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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte THOMAS A. CONROY, TODD H. BECKER, and
THOMAS G. SIEGEL

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Appeal 2018-003666
Application 14/689,664
Technology Center 3700

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Before ANTON W. FETTING, CYNTHIA L. MURPHY, and
KENNETH G. SCHOPFER, *Administrative Patent Judges*.

MURPHY, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants[1] appeal under 35 U.S.C. § 134 from the Examiner's
rejection of claims 1–42. We have jurisdiction over this appeal under
35 U.S.C. § 6(b).

We AFFIRM.

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[1] "The real party in interest is The Yankee Candle Company, Inc." (Appeal
Br. 3.)

STATEMENT OF THE CASE

According to the Appellants, their invention "relates generally to networked scent-diffusing devices and applications thereof." (Spec. ¶ 4.)

Illustrative Claim

[Claim 1]   A method, comprising:

receiving, via the internet, at a computer remote from an environment, at least one sensed scent parameter for the environment from a scent sensor in the environment;

determining, at the computer remote from the environment, an operational parameter of at least one scent diffusion device within the environment for achieving a target value of the scent parameter based on the sensed scent parameter data; and

transmitting from the computer to the at least one scent diffusion device in the environment, an instruction via the internet to initiate diffusion of a scent therefrom to achieve the target value of the scent parameter, wherein the instruction includes at least one of setting and adjusting the determined operation parameter of the at least one scent diffusion device.

Rejection

The Examiner rejects claims 1–42 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.[2] (Non-Final Action 2.)

ANALYSIS

Claims 1, 13, 20, 25, 30, 35, and 40 are the independent claims on appeal, with the rest of the claims on appeal depending therefrom. (*See* Appeal Br., Claims App) These independent claims recite "methods" concerning the operation of at least one scent-related "diffusion device." (*Id.*) According to the Appellants, their methods "enabl[e] effective,

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[2] US 2013/0081541 A1, published April 4, 2013. Our quotations to this reference will omit bolding of drawing-related numerals.

centralized management of remotely deployed scent systems" using "microprocessor-controlled and networked diffusion devices." (Spec. ¶ 13.)

Some, but not all, of the independent claims require a computer to be "remote" from the "environment" in which the scent diffusion device is situated. (*See* Appeal Br., Claims App.) The Appellants do not point to, and we do not see, formal definitions in the Specification for the terms "remote" and "environment." The Specification does, however, implicate that an "environment" can be considered a "room" in the context of the claimed invention. (*See, e.g.,* Spec. ¶¶ 23, 26, 28, 31, 32, 38–40, 110, 137, 144, 153 161, 163, 167, 176, 178, etc.)[3]

As such, in a multi-room building, a computer in one room would be considered "remote" from a scent diffusion device in another room. Insofar as the Appellants argue to the contrary (*see, e.g.,* Appeal Br. 13, 15–16; Reply Br. 6), we are not persuaded by these arguments. That being said, we agree with the Appellants' sentiment that, in the context of the claims on appeal, a "remote computer" would not be situated within the same environment (e.g., the same room) as "the environment being scented" (e.g., the room being scented) by a scent diffusion device, and certainly would not be situated "in" the scent diffusion device itself. (*Id.* at 8, 12.)

Turning now to the Examiner's obviousness rejection, it rests upon a single prior art reference, namely Hasenoehrl. (*See* Non-Final Action 2–3.) Hasenoehrl discloses a "Scent Emission Control Network (SECN) architecture" comprising "plural scent emitters 111." (Hasenoehrl ¶¶ 19, 20.)

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[3] For example, the Specification states that the method may "include determining the total number of scent diffusion devices to dispose in **an environment** based on **a room volume**." (Spec. ¶ 23, emphasis added.)

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One disclosed implementation of Hasenoehrl's SECN architecture is shown in

Figure 2, reproduced below.

FIG. 2
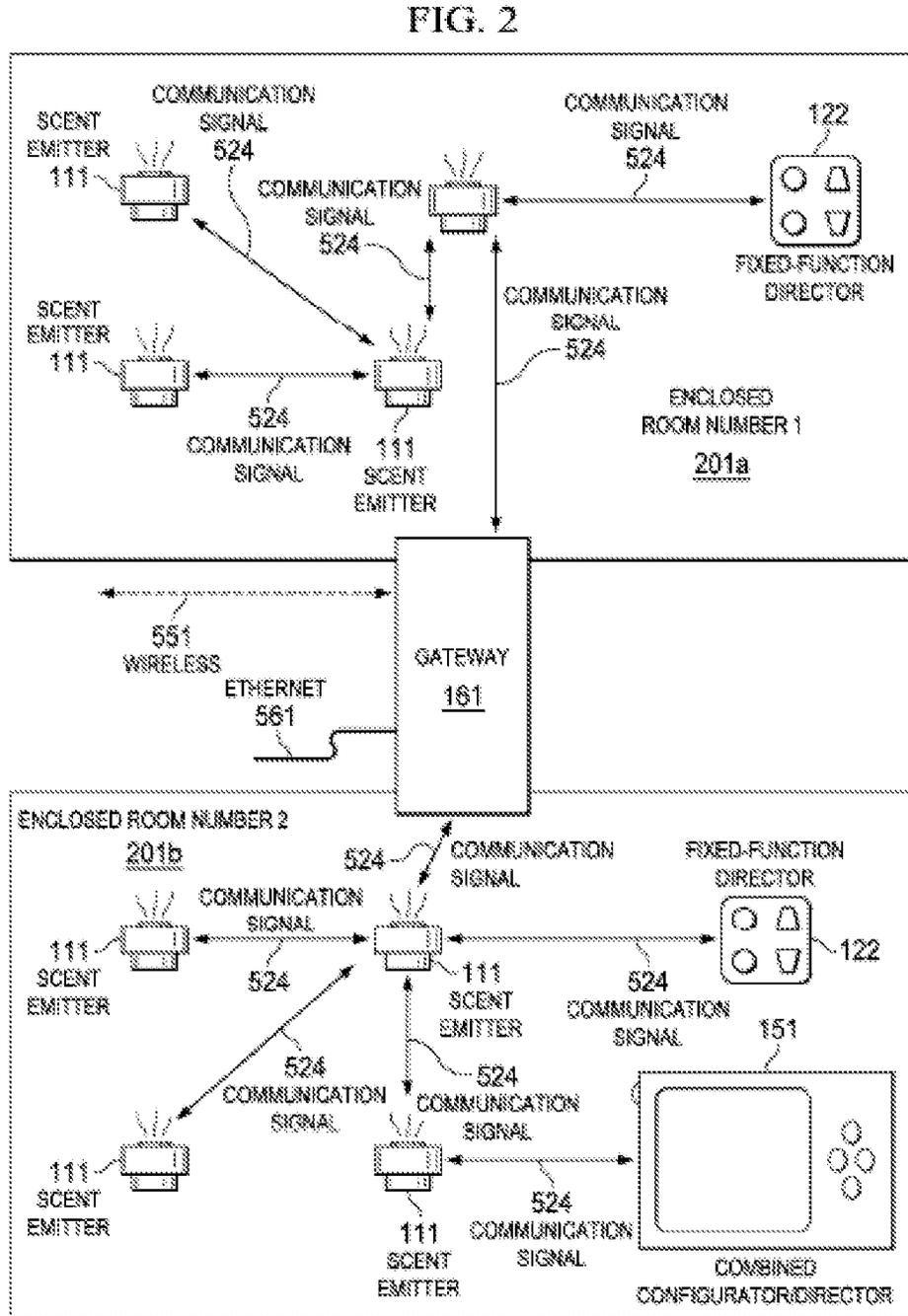
The above drawing shows a "SECN implication consisting of plural rooms"

in a "home of office." (*Id.* ¶ 25.) A group of scent emitters 111 is installed in

a room 201a and another group of scent emitters 111 is installed in a separate room 201b. (*See id.*) The room 201b is shown as physically apart from the first room 201a, and a combined configurator/ director 151 is located in the room 201b. (*See id.*) Thus, the room 201b is "remote" from the room 201a and, likewise, the combined configurator/ director 151 is situated "remote" from the scent emitters 111 installed in the room 201a.

In Hasenoehrl's SECN architecture, each scent emitter 111 includes its own "controller 301" with a "microprocessor 401" that operates the scent emitter 111 "based on the behavior software modules 801 that have been loaded into it." (Hasenoehrl ¶¶ 30, 36; *see also* Fig. 4.)

More specifically, the operation of a scent emitter 111 involves the emission of an "air freshening composition," and the behavior module 801 loaded into the controller 301 "make[s] scent emission decisions" to control "scent emission" from the scent emitter 111. (*See* Hasenoehrl ¶ 7.) A scent emitter 111, and particularly its controller 301, can "incorporate[] one or more sensors 431" for measuring "an odor or an odor level," and "[t]hese sensors can be used for feedback control of freshness intensity" (*id.* ¶ 38). The behavior module 801 currently running in a controller 301 operates the host scent emitter 111 to respond to "sensor input triggers" (*id.* ¶ 32), such as the scent parameter sensed by the internal odor sensors 431.

According to Hasenoehrl, there is a need to provide "a user's desired air freshening experience" throughout a "home[] or office[]" having "multiple rooms." (Hasenoehrl ¶¶ 4, 5.) The behavior modules 801 correspond to a user's "desired behavior of a set of controllers" (*id.* ¶ 46) so as to "provide a desirable scent in the air" (*id.* ¶ 24). There is, therefore, a target value associated with the user's desired air freshening experience throughout the

multiple rooms; and the behavior-module instructions are contrived to achieve this target value.

Put another way, a behavior module 801 is what causes a controller 301 to set/adjust an operational parameter of its host scent emitter 111 based on a sensed scent parameter to achieve a target value. Thus, control of the delivery of a behavior module 801 to a scent emitter 111 can equate to control of an operational parameter of this scent emitter 111.

As indicated above, Hasenoehrl's disclosed SECN architecture also includes a combined configurator/director 151 that is located in the room 201b. (*See* Hasenoehrl ¶ 25; Fig. 2.) Hasenoehrl teaches that, when "an operator [is] managing an entire building's freshness profile," this combined configurator/director 151 can be in a "fixed location" and can be considered "the operator's computer system." (*Id.* ¶ 49.) Thus, in the two-room implementation of Hasenoehrl's SECN architecture reproduced above, the combined configurator/ director 123 is a remote computer 151 relative to the scent emitters 111 installed in the room 201a.

Hasenoehrl's remote computer 151 combines "[t]he functions of [a] director 123 and [a] configurator 141." (Hasenoehrl ¶ 29.) The function of the configurator 141 is "designing and configuring behaviors" (*id.* ¶ 28), or in other words, the creation of behavior modules 801. "After designing the behaviors with configurator 141," the "resulting behavior modules 801" are transferred to the director 123, and the director 123 "can then be used to deliver the specified behaviors" to the respective controllers 301 of the scent emitters 111. (*Id.* ¶ 47.)

As discussed above, a behavior module 801 is contrived to achieve a target value for the room in which the scent emitters 111 are installed. (*See*

Hasenoehrl ¶¶ 24, 46.) To this end, the configurator 140 has an interface that allows a person "to design or adjust scent emitting behaviors for a space." (*Id.* ¶ 48.) Thus, during creation of a behavior module 801, behavior-defining values (e.g., a target value) would be input into the remote computer 151 when it is functioning as the configurator 140.

As also discussed above, a behavior module 801 can cause a controller 301 to set/adjust an operational parameter of its host scent emitter 111 based on a sensed scent parameter (i.e., sensed by the odor sensor 431). (*See* Hasenoehrl ¶¶ 32, 38.) Thus, during design of a behavior module 801, a determination is made, at the remote computer 151 (when it functions as the configurator 140), of the operational parameter required for the scent emitter 111 to achieve a target value, and this operational parameter can be based upon a sensed scent parameter. (*See* Hasenoehrl ¶¶ 24, 46.)

As additionally discussed above, the director 123 functions to "deliver new behavior modules 801 to the controllers [301]" (Hasenoehrl ¶ 27) and control of the delivery of a behavior module 801 to a scent emitter 111 can equate to control of an operational parameter of this scent emitter 111. Thus, delivery of a new behavior module 801 by the remote computer 151 (when it functions as the director 123) can equate to controlling the scent emitter 111 to achieve a target value based upon a sensed scent parameter.

But the delivery of new behavior modules 801 to the scent emitters 111 is not the only function of the director 123, as Hasenoehrl discloses that the director 123 and the scent-emitter controllers 301 "communicate with each other to receive and acknowledge requests." (Hasenoehrl ¶ 67.) Put another way, the director receives information from,

and sends instructions to, the scent emitters 111. (*See* Hasenoehrl ¶¶ 27, 49, 53, 67.) Thus, the remote computer 151 (when it functions as the director 123) receives information from the scent emitters 111 installed in the room 201a, and this information can include scent parameters sensed by the internal odor sensors 431 of the scent emitters 111. Hasenoehrl also specifically discloses that, when the remote computer 151 is being used to manage "an entire building's freshness profile," this management can include "obtaining sensor(s) information for a large area." (*Id.* ¶ 49.)

The Appellants appear to argue that Hasenoehrl's teachings are confined to autonomous, on-site, and/or non-remote control of a scent emitter 111 via integrated components, such as the controller 301, the microprocessor 401, the sensor 431, and the behavior module 801.[4] The problem with these arguments is that Hasenoehrl's teachings are not so confined. Inasmuch as Hasenoehrl teaches advantages associated with the self-organized autonomous control of its scent emitters 111 (*see, e.g.,*

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[4] For example, the Appellants argue that "[n]owhere in Hasenoehrl is there any discussion" of "a controller that is anything but integrated into a scent emitter." (Reply Br. 7.) Along this same line, the Appellants argue that "Hasenoehrl specifically requires that all aspects of its scent emission system [] be local to the environment being scented." (Appeal Br. 8.) The Appellants also contend, incorrectly, that "[n]owhere does Hasenoehrl actually disclose the remote control of scent diffusers." (Reply Br. 5; *see also* Appeal Br. 12.) The Appellants additionally assert that "[t]he scent parameter sensed via sensor 431 in Hasenoehrl *is not* received by *anything* remote from the sensor 431," and that Hasenoehrl "does not disclose 'receiving at least one remotely sensed parameter' from a sensor at a remote computer." (Appeal Br. 11, 12.) The Appellants also allege that "[i]t would make absolutely no sense for a collection of Hasenoehrl's scent diffusers — with distributed autonomous intelligence built in — to communicate with each other between related environments." (*Id.* at 15.)

Hasenoehrl ¶¶ 18, 19, 32, 57, 64), Hasenoehrl concurrently teaches that such autonomous control can be used in conjunction with remote control of its scent emitters 111 via a remote computer 151 (*see id.* ¶¶ 27–29, 43–49).[5]

Thus, we cannot agree with the Appellants' stance that "the Examiner has provided absolutely no prior art that actually teaches the remote monitoring and control of scent devices." (Appeal Br. 12; *see also* Reply Br. 4.) With this in mind, we individually address, where necessary, the claims at issue in the Examiner's obviousness rejection.

Independent Claim 1

Independent claim 1 recites a "scent diffusion device within [an] environment," and a "computer remote from the environment." (Appeal Br., Claims App.) Hasenoehrl discloses a multi-room building having scent emitters 111 installed within one room 201a and a computer 151 situated in another room 201b. (*See* Hasenoehrl ¶¶ 20, 25, 29, 49; Fig. 2.) Thus, in Hasenoehrl's SECN architecture, the computer 151 is remote from the room 201a, and the scent emitters 111 installed therein.

Independent claim 1 recites the step of "receiving," at the remote computer, a "sensed scent parameter for the environment" from a scent sensor. (Appeal Br., Claims App.) Hasenoehrl teaches that the remote computer 151 obtains "sensor(s) information" when managing the "entire building's freshness profile" (Hasenoehrl ¶ 49), and this would include

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[5] As such the obviousness rejection at hand need not involve the "removal" or "separation" of a controller 301 from a scent emitter device 111 (*see* Appeal Br. 13, 14), as a non-integrated computer component 151 already exist in Hasenoehrl's disclosed SECN architecture.

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obtaining sensed scent parameters from the scent emitters 111 (i.e., their internal odor sensors 431) in the room 201a.

Independent claim 1 recites the step of "determining," at the remote computer, "an operational parameter" for the scent diffusion device "for achieving a target value of the scent parameter based on the sensed scent parameter data." (Appeal Br., Claims App.) Hasenoehrl discloses that, during design of a behavior module 801, a determination is made, at the remote computer 151 (when functioning as the configurator 140), of the operational parameter required for the scent emitter 111 to achieve a target value. (*See* Hasenoehrl ¶¶ 24, 32, 38, 46.) And this operational parameter can be based on scent parameters sensed by the internal odor sensor 431, which would be the same sensed-scent-parameter data obtained by the remote computer 151 in the above-described receiving step. (*See id.* ¶ 32.)

Independent claim 1 recites the step of "transmitting," from the remote computer, "an instruction" to the scent diffusion device "to initiate diffusion of a scent therefrom to achieve the target value of the scent parameter." (Appeal Br., Claims App.) Hasenoehrl discloses that a behavior module 801, once downloaded into the controller 301 of a scent emitter 111, can initiate emission of a scent to achieve the target value of the scent parameter. (*See* Hasenoehrl ¶¶ 27, 32, 36, 80.) As the behavior module 801, containing this emission-initiating instruction, is transmitted by the remote computer 151 (when functioning as the director 123), the remote computer 151 transmits the instruction required by independent claim 1. (*See id.* ¶¶ 27, 43, 47, 49.)[6]

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[6] Independent claim 1 requires the "receiving" step, and also the "transmitting" step, to be "via the internet" (Appeal Br., Claims App.);

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Independent claim 1 also requires the "instruction" to include "at least one of setting and adjusting the determined operation parameter" of the scent diffusion device. (Appeal Br., Claims App.) The emission-initiating instruction contained in the behavior module 801 would entail the setting/adjusting of the determined operational parameter of the scent diffusion device. (*See* Hasenoehrl ¶¶ 7, 32, 36, 38.)

Thus, we sustain the Examiner's rejection of independent claim 1 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

Independent Claim 13

Independent claim 13 recites a "scent diffusion device," and an "environment." (Appeal Br., Claims App.)[7] Hasenoehrl discloses a scent emitter 111 installed in a room 201a. (*See* Hasenoehrl ¶¶ 20, 25; Figs. 1, 2.)

Independent claim 13 recites the step of "providing a sensed level of an airborne substance as feedback" to the scent diffusion device. (Appeal Br., Claims App.) Hasenoehrl discloses that each of the scent emitters 111 can have a controller 301 with an odor sensor 431 that can be used for feedback control. (*See* Hasenoehrl ¶¶ 20, 36, 38; Figs. 1, 2, 4.)

Independent claim 13 recites the step of "adjusting an operation parameter of the scent diffusion device in response to the feedback" so as to "enable[] the maintenance of a scent profile in the environment." (Appeal Br., Claims App.) Hasenoehrl's scent emitters 111 each has a behavior module 801, running in its controller 301, that operates it in response to

Hasenoehrl teaches that the controllers 301 of its scent emitters 111 can communicate via the "internet" (Hasenoehrl ¶ 29).

[7] Independent claim 13 does not require a "computer," much less a computer remote from the environment in which the scent diffusion device is located.

sensor input triggers. (*See* Hasenoehrl ¶ 32.) And a behavior module 801 corresponds to desired scent emitting behaviors for a space or, in other words, the scent profile of the room 201. (*See id.* ¶ 48.)

Independent claim 13 further recites the step of "communicating the adjustment to other scent diffusion devices in a network of scent diffusion devices." (Appeal Br., Claims App.) Hasenoehrl's scent emitters 111, or more particularly their respective controllers 301, "communicate with each other to provide coordinated behaviors across a collection of scent emitters." (Hasenoehrl ¶ 16.) Indeed, Hasenoehrl teaches that the controllers 301 can form "local area network[s]," and these local networks can be "connected to each other, or to the internet, through additional communication interfaces." (*Id.* ¶ 29.)

Thus, we sustain the Examiner's rejection of independent claim 13 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

Independent Claim 20

Independent claim 20 recites a "scent diffusion device," a "computer," and "an environment that is remote from the computer." (Appeal Br., Claims App.) Hasenoehrl discloses a multi-room building having scent emitters 111 installed within one room 201a and a computer 151 situated in another room 201b. (*See* Hasenoehrl ¶¶ 20, 25, 29, 49; Fig. 2.) Thus, in Hasenoehrl, the room 201a (and the scent emitters 111 installed therein) are remote from the computer 151.

Independent claim 20 recites the step of "receiving," at the remote computer, a "sensed parameter of the environment." (Appeal Br., Claims App.) Hasenoehrl teaches that the remote computer 151 obtains "sensor(s) information" when managing the "entire building's freshness profile."

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(Hasenoehrl ¶ 49.) And this sensor information includes scent parameters sensed by the internal odor sensor 431 of a scent emitter 111.

Independent claim 20 recites the step of "receiving," at the remote computer, a "target value of a scent parameter" for the environment. (Appeal Br., Claims App.) Hasenoehrl discloses that a target value is input into the interface of the remote computer 151 (when functioning as the configurator 140) during the design of a behavior module 801. (*See* Hasenoehrl ¶¶ 24, 46.) Thus, this input target value is received at the remote computer 151.

Independent claim 20 recites the step of "controlling," via the remote computer, "diffusion of a liquid" from the scent diffusion device "to achieve the target value of the scent parameter." (Appeal Br., Claims App.) Hasenoehrl discloses that the scent emitter 111 operates in accordance with the behavior module 801 loaded into its controller 301, and this operation can include the emission of a scent. (*See* Hasenoehrl ¶¶ 7, 18, 27.) And Hasenoehrl discloses that the remote computer 151 (when functioning as the director 123) delivers a new behavior module 801 to the controller 301 of a scent emitter 111. (*See id.* ¶ 27.) Thus, by the delivery of a particular behavior module 801, the remote computer 151 controls the scent emission of a scent emitter 111.

Independent claim 20 also requires that this controlling of the scent diffusion device to include "setting or adjusting an operational parameter of the at least one scent diffusion device in response to the sensed parameter." (Appeal Br., Claims App.) The behavior module 801 includes instructions for setting/adjusting an operational parameter of the scent emitter 111. (*See* Hasenoehrl ¶¶ 24, 30, 36, 46.) And these behavior-module instructions

respond to scent parameters sensed by the internal odor sensor 431 of the scent emitter 111; which is the same sensed-scent-parameter information obtained by the remote computer 151 during above-described receiving step. (*See id.* ¶¶ 32, 38.)

Thus, we sustain the Examiner's rejection of independent claim 20 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

Independent Claim 25

Independent claim 25 recites a "diffusion device disposed within an environment" and a "remote computer." (Appeal Br. Claims App.) Hasenoehrl discloses a multi-room building having scent emitters 111 installed within one room 201a and a computer 151 situated in another room 201b. (*See* Hasenoehrl ¶¶ 20, 25, 29, 49; Fig. 2.) Thus, in Hasenoehrl, the computer 151, situated in room 201b, is a remote computer relative to the room 201a and scent emitters 111 installed therein.

Independent claim 25 requires an "electronic data structure" that characterizes the "transformation" of the diffusion device and that includes "data regarding a sensed parameter of the environment." (Appeal Br., Claims App.) Hasenoehrl discloses that its behavior modules 801 are "software modules" that "are loaded into [the] internal memory" of the controller 301 of a scent emitter 111 and determine how it performs in response to "sensor input triggers." (Hasenoehrl ¶ 32.) And in order for there to be a determination as to how the controller 301 should respond to a sensor input trigger, the behavior module 801 must include data regarding the parameter sensed by the triggering sensor.

Independent claim 25 also requires "accessing," at the remote computer, "a target value of a scent parameter." (Appeal Br., Claims App.)

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Hasenoehrl discloses that desired-scent data (e.g., a target value) is input into the interface of the remote computer 151 (when functioning as the configurator 140) during the design of a behavior module 801. (*See* Hasenoehrl ¶¶ 24, 46.) Thus, design of the behavior module 801 would entail accessing, at the remote computer 151, the target value of a scent parameter. (*See id.* ¶ 27.)

Independent claim 25 further requires the step of "providing a service plan" for the diffusion device "based on the electronic data structure and the target value of the scent parameter." (Appeal Br., Claims App.) Hasenoehrl discloses the delivery of a new behavior module 801 (which includes the electronic data structure and the target value) to a controller 301 of a scent emitter 111. (*See* Hasenoehrl ¶ 47.) As a behavior module 801 incorporates the "desired behavior" of the controllers 301 of the plurality of scent emitters 111 installed in the room 201a, it constitutes a "service plan" for managing scent in the room 201a.

Thus, we sustain the Examiner's rejection of independent claim 25 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

Independent Claim 30

Independent claim 30 recites a "scent diffusion device" disposed "within an environment," and a "remote computer." (Appeal Br., Claims App.) Hasenoehrl discloses a multi-room building having scent emitters 111 installed within one room 201a and a computer 151 situated in another room 201b. (*See* Hasenoehrl ¶¶ 20, 25, 29, 49; Fig. 2.) Thus, in Hasenoehrl, the computer 151, situated in room 201b, is a remote computer relative to the room 201a and scent emitters 111 installed therein.

Independent claim 30 recites the step of "disposing at least one sensor within the environment that transmits sensor data to [the] remote computer." (Appeal Br., Claims App.) Hasenoehrl discloses that the scent emitters 111, situated in room 201a, have internal odor sensors 431; and Hasenoehrl discloses that the remote computer 151, in room 201b, obtains sensor information. (*See* Hasenoehrl ¶¶ 27, 49.)

Independent claim 30 requires the scent diffusion device to comprise "a communications facility that enables receiving a signal from the remote computer." (Appeal Br., Claims App.) Hasenoehrl discloses that each scent-emitter controller 301 "incorporates one or more communication interfaces 501 for communicating with directors 123," which can "support[] two-way and symmetric communication." (Hasenoehrl ¶ 37; *see also* Fig. 4.) Thus, the communication interface 501 of a scent emitter 111 in the room 201a receives signals from the remote computer 151 (when functioning as the director 123).

Independent claim 30 further requires a signal that is "a setting or an adjusting of an operation parameter of the at least one scent diffusion device in response to the sensor data to achieve a target value of a scent parameter." (Appeal Br., Claims App.) As discussed above in connection with independent claims 1, 20, and 25, the remote computer 151 (when functioning as the director 123) delivers behavior modules 801 to the scent emitters 111; and these behavior modules include instructions to set/adjust the operation of the scent emitters 111 in response to sensor data and to achieve the user-desired target value. (*See* Hasenoehrl ¶¶ 7, 18, 24, 27, 30, 32, 36, 38, 43, 46, 47, 49.)

Insofar as the delivery of a behavior module 801 would not
constitute the transmission of a signal, Hasenoehrl also discloses that a scent
emitter 111 "may respond to requests (e.g., from the director 123) that
instruct it to perform specific functions," such as "on/off; scent intensity;
scent selection; malodor detection; and the like." (Hasenoehrl ¶ 53.) Also, a
"sophisticated" director 123 "can control, configure, and interrogate
arbitrary controllers 301." (*Id.* ¶ 27.)

Thus, we sustain the Examiner's rejection of independent claim 30
under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

Independent Claim 35

Independent claim 35 recites a "scent diffusion device," an
"environment," and a "remote computer." (Appeal Br., Claims App.)
Hasenoehrl discloses a multi-room building having scent emitters 111
installed within one room 201a and a computer 151 located in another
room 201b. (*See* Hasenoehrl ¶¶ 20, 25, 29, 49; Fig. 2.) Thus, in Hasenoehrl,
the computer 151, situated in room 201b, is a remote computer relative to
the room 201a and scent emitters 111 installed therein.

Independent claim 35 recites the step of "creating," via the remote
computer, "an electronic data structure" that characterizes the
"transformation" of the scent diffusion device, and includes "data" regarding
a "sensed parameter" of the environment and a "target value." (Appeal Br.,
Claims App.) As discussed in connection with independent claim 25,
behavior modules 801 are software modules that include data regarding a
sensed parameter of the environment. (*See* Hasenoehrl ¶ 32.) And, as
discussed in connection with independent claim 1, Hasenoehrl discloses that
a behavior module 801 is designed to achieve the target value of the scent

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parameter, and thus would include data in this regard. (*See* Hasenoehrl ¶¶ 27, 32, 36, 80.)

Thus, we sustain the Examiner's rejection of independent claim 35 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

Dependent Claims 2–12, 14–19, 21–24, 26–29, 31–34, and 36–39

These claims depend directly or ultimately from one of the above-discussed independent claims (*see* Appeal Br. Claims App.); they are not argued separately (*see id.* at 8–15); and so they fall with independent claims 1, 13, 20, 25, 30, and 35.

Thus, we sustain the Examiner's rejection of dependent claims 2–12, 14–19, 21–24, 26–29, 31–34, and 36–39 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

Independent Claim 40

Independent claim 40 recites a "first scent diffusion device" in a "first environment," a "second scent diffusion device" in a "second environment," and a "central server" that is positioned "remotely from" both the first environment and the second environment. (Appeal Br., Claims App.) Hasenoehrl discloses a multi-room building having scent emitters 111 installed within a room 201a, scent emitters 111 installed within another room 201b, and a computer 151 located in the room 201b. (*See* Hasenoehrl ¶¶ 20, 25, 29, 49; Fig. 2.)

Thus, in the two-room-building implementation specifically illustrated by Hasenoehrl, the computer 151 is positioned remote from the room 201a, but not remote from the room 201b. However, Hasenoehrl's teachings regarding managing "an entire building's freshness profile" (Hasenoehrl ¶ 49) are not limited to two-room buildings. For example, in a three-room

building, a further room 201c would have scent emitters 111 installed therewithin, and the computer 151 situated in room 201b would be remote from both the room 201a (i.e., the first environment) and the room 201c (i.e., the second environment).

Independent claim 40 recites the steps of "providing a first sensed level of a[n] airborne substance" in the first environment to the central server, and "adjusting," via the central server, an "operational parameter" of the first scent diffusion device "in response" thereto. (Appeal Br., Claims App.) As discussed in connection with independent claim 1, Hasenoehrl teaches that the remote computer 151 obtains sensor information (e.g., scent-associated data sensed by the internal odor sensors 431) from the scent emitters 211 installed in room 201a. (*See* Hasenoehrl ¶ 49.) As also discussed in connection with independent claim 1, the remote computer 151 (when functioning as the director 123) adjusts an operational parameter of the scent emitter 111 when it delivers a new behavior module 801 thereto. (*See id.* ¶¶ 27, 32, 36, 43, 47, 49, 80.) And this operational parameter can be based on scent-associated data sensed by the internal odor sensor 431, which would be the same sensed-scent-parameter data obtained by the remote computer 151 in the above-described providing step. (*See id.* ¶ 32.)

Independent claim 40 recites the steps of "providing a second sensed level of a[n] airborne substance" in the second environment to the central server, and "adjusting," via the central server, an "operational parameter" of the second scent diffusion device "in response" thereto. (Appeal Br., Claims App.) The above-described providing and adjusting steps performed with respect to the scent emitters 111 installed in the room 201a, would likewise be performed with respect to the scent emitters 111 installed in the

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room 201c in a three-room building implementation of Hasenoehrl's SECN architecture.

Independent claim 40 requires the "adjusting" steps to "enable[] the maintenance of a first scent profile in the first environment" and "enable[] the maintenance of a second scent profile in the second environment." (Appeal Br., Claims App.) In Hasenoehrl, the purpose of the new behavior module 801, delivered by the remote computer 151 to adjust an operation parameter of the delivered-to scent emitter 111, is to "provide a desirable scent in the air." (Hasenoehrl ¶ 24.)

Thus, we sustain the Examiner's rejection of independent claim 40 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

Dependent Claim 41

Claim 41 depends from independent claim 40, and, according to the Appellants, "specifies that the central server controls the scent diffuser devices in different environments to create matching scent profiles in the separate environments." (Appeal Br. 17.) Hasenoehrl teaches that, in a "home or office" (i.e., a building having multiple rooms), "it is desirable" to "provide odor control and/or air freshening that is perceived by users as being uniform and effective." (Hasenoehrl ¶ 16.)

Thus, we sustain the Examiner's rejection of dependent claim 41 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

Dependent Claim 42

Claim 42 depends from independent claim 40, and, according to the Appellants, "includes multiple scents detected in multiple environments, all of which are provided to the central server for analysis and possible action." (Appeal Br. 17.) Hasenoehrl teaches that "[o]dor sensors 431 may

incorporate technology to allow for the measurement specific chemicals in the air," and "[s]cent emitters may emit customized air freshening compositions based upon the specific malodor chemical detected in the air." (Hasenoehrl ¶ 38.)

Thus, we sustain the Examiner's rejection of dependent claim 42 under 35 U.S.C. § 103 as unpatentable over Hasenoehrl.

DECISION

We AFFIRM the Examiner's rejection of claims 1–42.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

<u>AFFIRMED</u>