

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE, LLC,
Petitioner,

v.

ECOFACITOR, INC.
Patent Owner.

Case IPR2021-00054
Patent 10,534,382

ECOFACITOR, INC.'S ORAL HEARING DEMONSTRATIVES

In accordance with the Board's Order – Order Setting Oral Argument (Paper 29), Patent Owner EcoFactor, Inc., hereby files its oral hearing demonstratives.

Date: February 3, 2022

Respectfully submitted,

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Google, LLC

v.

EcoFactor, Inc.

U.S. Patent No. 10,534,382

IPR2021-00054

EcoFactor's Hearing Demonstratives

February 8, 2022

Instituted Grounds

- Ground 1: Claims 1-20

Obviousness over Geadelmann in view of Ehlers '330

Overview of Argument

All Instituted Grounds:

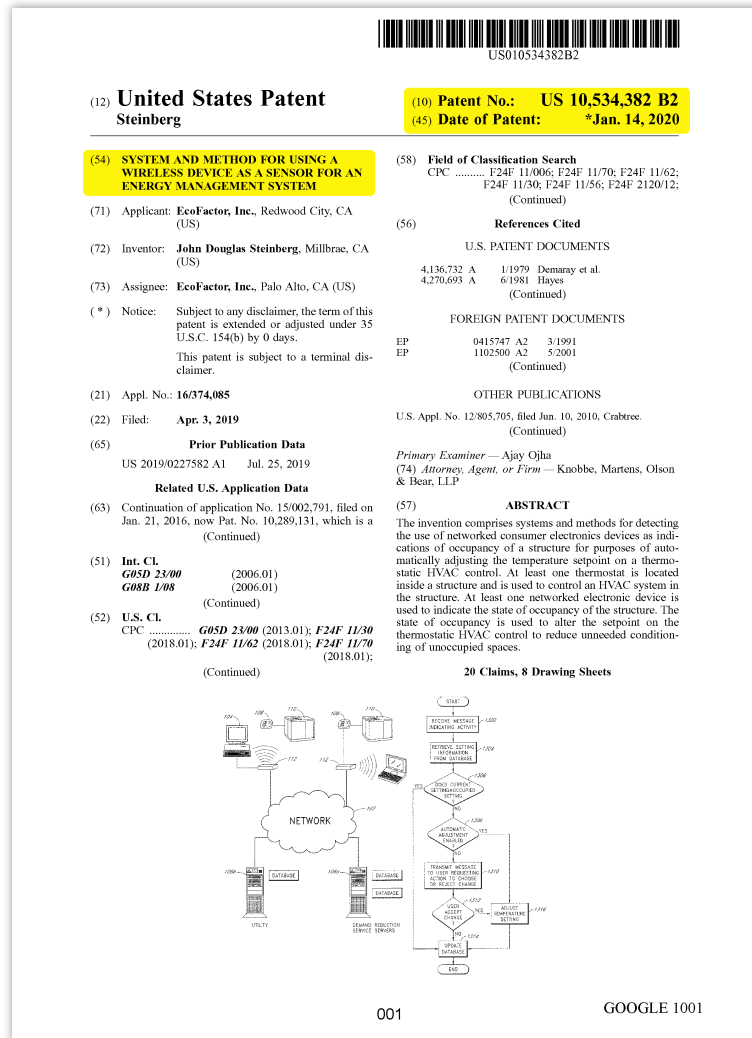
Petition Fails to Identify the Specific Combination of Geadelmann and Ehlers

Geadelmann and Ehlers:

- Do Not Disclose One Processor That Performs All of the Claimed Functions
- Do Not Disclose a First Processor Located Remotely from the Memory (Claim [1I])
- Do Not Disclose Storing Weather Data in the Memory (Claim [1m])
- Do Not Disclose Occupancy Determination Performed by Programmable Thermostats (Claim 12)

'382 Patent

'382 Patent



Ex. 1001

U.S. Patent No. 10,534,382
 (“’382 Patent”)

Date of Patent: January 14, 2020

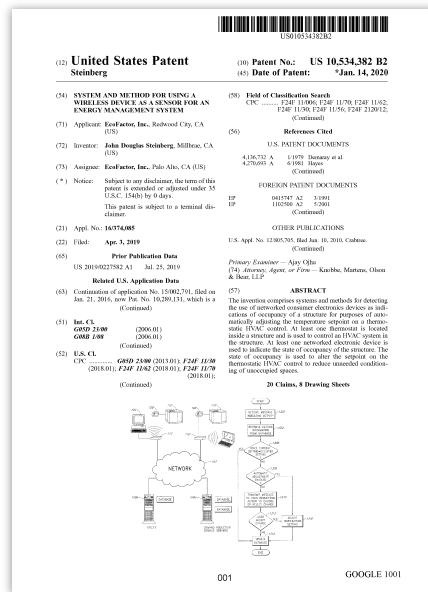
SYSTEM AND METHOD FOR USING A
WIRELESS DEVICE AS A SENSOR FOR AN
ENERGY MANAGEMENT SYSTEM

Challenged Independent Claim 1

1. A system for controlling an HVAC system at a user's building, the system comprising:
 - a memory; and
 - one or more processors with circuitry and code designed to execute instructions;
 - the one or more processors with circuitry and code designed to execute instructions to receive a first data from at least one sensor, wherein the first data from the at least one sensor includes a measurement of at least one characteristic of the building;
 - 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, wherein the second data from the network connection is received via the Internet;
 - the one or more processors with circuitry and code designed to execute instructions to receive a first temperature setpoint for the building corresponding to a desired temperature setting when the building is occupied, and a second temperature setpoint for the building corresponding to a desired temperature setting when the building is unoccupied;
 - the one or more processors with circuitry and code designed to execute instructions to receive commands through the Internet by way of a remote interface on a mobile, wireless device running software application code; wherein the interface is configured to allow the user to adjust temperature setpoints for the HVAC system;

* * *

- the one or more processors with circuitry and code designed to execute instructions to send user-specific data through the Internet, wherein user-specific information about the building and HVAC system is generated based at least in part on the user-specific data, wherein the user-specific information is configured to be presented on a user interface on a mobile, wireless device running software application code via the Internet;
- the one or more processors with circuitry and code designed to execute instructions to determine whether the building is occupied or unoccupied, and based on that determination, to control the HVAC system to provide heating or cooling to the building at an operational temperature;
- wherein the one or more processors comprises a first processor with circuitry and code designed to execute instructions, which is located remotely from the memory and is not electrically connected to the memory;
- the first processor with circuitry and code designed to execute instructions to communicate with the memory;
- wherein the memory is configured to store historical values of the first data and second data.

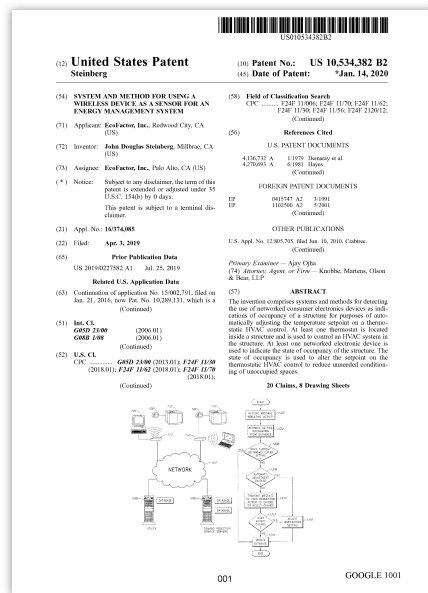


Ex. 1001

Challenged Independent Claim 17

17. A system for controlling an HVAC system at a user's building, the system comprising:
 a memory; and
 one or more processors with circuitry and code designed to execute instructions;
 the one or more processors with circuitry and code designed to execute instructions to receive a first data from at least one sensor, wherein the first data from the at least one sensor includes a measurement of the current temperature of the building by the sensor;
 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;
 the one or more processors with circuitry and code designed to execute instructions to receive a first temperature setpoint for the building corresponding to a desired temperature setting when the building is occupied, and a second temperature setpoint for the building corresponding to a desired temperature setting when the building is unoccupied;
 the one or more processors with circuitry and code designed to execute instructions to receive commands through the Internet by way of a remote interface on a mobile, wireless device running software application code; wherein the interface is configured to allow the user to adjust temperature setpoints for the HVAC system;

the one or more processors with circuitry and code designed to execute instructions to send user-specific data through the Internet, wherein user-specific information about the building and HVAC system is generated based at least in part on the user-specific data, wherein the user-specific information is configured to be presented on a user interface via on mobile, wireless device running software application code via the Internet;
 the one or more processors with circuitry and code designed to execute instructions to receive a third data from a motion sensor, and is further configured to determine whether the building is occupied or unoccupied based at least in part on the third data;
 the one or more processors with circuitry and code designed to execute instructions to control the HVAC system based on the determination that the building is occupied to provide heating or cooling to the building effective to reach the first temperature setpoint for the building corresponding to a desired temperature setting when the building is occupied;
 wherein the one or more processors comprises a first processor with circuitry and code designed to execute instructions, which is located remotely from the memory and is not electrically connected to the memory;
 the first processor with circuitry and code designed to execute instructions to communicate with the memory;
 wherein the memory is configured to store historical values of the first data and second data.



Ex. 1001

Claim Construction

“One Or More Processors ...”

Challenged Independent Claim 1

What is claimed is:

- [1a] 1. A system for controlling an HVAC system at a user's building, the system comprising:
- [1b] a memory; and
- [1c] one or more processors with circuitry and code designed to execute instructions;
- [1d] the one or more processors with circuitry and code designed to execute instructions to receive a first data from at least one sensor, wherein the first data from the at least one sensor includes a measurement of at least one characteristic of the building;
- [1e] 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, wherein the second data from the network connection is received via the Internet;
- [1f] the one or more processors with circuitry and code designed to execute instructions to receive a first temperature setpoint for the building corresponding to a desired temperature setting when the building is occupied, and a second temperature setpoint for the building corresponding to a desired temperature setting when the building is unoccupied;
- [1g] the one or more processors with circuitry and code designed to execute instructions to receive commands through the Internet by way of a remote interface on a mobile, wireless device running software application code; wherein the interface is configured to allow the user to adjust temperature setpoints for the HVAC system;
- [1h]

* * *

the one or more processors with circuitry and code designed to execute instructions to send user-specific data through the Internet, wherein user-specific information about the building and HVAC system is generated based at least in part on the user-specific data, wherein the user-specific information is configured to be presented on a user interface on a mobile, wireless device running software application code via the Internet;

the one or more processors with circuitry and code designed to execute instructions to determine whether the building is occupied or unoccupied, and based on that determination, to control the HVAC system to provide heating or cooling to the building at an operational temperature;

wherein the one or more processors comprises a first processor with circuitry and code designed to execute instructions, which is located remotely from the memory and is not electrically connected to the memory;

the first processor with circuitry and code designed to execute instructions to communicate with the memory;

wherein the memory is configured to store historical values of the first data and second data.

Ex. 1001, col. 8:11-67

Claim Requires All The “One Or More Processors” Perform All The Functions

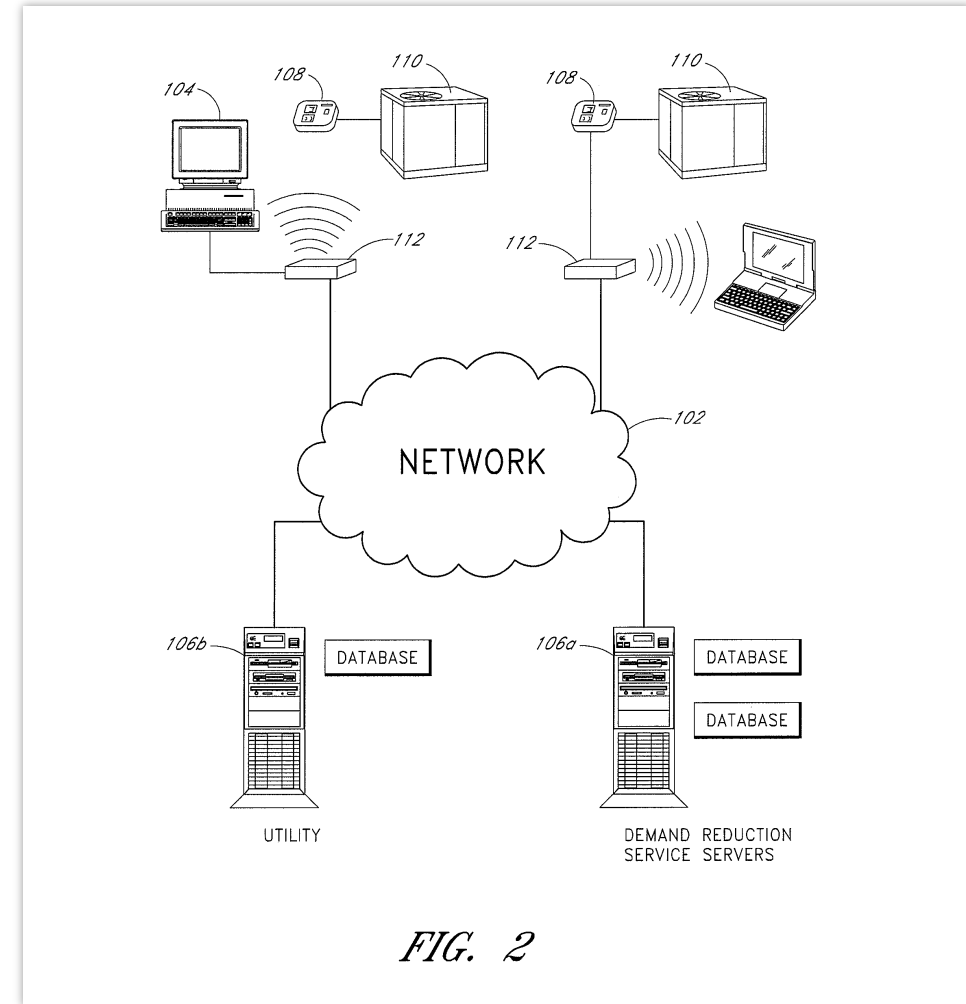
- Claim element [1c] recites “one or more processors with circuitry and code”
Ex. 1001, 8:15-16
- Claim elements [1d], [1e], [1f], [1g], [1k] and [1l] each recite
“*the* one or more processors with circuitry and code”
 - Claim [1c] provides antecedent basis for Claims [1d], [1e], [1f], [1g], [1k] and [1l]
- All of the ‘one or more processors’ must be able to perform the functions recited in claim elements [1d], [1e], [1f], [1g], [1i], [1k], and [1l]
- There needs to be at least a single processor that meets all of the limitations of claim elements [1d], [1e], [1f], [1g], [1i], [1k], and [1l].
 - For example, if a processor only met the limitations of claim elements [1d] and [1f], it would not meet claim 1.

Dependent Claims are Not Superfluous

- Claims require the “one or more processors” to perform all of the functions (except for those performed by the first processor).
- Language clarifies that two processors can each perform all of the functions.
- Dependent claims cover different claimed embodiments
 - Where functions performed by “first server” are a larger set
 - Different claims have different scopes

Specification Does Not Prohibit EcoFactor's Construction

- '382 patent describes the thermostat 108 and computer 104 connected to a server 106 via the Internet 102. Ex. 1001, 4:26-37.
- '382 patent does not prevent the server performing the recited functions from accessing the database at a different, remote server.



Ex. 1004.007

**“Located Remotely From The
Memory...”**

Challenged Claims [1l] and [1m]

wherein the one or more processors comprises a first processor with circuitry and code designed to execute instructions, which is **located remotely from the memory** and is not electrically connected to the memory;

the first processor with circuitry and code designed to execute instructions to communicate with the memory;

wherein the memory is configured to store historical values of the first data and second data.

Ex. 1001, col. 8:58-67

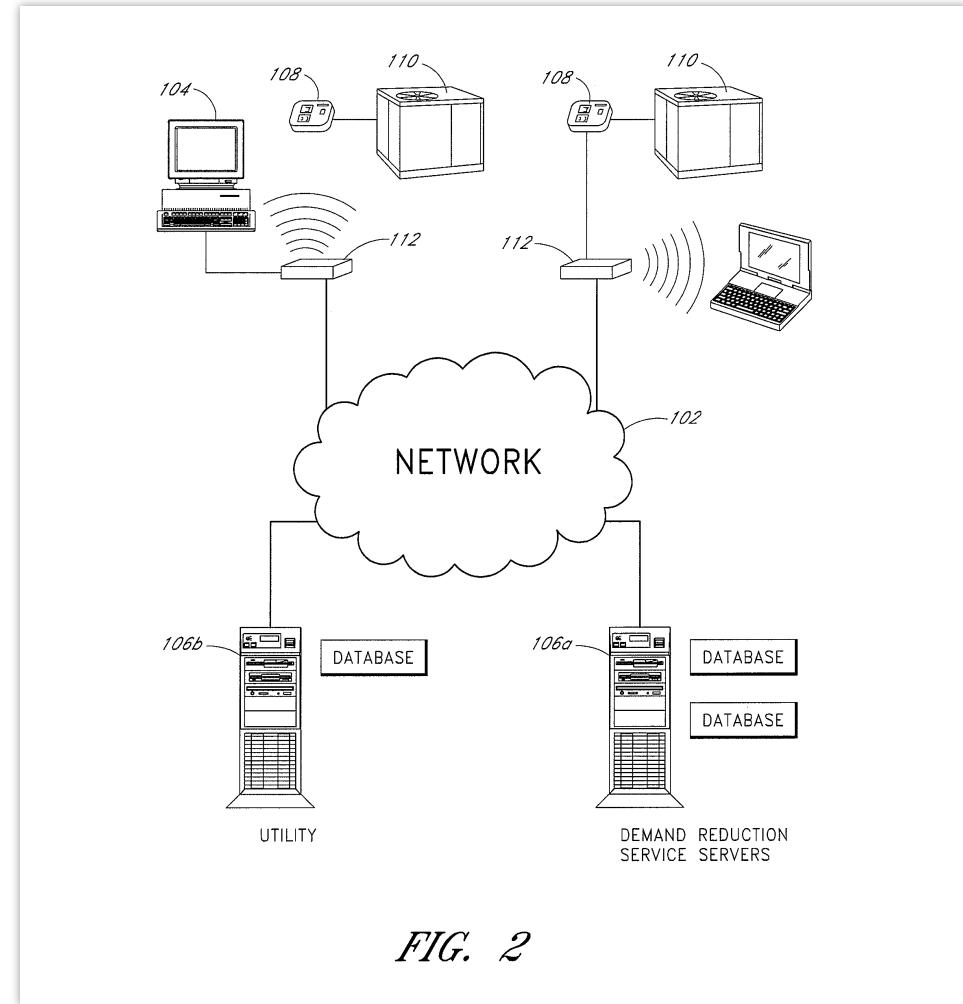
“Located Remotely from the Memory”

In the context of the specification and claims of the ‘382 patent, a POSITA would understand “located remotely from the memory” to mean not in the same building.

“Located Remotely from the Memory”

“Located Remotely” means not in the same building.

- ‘382 patent describes the thermostat 108 and computer 104 connected to a server 106 via the Internet 102. Ex. 1001, 4:30-37.
- The databases 300 in servers 106a and 106b, are remote from and not located in the same building as the thermostats 108 and computers 104.



Ex. 1004.007

“Located Remotely” Is Not In Same Device

Deposition Testimony of Google’s Expert, Mr. Rajendra Shah.

Ex. 2016, 28:20-29:4

Q. Going back to the example of your notebook computer, you would say that the -- the first processor is located remotely from the memory; is that correct?

MR. SMITH: Object to form.

THE DEPONENT: On that one, because they're all within the same laptop enclosure, I would say they are not remotely located. The first -- the processor in the -- in my laptop and the memory in my laptop are not remote.

“Located Remotely” Is Separated

Deposition Testimony of Google’s Expert, Mr. Rajendra Shah.

Ex. 2016, 23:24-24:10

Q. And I'd like to understand your customary and ordinary meaning, in light of the patent specification for "located remotely from the memory."

A. The -- so with --

MR. SMITH: Objection. Sorry.

THE DEPONENT: Go ahead.

Talking about the location of the first processor with respect to the memory, and the "located remotely" would say that they are like not next to each other. They're separated by some -- some amount of space.

Geadelmann

Geadelmann

US008196185B2

(12) **United States Patent**
Geadelmann et al.

(10) **Patent No.:** US 8,196,185 B2
(45) **Date of Patent:** Jun. 5, 2012

(54) **REMOTE HVAC CONTROL WITH A CUSTOMIZABLE OVERVIEW DISPLAY**

(75) **Inventors:** Levi H. Geadelmann, Edina, MN (US); Kevin B. Moore, Chaska, MN (US); Daniel J. Sullivan, St. Anthony, MN (US); Geoffrey Ho, Minneapolis, MN (US)

(73) **Assignee:** Honeywell International Inc., Morrisstown, NJ (US)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1172 days.

(21) **Appl. No.:** 11/845,770
(22) **Filed:** Aug. 27, 2007

(65) **Prior Publication Data**
US 2009/0057427 A1 Mar. 5, 2009

(51) **Int. Cl.**
G06F 7/04 (2006.01)
G06F 1/00 (2006.01)
G06F 15/16 (2006.01)
G06F 15/177 (2006.01)
G06F 15/173 (2006.01)
G05D 23/00 (2006.01)

(52) **U.S. Cl.** 726/4; 713/324; 700/276; 709/200; 709/203; 709/222; 709/223; 709/224; 709/225; 709/229; 236/51

(58) **Field of Classification Search** 726/4; 713/324; 700/276; 709/200, 203, 222-225, 229; 236/51
See application file for complete search history.

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Primary Examiner — Aravind Moorthy
(74) *Attorney, Agent, or Firm* — Seager, Tufte & Wickhem LLC

(57) **ABSTRACT**
An HVAC control system that accommodates and/or facilitates control from a remote location. The HVAC control system may include a web-enabled building control appliance having a controller, a first port and a second port. The controller may implement a web server that is coupled to the first port for serving up one or more web pages on a first network and for receiving a number of responses. The controller may also be coupled to the second port so as to communicate with one or more communicating thermostats via a second network. The web server may be adapted to provide an overview or summary web-page via the first port that displays information regarding the one or more thermostats, where the information that is displayed may be customized for a particular user.

18 Claims, 75 Drawing Sheets

001

GOOGLE 1004

Ex. 1004

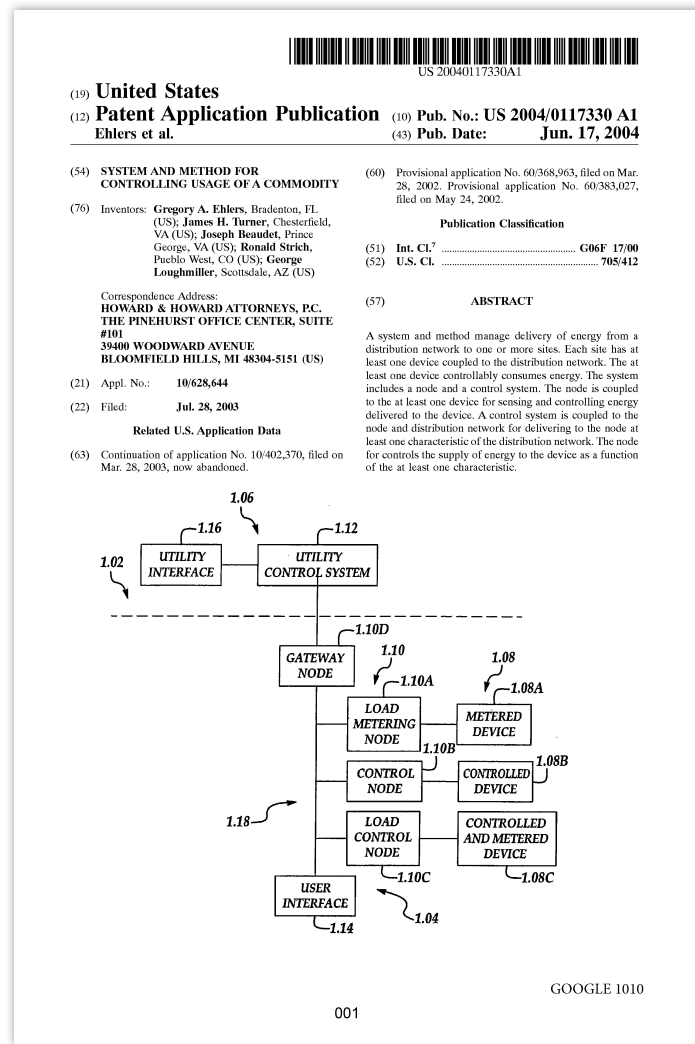
U.S. Patent No. 8,196,185
("Geadelmann")

Date: June 5, 2012

REMOTE HVAC CONTROL WITH A CUSTOMIZABLE OVERVIEW DISPLAY

Ehlers

Ehlers



Ex. 1010

U.S. Publication No. US 2004/0117330
("Ehlers")

Date: June 17, 2004

SYSTEM AND METHOD FOR
CONTROLLING USAGE
OF A COMMODITY

Petitioner Fails to Identify the Specific Combination of Geadelmann and Ehlers

No Specific Combination Identified

- Google identifies over 200 hundred potential combinations
- Google’s job to identify which combination is being relied upon, not Board’s or EcoFactor’s

Claim Limitation	Alternative Structures from Geadelmann	Petition/Shah Decl. Support
Claim [1b]	Building Control Appliance (“BCA”) 12, the PC 34, or the programmable thermostats 26-32	Pet. at 24; Ex. 1002 at ¶ 71.
Claim [1c]	Building Control Appliance (“BCA”) 12, the PC 34, or the programmable thermostats 26-32	Pet. at 25; Ex. 1002 at ¶ 72.
Claim [1g]	Building Control Appliance (“BCA”) 12 or the PC 34	Pet. at 35; Ex. 1002 at ¶ 88.
Claim [1i]	Building Control Appliance (“BCA”) 12 or the PC 34	Pet. at 39; Ex. 1002 at ¶ 71.
Claim [1k]	Building Control Appliance (“BCA”) 12 or the programmable thermostats 26-32	Pet. at 45; Ex. 1002 at ¶ 107.
Claim [1l]	PC 34, or the programmable thermostats 26-32	Pet. at 45; Ex. 1002 at ¶ 108.
Claim [1m] (first processor)	PC 34, or the programmable thermostats 26-32	Pet. at 50; Ex. 1002 at ¶ 113.

POR at 20; Ex. 2013, ¶ 46.

Geadelmann and Ehlers Do Not Render Obvious Claims 1-20

Geadelmann Does Not Disclose Automatically Determining Occupancy

- Geadelmann discloses designation of occupied/unoccupied status based on pre-programmed schedule.
- A pre-programmed schedule is not a processor that makes a determination whether a building is occupied or unoccupied.

POR at 21-22; Ex. 1012 at ¶ 59

Geadelmann Does Not Disclose Automatically Determining Occupancy

- In any event Geadelmann teaches away from the patented automatic occupancy determination by a processor remote from the memory.
- The petition alleges that Geadelmann merely has a local thermostat with an occupancy sensor – not a processor that makes a determination – and indeed that local thermostat is in the same building as the memory.

POR at 21-22; Ex. 1012 at ¶ 59

Gadelmann Does Not Disclose Automatically Determining Occupancy

- Mr. Shah admits that “Gadelmann does not expressly state that the occupancy sensor is used to determine occupancy.”
Ex. 1002, ¶ 103.
- Even if it did, an occupancy sensor is not a processor that makes a determination.

POR at 37; Ex. 1012 at ¶ 94

First Processor Not “Located Remotely” From The Memory In Geadelmann

- Google claims BCA 12 or Programmable Thermostats meet claim [1k]
 - But BCA 12 does not meet claim [1l]
 - Only alleges PC 34 or Programmable Thermostats 26-32 for Claim [1l]
- But Google also argues that memory of claim [1b] is either BCA 12 or Programmable Thermostats. Pet. at 24.

Claim Limitation	Alternative Structures from Geadelmann	Petition/Shah Decl. Support
Claim [1c]	Building Control Appliance (“BCA”) 12, the PC 34, or the programmable thermostats 26-32	Pet. at 25; Ex. 1002 at ¶ 72.
Claim [1d]	Building Control Appliance (“BCA”) 12	Pet. at 27; Ex. 1002 at ¶ 76.
Claim [1e]	Building Control Appliance (“BCA”) 12	Pet. at 30; Ex. 1002 at ¶ 80.
Claim [1f]	Building Control Appliance (“BCA”) 12	Pet. at 32; Ex. 1002 at ¶ 83.
Claim [1g]	Building Control Appliance (“BCA”) 12 or the PC 34	Pet. at 35; Ex. 1002 at ¶ 88.
Claim [1i]	Building Control Appliance (“BCA”) 12 or the PC 34	Pet. at 39; Ex. 1002 at ¶ 71.
Claim [1k]	Building Control Appliance (“BCA”) 12 or the programmable thermostats 26-32	Pet. at 45; Ex. 1002 at ¶ 107.
Claim [1l]	PC 34, or the programmable thermostats 26-32	Pet. at 45; Ex. 1002 at ¶ 108.

POR at 23; Ex. 2013, ¶ 61.

First Processor Not “Located Remotely” From The Memory In Geadelmann

- First Processor of Claim [1I] Must Be Remote from Memory
- Programmable Thermostat Cannot Be Both Memory and First Processor

wherein the one or more processors comprises a first processor with circuitry and code designed to execute instructions, which is **located remotely from the memory** and is not electrically connected to the memory;

the first processor with circuitry and code designed to execute instructions to communicate with the memory;

wherein the memory is configured to store historical values of the first data and second data.

Ex. 1001, col. 8:58-67

Thermostats Not "Located Remotely" From BCA 12

BCA 12 And Programmable Thermostats Are Located In The Same Building.

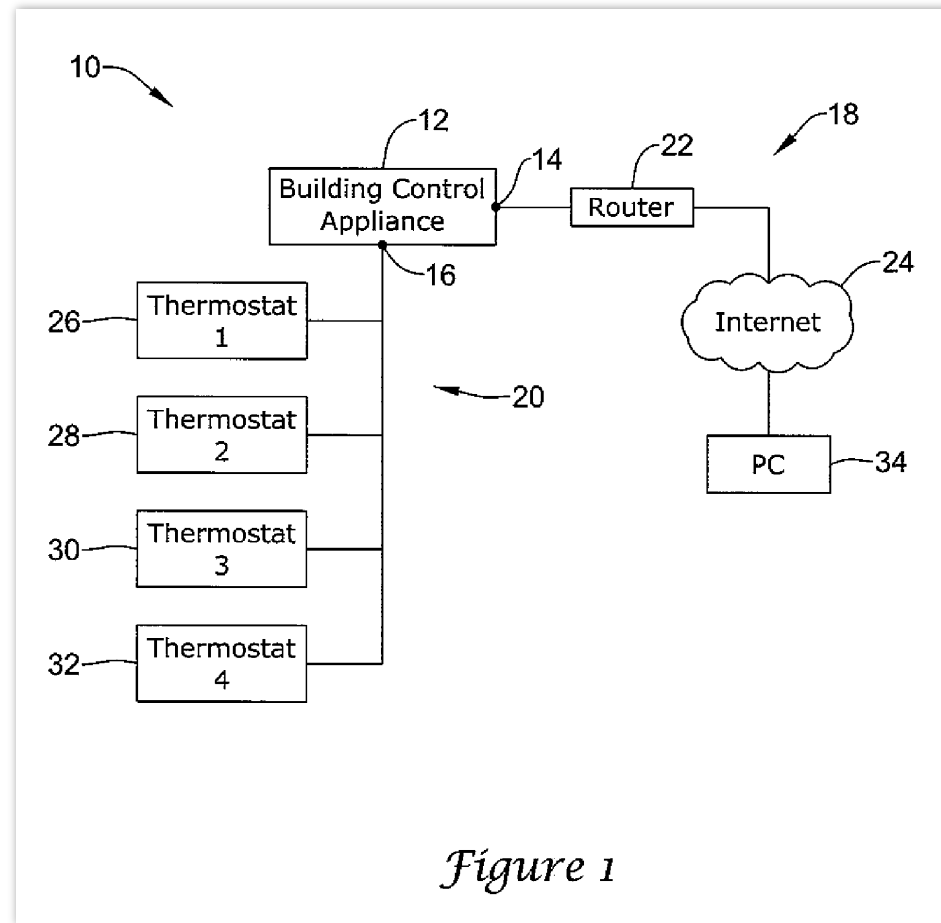


Figure 1

Ex. 1004, Fig. 1

User Device 34 Cannot Be “First Processor”

User Device 34 Does Not Meet Claims [1d], [1e], [1f], Or [1k].

Claim Limitation	Alternative Structures from Geadelmann	Petition/Shah Decl. Support
Claim [1c]	Building Control Appliance (“BCA”) 12, the PC 34, or the programmable thermostats 26-32	Pet. at 25; Ex. 1002 at ¶ 72.
Claim [1d]	Building Control Appliance (“BCA”) 12	Pet. at 27; Ex. 1002 at ¶ 76.
Claim [1e]	Building Control Appliance (“BCA”) 12	Pet. at 30; Ex. 1002 at ¶ 80.
Claim [1f]	Building Control Appliance (“BCA”) 12	Pet. at 32; Ex. 1002 at ¶ 83.
Claim [1g]	Building Control Appliance (“BCA”) 12 or the PC 34	Pet. at 35; Ex. 1002 at ¶ 88.
Claim [1i]	Building Control Appliance (“BCA”) 12 or the PC 34	Pet. at 39; Ex. 1002 at ¶ 71.
Claim [1k]	Building Control Appliance (“BCA”) 12 or the programmable thermostats 26-32	Pet. at 45; Ex. 1002 at ¶ 107.
Claim [1l]	PC 34, or the programmable thermostats 26-32	Pet. at 45; Ex. 1002 at ¶ 108.

POR at 23; Ex. 2013, ¶ 61.

Claims [1e] and [1m] Are Not Met by Geadelmann

Element [1e]:

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, wherein the second data from the network connection is received via the Internet;

Element [1m]:

the first processor with circuitry and code designed to execute instructions to communicate with the memory;
wherein the memory is configured to store historical values of the first data and second data.

Claims [1e] and [1m] Are Not Met by Geadelmann

- Google identifies a navigation bar that includes “Local Weather and Outdoor Air Temperature.”
- Ignores that this is an external link to click to access the weather
- This data is at the server hosting the link, not the system in Geadelmann

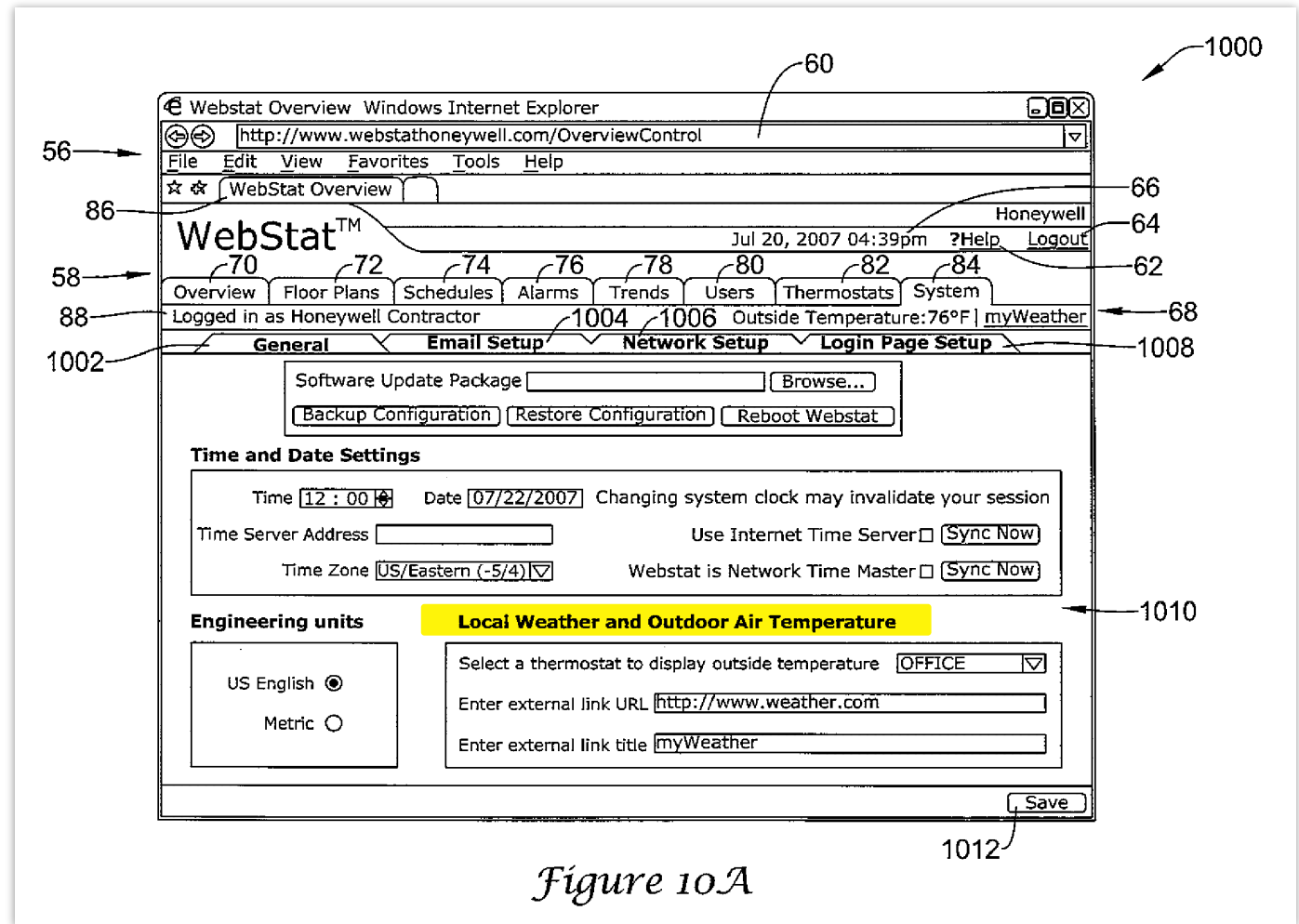


Figure 10A

Ex. 1004, Fig. 10A

Claims [1e] and [1m] Are Not Met by Geadelmann

- Google argues that “measurements of outside temperature would most obviously have been made by exposing temperature sensor to outside air, which can only be found external to the building.” Ex. 1002, ¶ 79.
- But there is no teaching in Geadelmann of where the temperature sensors are located or that they would send data to BCA 12 via the Internet

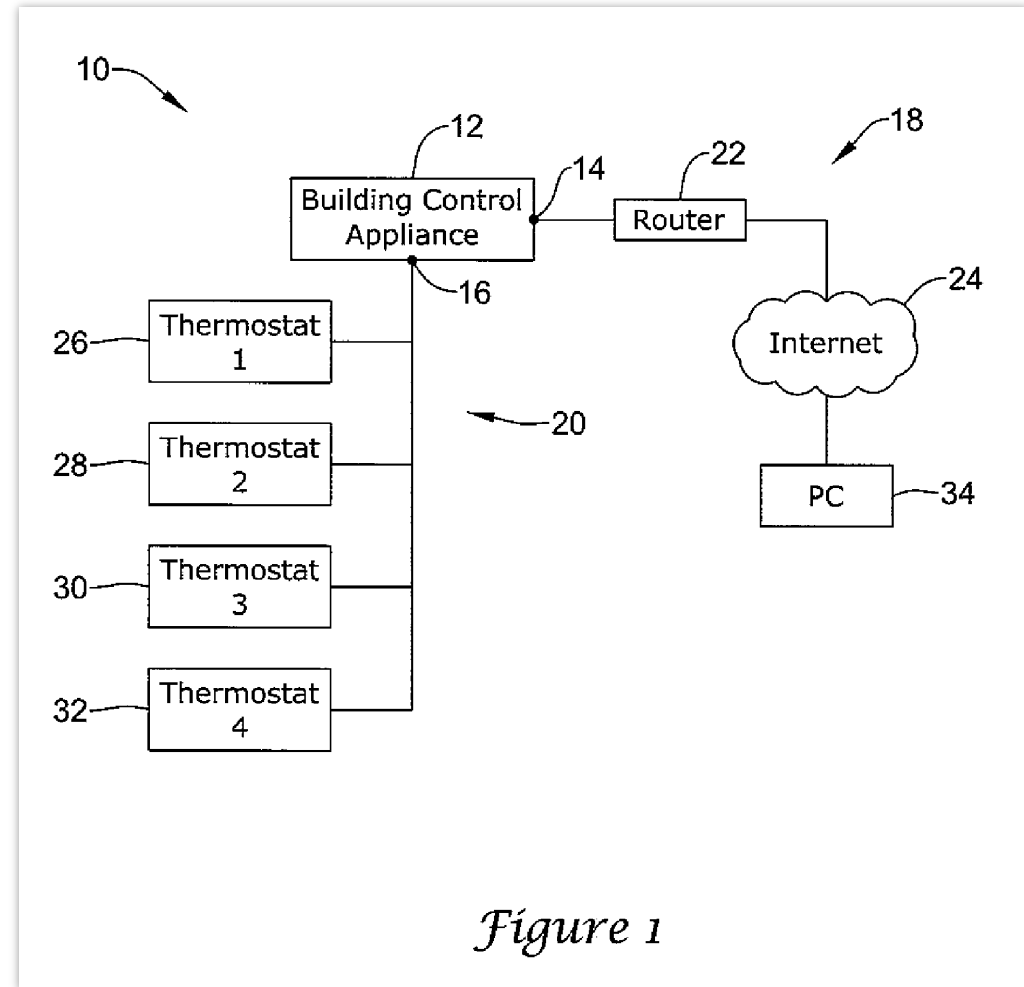


Figure 1

Ex. 1004, Fig. 1

No Teaching That Geadelmann Stores Outside Temperature Data

- Fig. 7A Refers to an external website at Webstathoneywell.com.
- No teaching in Geadelmann that weather data is stored anywhere other than this website.

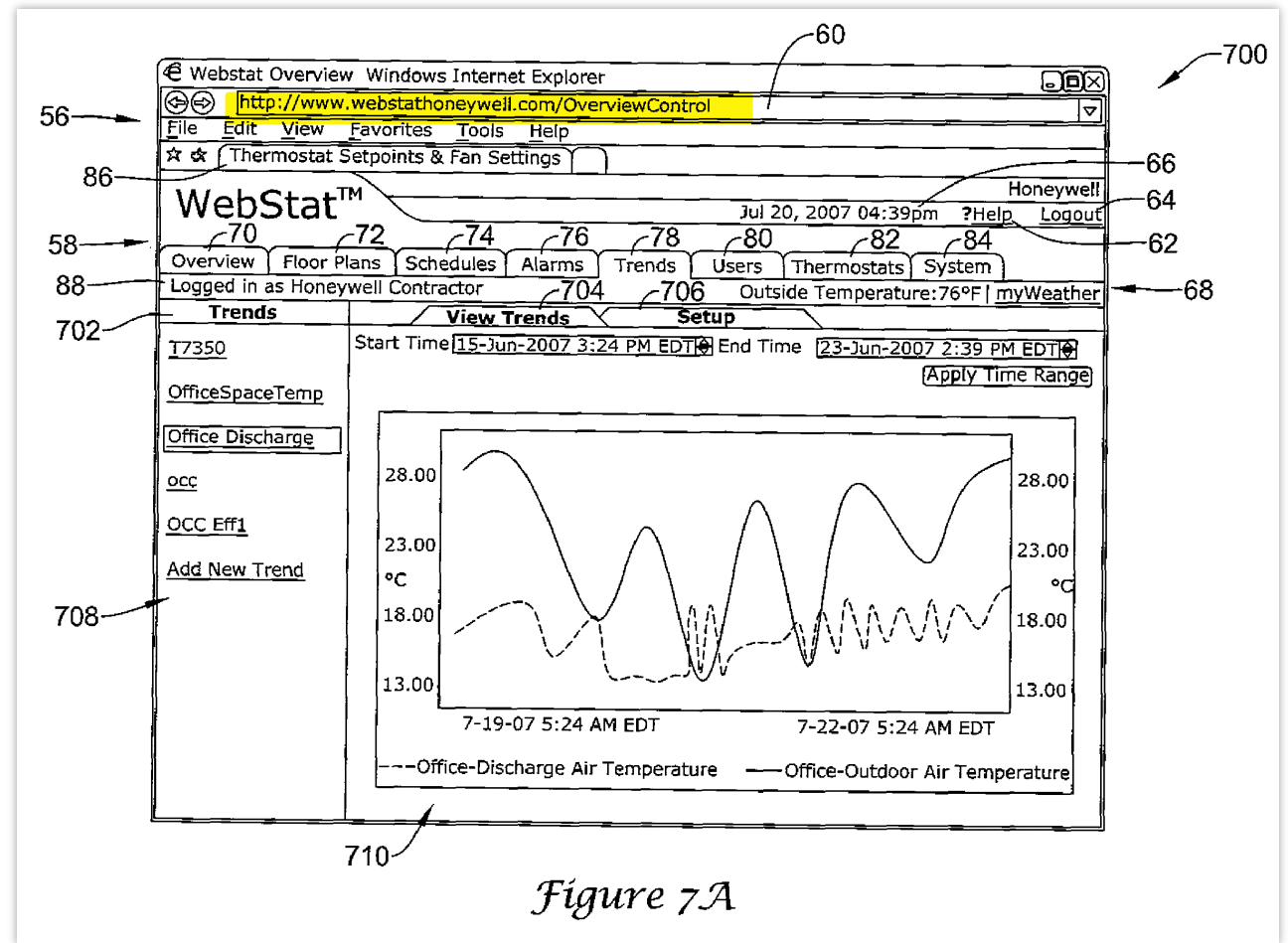


Figure 7A

Ex. 1004, Fig. 7A

Geadelmann and Ehlers Do Not Render Obvious Claim 12

Gadelmann and Ehlers Do Not Invalidate Claim 12

Claim [1k]:

the one or more processors with circuitry and code designed to execute instructions to determine whether the building is occupied or unoccupied, and based on that determination, to control the HVAC system to provide heating or cooling to the building at an operational temperature;

Claim [12]:

12. The system of claim 1, wherein the determination of whether the building is occupied or unoccupied by is performed by the first processor.

Google argues that BCA 12 or Thermostats 26-32 meet Claim 12 (Pet. at 64)

Gadelmann and Ehlers Do Not Invalidate Claim 12

- Claim [1I] requires the first processor to be “located remotely from the memory”
- For Claim [1m], Google only relies on BCA 12 for memory that stores “historical values of the first and second data.”
- Thus, the BCA 12 cannot be the First Processor for Claim 12

Q. (By Mr. Mirzaie) And for just this element, am I correct that the memory that you rely on is in the building control appliance, fair?

Just for element 1m.

A. Just for element 1m, yes. That's correct.

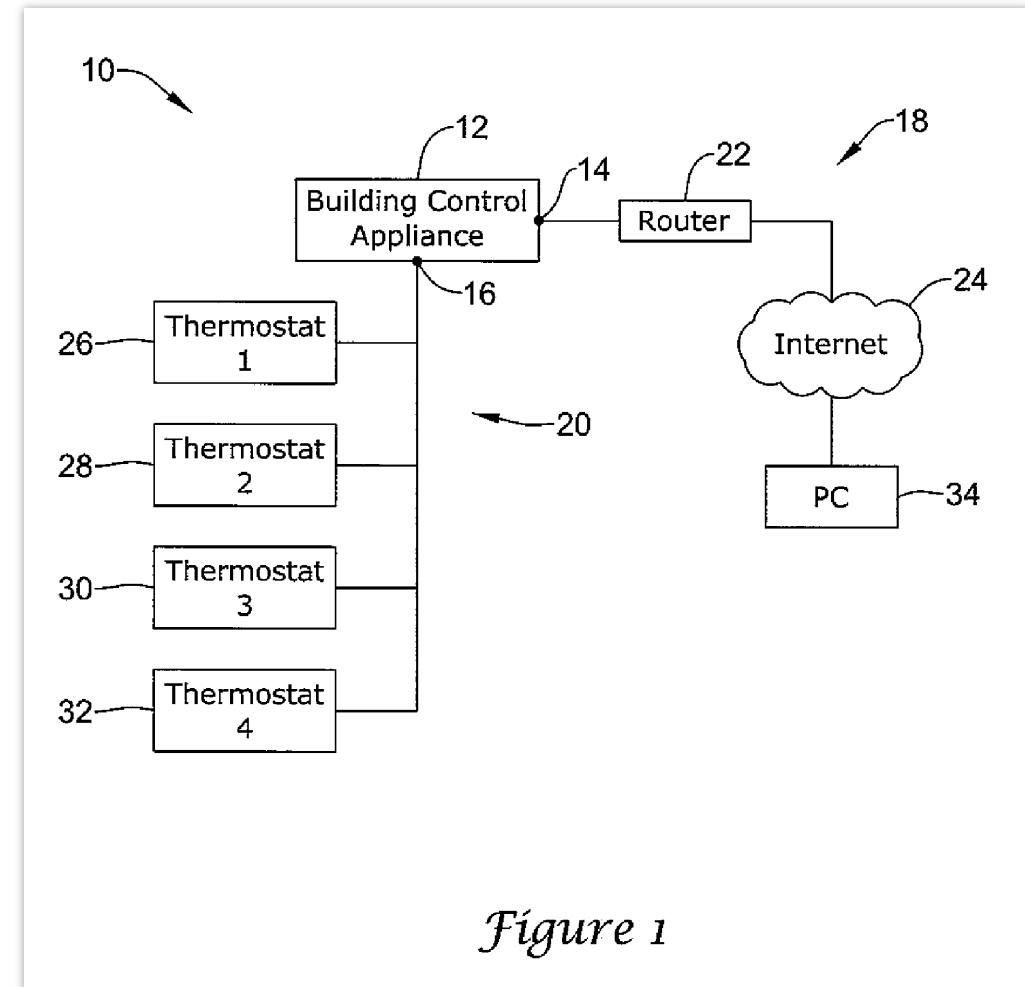
Q. And just for element 1m, the -- the memory is not the memory in the thermostats in Gadelmann or the PC, et cetera, 34 in Gadelmann, fair?

A. For 1m -- okay. Now, there are two parts to 1m. Both deal with memory. But I -- I believe you're right. That's the BCA memory.

Ex. 2016, 77:2-14

Gadelmann and Ehlers Do Not Invalidate Claim 12

- Programmable Thermostats 26-32 do not meet Claim 12
- As noted previously, the Programmable Thermostats 26-32 are located in the same building as BCA 12



Ex. 1004, Fig. 1

Gadelmann and Ehlers Do Not Invalidate Claim 12

No Teaching in Gadelmann that Programmable Thermostats 26-32 Determine Whether Building is Occupied or Unoccupied

The web pages served up by web server 38 may include a number of predetermined configuration options for selection by the user. At least some of the predetermined configuration options may, if desired, be presented in a pull-down menu. Examples of predetermined configuration options include, but are not limited to, one or more of a thermostat model option, an equipment type option, a thermostat keypad lock-out option, a system mode option, a fan mode option, a room temperature input designation option, a humidity input designation option, an outdoor temperature input designation option, **an occupancy sensor input designation option**, a number of cooling stages option, a number of heating stages option, a cooling cycle rate and/or a heating cycle rate.

Ex. 1004, 8:31-43

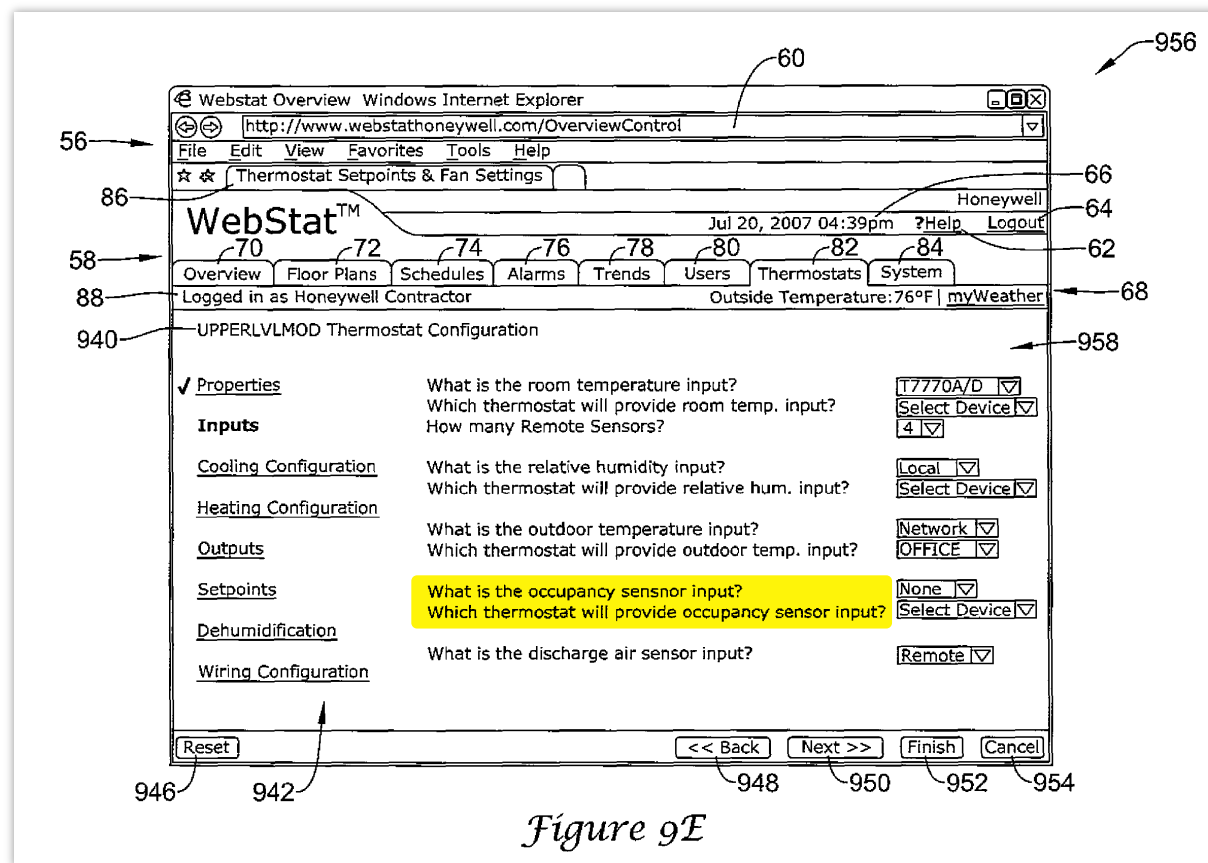


Figure 9E

Ex. 1004, Fig. 9E

Gadelmann and Ehlers Do Not Invalidate Claim 12

- No other description in Gadelmann of occupancy
- No discussion about occupancy sensors, how they function, or where occupancy determination is made
- Google's own Expert admits that "Gadelmann does not expressly state that the occupancy sensor is used to determine occupancy."
Ex. 1002, ¶ 103.
 - Nothing inherent as to where the occupancy determination occurs.
 - Just as likely to be performed at BCA 12, or even elsewhere, as at thermostats 26-32.
- Ehlers does not remedy this deficiency
 - No teachings in Ehlers of occupancy sensor used to determine occupancy.

No Motivation to Modify Geadelmann and Ehlers

- Sole Motivation Provided Is Insufficient:
 - Conclusory.
 - Merely repeats the claimed elements.
 - Geadelmann does not disclose thermostats that contain occupancy sensors.

The web pages served up by web server 38 may include a number of predetermined configuration options for selection by the user. At least some of the predetermined configuration options may, if desired, be presented in a pull-down menu. Examples of predetermined configuration options include, but are not limited to, one or more of a thermostat model option, an equipment type option, a thermostat keypad lock-out option, a system mode option, a fan mode option, a room temperature input designation option, a humidity input designation option, an outdoor temperature input designation option, an occupancy sensor input designation option, a number of cooling stages option, a number of heating stages option, a cooling cycle rate and/or a heating cycle rate.

Ex. 1004, 8:31-43

1002, ¶136). It would have been particularly obvious to use the processor of a thermostat to perform the determination of occupancy, because (as shown in Fig. 9E of Geadelmann) the thermostats contained the occupancy sensors (Ex. 1004, Fig. 9E, 8:31-43)(Ex. 1002, ¶136), and because the thermostats were the units that needed to operate their associated HVAC systems based on the occupied or unoccupied state

Pet. at 64.

CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e)(1))

The undersigned hereby certifies that the above document was served on February 3, 2022 by filing this document through the Patent Review E2E system as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioner:

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