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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/252,098	04/14/2014	Jordin T. Kare	0113-004-003-000000	2778

138951 7590 02/12/2020		EXAMINER
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Omaha, NE 68118	3686	

NOTIFICATION DATE	DELIVERY MODE
02/12/2020	ELECTRONIC

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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 JORDIN T. KARE, WAYNE R. KINDSVOGEL,
and ELIZABETH A. SWEENEY
_____

Appeal 2019-003252
Application 14/252,098
Technology Center 3600
_____

Before MICHAEL L. HOELTER, JAMES P. CALVE, and
LEE L. STEPINA, *Administrative Patent Judges*.

CALVE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the decision
of the Examiner to reject claims 1, 116–28, and 131. *See* Appeal Br. 7. We
have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] "Appellant" refers to "applicant" as defined in 37 C.F.R. § 1.42. Appellant
identifies Elwha LLC as the real party in interest. Appeal Br. 3.

CLAIMED SUBJECT MATTER

1.   A system, comprising:

one or more sensors configured to detect at least one biological characteristic of a subject in a healthcare setting,

a pupillometer configured to measure a pupil of the subject in the healthcare setting;

a user interface configured to request input from the subject regarding a plurality of Environmental Supplements to determine a preference of the subject with respect to the plurality of Environmental Supplements, the pupillometer configured to measure the pupil of the subject during presentation of the plurality of Environmental Supplements to the subject via the user interface to measure an autonomic response of the subject to each of the plurality of Environmental Supplements, the autonomic response associated with the preference of the subject with respect to the plurality of Environmental Supplements;

circuitry configured to receive one or more sensed signals from each of the pupillometer and the one or more sensors, to convert the one or more sensed signals from at least the one or more sensors to a personal profile for the subject, and to compare the personal profile to a database of Environmental Supplements, the circuitry configured to select an Environmental Supplement from the database of Environmental Supplements based on the autonomic response associated with the preference of the subject with respect to the plurality of Environmental Supplements and to generate one or more instructions associated with the selection responsive to comparison of the personal profile to the database of Environmental Supplements;

a network interface operably coupled to the circuitry and configured to transmit the one or more instructions responsive to control by the circuitry; and

an audio delivery device operably coupled to the network interface, the audio delivery device configured to initiate an audio output to correspond to the preference of the subject or alter the audio output to correspond to the preference of the subject responsive to receipt of the one or more instructions from the network interface.

REJECTIONS

Claims 1, 116–25, 127, 128, and 131 are rejected under 35 U.S.C. § 103 as unpatentable over Bechtel (US 2012/0323090 A1, pub. Dec. 20, 2012), Berg, Jr. (US 2010/0174586 A1, pub. July 8, 2010) (hereinafter "Berg"), and Roe (US 2011/0035234 A1, pub. Feb. 10, 2011).

Claim 126 is rejected under 35 U.S.C. § 103 as unpatentable over Bechtel, Berg, Roe, and Johnson (US 2014/0095181 A1, pub. Apr. 3, 2014).

ANALYSIS

Claims 1, 116–25, 127, 128, and 131
Rejected over Bechtel, Berg, and Roe

Appellant argues the claims as a group. Appeal Br. 15–26. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Regarding claim 1, the Examiner finds that Bechtel teaches a system substantially as claimed with sensors, a user interface, circuitry, a network interface, and an audio delivery device. Final Act. 8–10. The Examiner relies on Berg to teach a pupillometer configured to measure the pupil of a subject during the presentation of an Environmental Supplement (ES) and circuitry configured to receive sensed signals from the pupillometer and select an ES from a database based on an autonomic response associated with the subject's preference. *Id.* at 10–11.

Appellant challenges the Examiner's findings that Bechtel teaches "a user interface configured to request <u>input from the subject regarding a plurality of Environmental Supplements</u>." Appeal Br. 20. Appellant argues that paragraph 158 of Bechtel, cited by the Examiner for this feature, only teaches a pain management process triggered upon receiving *inputs from ambient sensors* rather than from the subject as claimed. *Id.* at 20–21.

Subject Inputs Plural Environmental Supplements

The rules governing appeals to the PTAB require an appellant to file an appeal brief containing the following arguments:

> The arguments of appellant with respect to each ground of rejection, and the basis therefor, with citations of the statutes, regulations, authorities, and parts of the Record relied on. The arguments shall explain why the examiner erred as to each ground of rejection contested by appellant.

37 C.F.R. § 41.37(c)(1)(iv). This rule requires an argument in an Appeal Brief to identify error in an office action/rejection that is appealed. *Ex Parte Frye*, 94 USPQ 2d 1072, *4 (BPAI 2010) (precedential) (a panel reviews rejections for error based on the issues identified by an appellant). Our reviewing court has upheld this practice of requiring an appellant to identify error in an Examiner's rejection. *See In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (approving of Board's practice as set forth in *Ex Parte Frye* of requiring appellants to identify Examiner error in a rejection).

On this basis, Appellant's argument is insufficient because it does not address the Examiner's findings for this limitation. The Examiner relies on, and cites to, paragraphs *21, 30, 117*, and 158 in support of his findings that Bechtel teaches the claimed user interface. Final Act. 8. We agree with the Examiner that Bechtel teaches this feature in the portions cited in the Office Action and in other, related portions describing this process.

Paragraph 117 teaches a patient care room that includes components and/or interfaces that allow a patient, clinician, or other person to manually input a request regarding a plurality of environmental settings that Bechtel refers to as real-world tasks. These settings facilitate reading, relaxation, entertainment, travel, education, personal hygiene, patient care, and the like.

The Specification describes various Environmental Supplements (ES) as being designed to alter a subject's surroundings to enhance the subject's health by creating a profile for the subject based on health history and input from the subject and others such as health care workers. Spec. 2:4–14. For example, ES include temporal or spatial images of traveling on land, sea, or air, birds chirping at sunrise, temperature changes, personal or neighborhood components, ceilings reflecting the sky, and favorite places (e.g., golf course). Spec. 5:16–6:6. ES may be customized for temperature, lighting, light intensity, air flow, images of locales or scenes (ocean, beach, and sunshine), ceilings with the sky's appearance, and sounds. *Id.* at 22.

Bechtel allows patients to select the same types of ES as input for the settings of the patient's room via patient interactive station component 314, which displays modules on a patient interactive station. Bechtel ¶ 65. An environmental module allows a patient to adjust the lighting and temperature in the room. *Id.* ¶ 72. Furthermore, a scene module allows a patient to input and initiate various scenes in the smart clinical care room to facilitate real-world activities such as reading, watching television, and relaxing. *Id.* ¶ 76. The scene module also interacts with other modules of patient interactive station 314 to control the television module, environmental module, gaming module, aromatherapy module, and the like to initiate a requested scene. *Id.* The patient interactive station is easily accessible as a monitor by the bed, a pillow speaker, touch screen tablet, or voice command activated. *Id.* ¶ 77.

For pain management, therapy settings pre-selected by the patient at patient interactive station are activated to change the room's ES. *Id.* ¶ 176. These therapies include audio therapy (playing sounds) and visual therapy (displaying pre-selected scenes on digital ceiling/digital window). *Id.* ¶ 177.

Bechtel's audio therapy automatically plays pre-selected sounds such as white noise, thunderstorms, *rain*, *waves*, and the like and *music*. *Id.* The visual therapies display pre-selected *cloud scenes* on digital ceiling 1810 and pre-selected *beach scenes* on digital window 1812. *Id.* ¶ 179, Fig. 18.

Appellant's Specification describes similar audio and visual settings for a room's ES as sounds of birds singing, *ocean waves*, *rain falling*, wind blowing, animal sounds, *music*, and the like. Spec. 22:1–12. The visual ES include lighting, outdoor scenes like the *ocean*, *beach*, mountains, *sunshine*, rain, and *the sky above*. *Id.*

Therefore, we agree with the Examiner that Bechtel provides a user interface configured to request input from a subject regarding a plurality of ES to determine the subject's preference as claimed.

Appellant is correct that Bechtel also describes a clinician-dashboard display device that presents a graphical user interface configured to receive a patient's questions "for a non-present clinician for future retrieval by the clinician to go through the questions with the patient." Appeal Br. 21 (citing Bechtel ¶ 64). However, the Examiner does not rely on this display device with this particular functionality to teach the claimed user interface. Final Act. 8; Ans. 4. Thus, this argument does not apprise us of Examiner error.

Pupillometer Measures Pupil During Presentation of ES

Appellant argues that Berg does not cure the deficiencies of Bechtel, and the Examiner fails to show that Berg teaches a "pupilometer configured to measure the pupil of the subject **during presentation of the plurality of Environmental Supplements** to the subject via the user interface" as claimed. Appeal Br. 22. Appellant argues that Berg conducts consumer research for a company's products rather than ES as claimed. *Id.* at 22–23.

These arguments are not persuasive for several reasons. First, it does not address the Examiner's rejection of claim 1, the Examiner's reliance on Berg to teach the claimed pupilometer and circuitry, or the Examiner's basis for combining Berg's pupilometer, sensors, and circuitry with Bechtel "in order to obtain 'feedback regarding their selection preference or determine their probably emotive state in response to the at least one visual stimulus (Berg, Paragraph [0002])." Thus, these arguments do not persuade us of error in the Examiner's findings regarding Berg or the Examiner's reasons for combining Berg's teachings with Bechtel to render obvious claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv); *Jung*, 637 F.3d at 1365.

Second, these arguments attack the references individually where the Examiner has relied on their combined teachings to reject claim 1. *See In re Merck*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) ("Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.").

Third, the Examiner cites teachings of Berg regarding the efficacy of using sensors with a physiological device "to obtain consumer feedback regarding their selection preference or determine their probable emotive state in response to the at least one visual stimulus." Berg ¶ 2 (cited in Final Act. 11). The Examiner cites many Berg teachings regarding the accuracy of feedback obtained from a subject's inputs of *preferences* for particular products displayed on monitors. Final Act. 10–11 (citing Berg ¶¶ 8, 11). Berg measures autonomic responses such as pupil dilation and other sensed biometric data. *Id.* ¶¶ 57, 59. Berg's real or virtual environments simulate home, office, restaurants, outdoors, indoors, retail stores, and test facilities to obtain a subject's selection *preferences.* ¶¶ 64, 67, 68.

Berg's use of autonomic response and sensed biometric data to determine a subject's preference for visually-displayed information that relates to *consumer products* is a distinction without a difference. Berg teaches the efficacy of using a pupilometer to obtain pupil dilation and autonomic response data, in addition to autonomic data measured by other sensors, as a means of obtaining a more accurate measurement of a subject's preference for particular environmental settings as claimed. In Berg, the environmental settings are home, office, restaurants, outdoors, indoors, retail stores, and test facilities with consumer products discussed above. Bechtel and the claimed system both measure a subject's preference for ES in similar venues for the same reasons, namely, to obtain a more accurate measurement of a subject's preference for particular ES in order to provide surroundings more conducive to medical treatment and pain management.

The Examiner merely proposes to improve Bechtel's selection system by modifying it to include Berg's pupilometer, sensors, and circuity so that Bechtel's interactive patient system obtains more accurate measurement of each patient's preferences for ES in the patient's room. In this regard, Berg teaches that measuring a subject's preferences by obtaining their written or oral feedback in response to seeing or interacting with products has some value but can be misleading, inefficient, incomplete, and inaccurate as a way to predict their preferences. Berg ¶¶ 4–6. Berg teaches how to improve the accuracy of determining a subject's actual preferences for ES by measuring autonomic responses including pupil dilation and other biometric data in response to visual imaging. *Id.* ¶¶ 57–60, 68. This measured biometric data can be used to adjust *databases* and models for specific consumers to create a specific physiological response *profile* of a subject. *See id.* ¶¶ 102, 103.

Motivation to Combine Teachings of Bechtel and Berg

We have been instructed that using a known technique that has been used to improve one device to improve similar devices in the same way is obvious unless its application is beyond the level of ordinary skill in the art. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). An implicit motivation to combine also exists when an "improvement" makes a product stronger, cheaper, faster, lighter, smaller, more durable, or more efficient. *See DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2006). Berg satisfies both of these bases with Bechtel. *See* Appeal Br. 23–25.

Bechtel uses sensed autonomic responses of a patient to change and introduce ES into a patient's room. Bechtel initiates changes in the ES of a patient's room upon detecting the onset of patient discomfort via sensors in the room that measure a patient's biometric data and autonomic responses and compare the data to a patient profile as claimed. Bechtel ¶¶ 158–170. If ambient sensor data exceeds a patient's profile threshold, the system changes the ES to reduce patient discomfort. *Id.* ¶¶ 172–179. Bechtel continues to sense the patient's biometric and autonomic responses to ES stimulus and can change the first ES scene to a second ES scene and settings taken from a database of the patient's preference profile if the sensed data still exceeds a threshold for the patient. *Id.* ¶¶ 186–91, Figs. 9, 18, 20.

Although Bechtel teaches to use autonomic and biometric sensed data to establish and change ES scenes in a patient's room, Bechtel does not use such data as part of the patient's *initial selection* of ES settings or scenes as input into a patient interactive station. Berg uses autonomic and biometric sensed data during an ES selection to improve ES selection accuracy.

Select ES from Database and Generate Instruction(s)

At various places in the Appeal Brief, Appellant quotes large portions of claim 1 and argues that the Examiner has failed to show that Bechtel or Berg teaches or suggests these limitations. *See* Appeal Br. 23–24, 25. These arguments are not persuasive of Examiner error because they again amount to piecemeal attacks on the references where the Examiner relies on the combined teachings of Bechtel, Berg, and Roe for the limitations. The Examiner cites Roe to teach "generate one or more instructions associated with the selection responsive to comparison of the personal profile to the database of Environmental Supplements." Final Act. 11. Appellant does not address the Examiner's findings that Roe teaches this claimed feature. *See* Appeal Br. 20–26. Nor does Appellant address the complete findings of the Examiner as set forth in the Final Office Action that Bechtel and Berg, either alone or in combination, teach other limitations. *See id.*

Second, as discussed above, Bechtel selects ES (scenes, settings) from a database of ES based on a patient's autonomic response associated with the patient's preferences for the ES in the patient's room and generates one or more instructions associated with the selection responsive to comparison of the personal profile to the database. *See* Bechtel ¶¶ 76, 77, 97, 99, 111, 116–18, 158–191, Figs. 1, 3, 4A–4C, 6, 9, 10, 16, 18, 20.

Third, arguments reciting lengthy portions of a claim with little or no analysis of the Examiner's findings do not identify precise issues/limitations that allegedly are lacking in the prior art. Such arguments that merely recite limitations and assert that they are not shown in the prior art do not provide a sufficient basis for us to review the Examiner's actions for error due to their lack of specificity.

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"A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim." 37 C.F.R. § 41.37(c)(1)(iv). This rule of the Board's appeal procedures applies most directly to arguments made in an appeal brief for the separate patentability of claims that are grouped together by an appellant for a ground of rejection. However, the rule reflects more broadly the policy of our rules and practice to require an appeal brief to provide sufficient detail in its allegation of error by an examiner so that the Board can adjudicate that matter properly. Mere generalized arguments make it impossible to determine what an appellant considers to be lacking from an examiner's rejection. *See also In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (holding that the Board reasonably interpreted 37 C.F.R. § 41.37(c)(1)(vii) (predecessor to § 41.37(c)(1)(iv)) to require "more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.").

Audio Output Device

Appellant also asserts that there is no record evidence that a skilled artisan would interpret Bechtel, Berg, or Roe to teach or suggest the claimed "audio delivery device configured to initiate an audio output to correspond to the preference of the subject or alter the audio output to correspond to the preference of the subject responsive to receipt of one or more instructions from the network interface" and the preferences relate to pupillometer data. Appeal Br. 23; Reply Br. 5. Appellant recognizes that Bechtel teaches to play pre-selected music as part of the ES provided to a patient. Appeal Br. 23 (quoting Bechtel ¶ 179). Appellant has not apprised us of error in the Examiner's findings in this regard.

As discussed above, Bechtel outputs audio therapy corresponding to a patient's preferences input into a patient interactive station. Audio therapy is output as soothing music over a network interface. *See* Bechtel ¶¶ 27, 77, 99, 116–18, 177, Figs. 1–3, 9, 18, 20. The Specification describes similar audio therapy. Spec. 8:15–16, 22:11–12. Thus, Appellant has not persuaded us of error in the Examiner's findings and determination of obviousness for claim 1.

Accordingly, we sustain the rejection of claim 1 and claims 116–25, 127, 128, and 131, which fall with claim 1.

Claim 126 Rejected over Bechtel, Berg, Roe, and Johnson

Appellant argues that claim 126 is patentable for the same reasons as claim 1 from which it depends. Appeal Br. 26. Because we sustain the rejection of claim 1, this argument is not persuasive, and we also sustain the rejection of claim 126.

CONCLUSION

Claims Rejected	35 U.S.C. §	Reference/Basis	Affirmed	Reversed
1, 116–25, 127, 128, 131	103	Bechtel, Berg, Roe	1, 116–25, 127, 128, 131	
126	103	Bechtel, Berg, Roe, Johnson	126	
Overall Outcome			1, 116–28, 131	

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).

AFFIRMED