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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STEFFEN CLARENCE PAUWS, FABIO VIGNOLI,
and GERTJAN LEENDERT WIJNALDA

Appeal 2010-009063
Application 11/815,886
Technology Center 3700

Before: JOHN C. KERINS, STEFAN STAICOVICI, and
CHARLES N. GREENHUT, *Administrative Patent Judges*.

GREENHUT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1-9. App. Br. 2. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The claims are directed to an electronic device that controls, for example, an audio signal to motivate or relax a user to reach a target pace or heart rate. Spec. p. 1, l. 24 – p. 2, l. 15. In particular, the audio signal may be music with a tempo that is selected based on the pace and physical state (e.g., heart rate) of the user. Spec. p. 11, l. 21 – p. 12, l. 10. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. An electronic device comprising electronic circuitry, the electronic circuitry being operative to:
 - select a human perceptual signal in dependency of a pace of a person;
 - adapt the human perceptual signal in dependency of a physical state of the person, an adaptation being limited to a certain maximum; and
 - reproduce the human perceptual signal.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

McKinney	WO 2004/072767 A2	Aug. 26, 2004
Watterson	US 2002/0022551 A1	Feb. 21, 2002

REJECTIONS

Claims 1-2 and 4-9 stand rejected under 35 U.S.C. § 102(e) as being anticipated by McKinney. Ans. 4.

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McKinney and Watterson. Ans. 7.

OPINION

A. 35 U.S.C. § 102(e) rejection of Claims 1, 2 and 4-9 as anticipated by McKinney

McKinney describes an audio reproduction device that plays music with a selected tempo. McKinney p. 6, ll. 8-12. The device has different strategies for selecting a tempo of the music, and the Examiner and Appellants identify two of them as pertinent to Claim 1. One of the tempo selection strategies is described as based on the runners pace. McKinney p. 6, ll. 20-27; App. Br. 4, second paragraph, ll. 1-2; Ans. 4-5; Reply Br. 4, second full paragraph. An alternative tempo selection strategy is described as based on a desired training level or heart rate. McKinney p. 6, ll. 28-34; App. Br. 4, second paragraph, ll. 3-5; Ans. 5, 9; Reply Br. 4, last paragraph.

Appellants correctly argue that the first tempo selection strategy of McKinney at page 6, lines 20-27 does not describe a signal “in dependency on a physical state of a person” – e.g., a heart rate. Reply Br. 4, last full paragraph. Accordingly, we confine our discussion to the alternative tempo selection strategy based on a desired training level.

The Examiner found that McKinney describes a system that adapts a human perceptual signal (music with a particular tempo) in dependency of a physical state (heart rate) and reproduces the human perceptual signal as required by the second and third limitations of claim 1. Ans. 9. Appellants do not dispute, with regard to the “alternative tempo selection strategy,” that heart rate of the exercising user is an input to the tempo derivation unit. App. Br. 4. Appellants assert that this alternative tempo selection strategy of McKinney, which uses heart rate as an input, does not “describe calculating a tempo based upon both the measured runner’s pace and the heart rate of

the user,” which Appellants apparently believe is required by the combination of the first and second limitations of claim 1. App. Br. 4, second paragraph.

This selection strategy is described at page 6, lines 28-34 of McKinney, which reads:

In an alternative tempo selection strategy, a desired training level can be set. E.g.[,] a heart rate meter 132 on a step machine in a fitness center may be transmitting the heart rate of a user exercising to the tempo derivation unit 103. A desired heart rate is set on the step machine. As long as the actual heart rate of the user is below the desired heart rate, for a predefined interval of time to take into account adaptations in the heart rate of the user to increased exercise load conditions, fast music is played. The user can then fasten his step according to the output tempo of the music.

Turning to the language of claim 1, there is no dispute that the device of McKinney selects a human perceptible signal (music), adapts it based on a physical state—heart rate, and reproduces it. The issue in dispute is whether the tempo selection of McKinney is “in dependency of a pace of a person.”

McKinney does not measure the actual pace of a user in this embodiment. However, there does not appear to be any language in claim 1 requiring such a measurement. McKinney describes playing fast music, where the user is intended to match (“fasten”) his pace (“step”) to the output tempo. Implicit in this description (the complement of “as long as the actual heart rate is below” being “when the heart rate is not below”) is that if the heart rate later increases, or if no change in heart rate is desired, non-fast music is then played, and the user matches his pace to the slower tempo, reducing or maintaining the exercise load conditions. While the actual pace may not be measured in this embodiment of McKinney, it is presumed to be

adequate or too slow based on the heart rate. *See* Ans. 10. The circuitry in the alternative selection strategy of McKinney on page 6, lines 28-34 continuously selects or adapts the music tempo based on heart rate and the desired or intended pace, or change in pace, of the user. This selection of music is therefore “in dependency of a pace of a person.”

In response to the Examiner’s Answer, Appellants discuss both selection strategies of McKinney under the heading “McKinney Does Not Disclose Or Suggest Adapt The Human Perceptual Signal In Dependency Of A Physical State Of The Person.” Reply Br. 4-5. In particular, Appellants argue that the selection of fast music at McKinney page 6, lines 28-34 is based on a selection of a desired heart rate rather than being adjusted to an actual heart rate. Reply Br. 5, first full paragraph. This argument is unpersuasive with regard to the alternative tempo selection strategy. While Appellants characterize McKinney as playing fast music “if” (Reply Br. 5, l. 11) the measured heart rate is lower than the desired heart rate, McKinney actually selects fast music “[a]s long as” (McKinney p. 6, l. 31) the actual heart rate is below the desired rate. This implies following with slower music once the actual heart rate increases to the desired level. The passage of McKinney quoted above is selecting fast or other music based on a difference between the actual heart rate measured, for example, by a heart rate meter 132, and the desired heart rate. Since McKinney does not play “fast” music when the actual heart rate is at the desired heart rate, the actual heart rate (a “physical state of the person”) is also an input to the tempo of the music.

We therefore affirm the rejection of claim 1.

Claims 2 and 4-7 are not argued separately, and claims 8 and 9 are said to distinguish over McKinney for the same reasons as claim 1. App. Br.

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5.¹ Accordingly, we affirm the rejection of claims 2 and 4-9 for the reasons given above with respect to claim 1.

B. 35 U.S.C. § 103(a) rejection of claim 3 as being unpatentable over McKinney and Watterson

Appellants do not separately argue for the features of claim 3. Rather, claim 3 is said to be allowable for the same reasons as claim 1. App. Br. 6, last paragraph. As we have affirmed the rejection of claim 1, we likewise affirm the rejection for claim 3.

DECISION

The Examiner's rejection of claims 1-9 is affirmed.

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

AFFIRMED

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¹ Neither Appellants nor the Examiner suggest that recitation in the form of a method has any influence on the issues raised by Appellants in this appeal.