

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD E. PATTON

Appeal No. 1999-2784
Application No. 08/608,440

HEARD: February 15, 2001¹

Before KRASS, LALL, and BLANKENSHIP, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-22, all of the claims pending in the application.

¹ Telephonic

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The invention is directed to a method for analyzing neurological responses to emotion-induced stimuli. The preferred embodiment resides in the use of the method in the field of consumer advertising to determine the effectiveness of ads. Particular brain wave activity is measured to determine polar opposite emotions. A correlation is made between the measured brain waves and emotional states. The emotions are then graphed and placed in a circle, referred to as a circumplex of emotions. The emotional steps and changes, as well as the rate of change of the emotions, are measured dynamically as the subject undergoes exposure to an audio-visual presentation.

Representative independent claim 1 is reproduced as follows:

1. A method of determining the extent of an emotional response of a test subject to an advertising presentation, said method comprising preparing a presentation having a time-varying content and intended to elicit a particular overall emotional response in an audience to whom viewing said presentation will ultimately be made, positioning at least one test subject capable of capable of [sic] undergoing individual emotional responses each represented by a particular frequency and intensity in a position to observe said presentation for a given duration, establishing a path of communication between said at least one subject and an electroencephalographic brain wave detector and a brain wave analyzer capable of measuring an intensity characteristic of brain wave signals of a

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plurality of substantially exact but different frequencies, each of said frequencies being associated with a predetermined base emotion, permitting said at least one subject to view said presentation and recording the absolute values of said brain wave intensity characteristic at a plurality of intervals during said duration when said subject is viewing said presentation, thereby subdividing said duration into a plurality of individual time segments, thereafter determining the intensity characteristic changes and intensity characteristic change rates of said plurality of brain wave frequencies, using the changes of said intensity characteristic of each point relative to a preceding point to establish marginal values for each of said time segments, creating at least one two-axis graph, said graph having axes corresponding to two of said base emotions and including a plurality of coordinate points each representing a pair of the marginal values taken from a selected emotion scale, thereafter graphically determining the composite emotional state of the test subject at each segment of the presentation, and comparing the achieved emotional response of the test subject to the response intended to be achieved to determine whether changes in the content of the presentation are indicated so as to increase the likelihood that the audience intended to view the presentation will display the intended emotional response.

The examiner relies on the following references:

Raviv et al. (Raviv)	4,744,029	May 10, 1988
Trivedi et al. (Trivedi)	4,862,359	Aug. 29, 1989
Duffy	Re. 34,015	Aug. 04, 1992

Claims 1-22 stand rejected under 35 U.S.C. 103 as unpatentable over either one of Trivedi, Duffy or Raviv.

Reference is made to the briefs and answer for the respective positions of appellant and the examiner.

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OPINION

We reverse.

It is our view that the examiner has not established a prima facie case of obviousness of the claimed subject matter.

The examiner cites any one of the references to Trivedi, Duffy and Raviv for a teaching of measuring brain activity but admits that none of the references deal with "emotional responses," as required by the claims. The examiner's position, however, is that it is well known that the prior art measurements are associated with "mental states" and that "emotional responses" are nothing more than mental states. Thus, concludes the examiner, no matter what label is affixed to the mental states being depicted by the measured brain waves of the prior art, the instant invention and the prior art are measuring the same thing.

We agree with appellant that the cited references do not suggest the claimed method for determining the extent of an emotional response of a test subject.

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While the instant claims are very specific as to determining emotional responses to an advertising presentation and that, inter alia, emotional responses are represented by particular frequencies and intensities of subjects' brain activity and that intensity characteristic changes and change rates of the brain wave frequencies are used to establish marginal values for each of a plurality of time segments; that a graph is created with axes corresponding to particular base emotions; that composite emotional states of the subject at each segment of a presentation is graphically determined and a comparison is made between the achieved emotional response and the intended response wherein changes as to the content of the presentation are indicative of the likelihood that an intended audience will display the intended emotional response; the examiner never comes to grips with these claimed elements by coordinating the claimed elements with specific portions of the references' disclosures. Accordingly, it is difficult to determine just what the examiner regards as equivalent to these claimed features in the prior art.

For all the examiner's argument regarding how "emotional responses" is nothing more than semantics because the mental

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states measured by the prior art references may be considered to be "emotional responses," the examiner apparently ignores other claim limitations setting forth a specific method by which the emotional responses are measured and employed for purposes of tying these emotional responses to the field of an advertising presentation. Using these emotional responses in an advertising presentation for the specific purpose of determining the effectiveness of the advertisements in eliciting intended responses from subjects is an important part of independent claims 1, 15, 21 and 22 and the examiner does not appear to give these limitations much weight.

Clearly, the prior art devices cited by the examiner measure brain waves but they are concerned with medical evaluations and brain wave responses to such stimuli as flashing lights, for example. The examiner has pointed to nothing in the cited references which reasonably could be considered an "emotional response." For example, at least instant independent claims 15, 20 and 22 recite the determination of "pleasure and arousal" emotions with the establishment of a two-axis "pleasure v. arousal graph" in claim 15. The examiner has pointed to nothing in the cited

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references which would suggest this limitation as the references are not looking for these emotional states.

The instant claims are directed to eliciting and determining certain emotional responses and are concerned with how these responses are to be used. The examiner has pointed to nothing in the references as to how certain responses determined by brain activity therein are to be used.

Claim 19 also requires the determination of an emotional response of a subject to stimuli in the form of a presentation having at least a time-varying visual content and positioning the subject to observe the presentation. Rather than having the subject quiet or in a sleeping mode, the instant invention requires the subject to actually view some predefined material, such as a television commercial. The examiner has not pointed out what, in the applied references, is being relied on for the teaching of a subject observing this presentation of time-varying visual content. Additionally, claim 19 includes the limitation of recording change rates in intensity components periodically during the presentation and using the intensity change rate data to construct a graph for establishing a composite emotional state of the subject to the

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presentation. It is not clear to us what the examiner relies on in the applied references for the teaching or suggestion of this limitation.

The examiner's citation of references showing general measurement of brain waves, without any specific showing as to how the claimed elements correspond to those of the references, especially where the instant claims appear to recite many elements which are not apparent from the applied references, does not constitute a prima facie showing of obviousness of the instant claimed subject matter.

The examiner's decision rejecting claims 1-22 under 35 U.S.C. 103 is reversed.

REVERSED

ERROL A. KRASS)
Administrative Patent Judge)
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PARSHOTAM S. LALL) BOARD OF PATENT

