperatures outside the structure;

[9c] using the stored data to predict a rate of change of temperatures inside the structure in response to at least changes in outside temperatures;

[9d] calculating scheduled programming of setpoints in the thermostatic controller based on the predicted rate of change, the scheduled programming comprising at least a first automated setpoint at a first time and a second automated setpoint at a second time;

[9e] comparing the actual setpoint at the first time for said thermostatic controller to the first automated setpoint for said thermostatic controller;

[9e] detecting a manual change to the first automated setpoint by determining whether said actual setpoint and said first automated setpoint are the same or different;

[9f] changing the second automated setpoint at the second time based on at least one rule for the interpretation of said manual change.

The '550 Patent

- 17. [17a] An apparatus for detecting manual changes to the setpoint for a thermostatic controller comprising:
 - [17b] at least a programmable communicating thermostat;
 - [17c] at least a remote processor;
 - [17d] at least a network connecting said remote processor and said communicating;
 - [17e] at least a database comprising a plurality of internal temperature measurements taken within a structure and a plurality of outside temperature measurements relating to temperatures outside the structure;
 - [17f] computer hardware comprising one or more computer processors configured to use the stored data to predict a rate of change of temperatures inside the structure in response to changes in outside temperatures;
 - [17g] the one or more computer processors configured to calculate scheduled setpoint programming of the programmable communicating thermostat for one or more times based on the predicted rate of change, the scheduled programming comprising one or more automated setpoints;
 - [17h] at least a database that stores the one or more automated setpoints associated with the scheduled programming for said programmable communicating thermostat;
 - [17i] at least a database that stores actual setpoint programming of said programmable communicating thermostat; and
 - [17j] the one or more computer processors configured to compare the one or more automated setpoints associated with said scheduled setpoint programming with said actual setpoint programming.

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