

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. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GERARD F. HARKIN

Appeal No. 2001-0040
Application No. 09/037,105

ON BRIEF

Before HAIRSTON, DIXON, and SAADAT, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-4 and 6-14. Claim 5 was objected to as being allowable if rewritten. Claim 5 has been rewritten in independent form and indicated as allowable along with dependent claim 9 which has been rewritten in independent form. Therefore, claims 1-4, 6-8 and 10-14 remain on appeal.

We AFFIRM.

BACKGROUND

Appellant's invention relates to a hand biometrics sensing device. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A sensing device for sensing a biometric characteristic of a person's hand and comprising a matrix array of sensing elements defining a sensing area, characterised [sic] in that in a first portion of the array the sensing elements have a resolution capable of sensing the fingerprint pattern of a person's finger when placed over that portion of the sensing area and in a second portion of the array the sensing elements have a lower resolution for sensing at least one other hand biometric characteristic.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Ruell	4,394,773	Jul. 19, 1983
Knapp	5,325,442	Jun. 28, 1994

Claim 12 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 10-13 stand rejected under 35 U.S.C. § 102 as being anticipated by Ruell. Claims 1-4, 6-8, 13 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Knapp in view of Ruell.

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Rather than reiterate the conflicting viewpoints advanced by the examiner and appellant regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 17, mailed Jun. 20, 2000) for the examiner's reasoning in support of the rejections, and to appellant's amended brief (Paper No. 23, filed Mar. 13, 2002) in accordance with the amended appendix (Paper No. 27, filed Jul. 9, 2002) and reply brief (Paper No. 18, filed Aug. 17, 2000) for appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we make the determinations which follow.

As pointed out by the Federal Circuit, we must first establish the scope of the claim. "[T]he name of the game is the claim." **In re Hiniker Co.**, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Moreover, when interpreting a claim, words of the claim are generally given their ordinary and accustomed meaning unless it appears from the specification or the file history that they were used differently by the inventor. **Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.**, 15 F.3d 1573, 1577, 27

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USPQ2d 1836, 1840 (Fed. Cir. 1993). Although an inventor is indeed free to define the specific terms used to describe his or her invention, this must be done with reasonable clarity, deliberateness, and precision. **In re Paulsen**, 30 F.3d1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994).

35 U.S.C. § 112, SECOND PARAGRAPH

The examiner maintains that the use of the term “finger tip” in the claim limitation “a portion of the hand other than the finger tip” is not well defined. The examiner maintains that the claim limitation can be legitimately defined in many ways. (See answer at page 4.) While we agree with the examiner that the term may be interpreted differently, the examiner merely required appellant to clarify what portion of the finger constitutes the “finger tip.” (See answer at page 4.) From our review of the specification and relevant drawings, we do not find a specific definition of the term “finger tip” in the specification as asserted by appellant. (See brief at page 4.) From our review of the specification and drawings in view of the ordinary definition of “fingerprint” as used in independent claim 1 as “an impression on a surface of the curves formed by the ridges on a finger tip, especially such an impression made in ink and used as a means of identification,” (emphasis added) (**The American Heritage® Dictionary of the English Language, Third Edition**, copyright © 1992 by Houghton

Mifflin Company, electronic version licensed from INSO Corporation), we find that appellant has clarified the meaning of the term “finger tip” as required by the examiner. We find that appellant’s interpretation of “finger tip” as that “part of the finger above the first knuckle” (brief at page 4) is reasonable in view of the above dictionary definition, in light of the claimed and disclosed invention as a whole. Therefore, we find that the language of the claim is definite, and we will not sustain the rejection of dependent claim 12.

35 U.S.C. § 102

With respect to independent claims 1, 13, and dependent claims 10-12, the examiner maintains that Ruell teaches the sensing of a fingerprint pattern and a biometric characteristic other than the fingerprint pattern which would be the pulse frequency. (See Ruell Figures 11 and 12 and column 9, lines 28-38 and answer at pages 5-7.) We agree with the examiner that the presence of a pulse frequency would have been a different biometric other than the fingerprint. Appellant argues the definitions of “vivid” and “artifacts.” (See brief at pages 4-6.) We disagree with appellant’s interpretation of the rejection. Therefore, this argument is not persuasive.

Appellant argues that the phrase “other hand biometric characteristic” is defined in appellant’s specification. (See reply brief at page 1 and specification at pages 3-4.) We disagree with appellant and find no such clear definition in the specification. We

merely find that the specification sets forth examples of the other hand characteristics which require a coarser resolution. Therefore, this argument is not persuasive.

Appellant argues that all of the characteristics listed fall within the category of geometric measurements of portions of the hand. We disagree with appellant whereas the palm print would appear to be a measurement of the lines/grooves on the hand/palm.

Therefore, this argument is not persuasive. If the claim language were so limited, we would agree with appellant, but we do not find the argument commensurate in scope with the claim language. Appellant argues that the claimed invention has a functional advantage over Ruell by eliminating the need for additional circuitry. (See reply brief at page 2.) We do not find the argument commensurate in scope with the claim language and find no limitation which supports this argument. Therefore, this argument is not persuasive.

Appellant argues that the term “biometric” requires measurement as implied by the root term “metric.” (See reply brief at page 2.) While we agree with appellant that a biometric involves a measure of a characteristic, the language of independent claim 1 does not require a numeric value. Therefore, we disagree with appellant’s interpretation of the language of claim 1. Measuring the presence of a characteristic meets the limitation of “sensing at least one other hand biometric characteristic.” Here,

we find the presence of a pulse to be the “sensing at least one other hand biometric characteristic” as recited in the language of the claim when interpreted in view of its ordinary definition. Therefore, we will sustain the rejection of independent claims 1 and 13 under 35 U.S.C. § 102. Similarly, dependent claim 10 falls with independent claim 1 since no separate argument for patentability has been set forth.

With respect to dependent claim 12, appellant argues that the examiner is in error in his interpretation of Ruell in his interpretation of other or different portions of the hand than the finger tip. (See brief at page 6.) We disagree with appellant and find that the presence of a pulse frequency would be a characteristic other than the finger tip. Therefore, this argument is not persuasive, and we will sustain the rejection of dependent claim 12.

With respect to dependent claim 11, the examiner maintains that Ruell teaches the difference in density of the sensors. (See answer at page 6.) Appellant argues that the spacing is the same between adjacent elements in the different portions, but does not identify any support for this position. (See brief at pages 6-7.) The examiner maintains that the spacing is different in the argument section at pages 14-15 of the answer (but the examiner addresses it with respect to claim 13). We agree with the examiner’s support in the answer for why the spacing would be different, and appellant

has not provided convincing argument/evidence to the contrary. Therefore, we will sustain the rejection of dependent claim 11.

Appellant objects to the varied use of Ruell in the combination with Knapp. (See brief at page 7.) We do not find any problem with the use of all the teachings of a reference in varied combination as long as they are reasonable interpretations of the respective teachings. Here, the examiner has set forth reasonable interpretations.

35 U.S.C. § 103

With respect to independent claim 1, appellant maintains that the combination is deficient as discussed above. (See brief at page 7.) We disagree with appellant, as discussed above. Appellant argues that the examiner's combination is based upon speculation and impermissible hindsight. (See brief at page 7.) We disagree with appellant. We find that the examiner has set forth a well-reasoned analysis of both Knapp and Ruell and has addressed the motivation for modifying the teachings of Knapp with those of Ruell for providing an extra level of security. (See answer at page 8.) Appellant argues that there is no teaching or suggestion of how the various types of circuitry required by Ruell's different types of sensors could be incorporated into the matrix of Knapp and that the additional circuitry would require undue experimentation. (See reply brief at page 3.) We disagree with appellant. The

examiner has provided a line of reasoning as to it being within the level of ordinary skill in the art to combine the teachings. (See answer at page 8.) We agree with the examiner that the addressing would have been within the level of ordinary skill in the art. Appellant argues that there is no indication in Ruell that Ruell saw any advantage to incorporate the detection of pulse into the matrix to detect fingerprints. (See reply brief at page 3.) Appellant argues that the sensors in the second portion are only of a lower resolution and not of a fundamentally different type. (See reply brief at page 3.) We disagree with appellant's argument since the claim does not expressly limit the sensors to be the same type or limit what the other biometric characteristic is sensed. We do not find that appellant has adequately rebutted the *prima facie* case of obviousness set forth by the examiner, and we will sustain the rejection of independent claim 1 under 35 U.S.C. § 103 along with dependent claims 2, 3, 6 and 7 which appellant has grouped with independent claim 1.

With respect to claim 3, appellant separately argues in the reply brief the aspect of pitch and that the sensors 31/32 are irregular and without pitch. (See reply brief at page 3.) We disagree with appellant and find that there appears to be a regular spacing and organization to those sensors. Additionally, appellant elected to group claim 3 with independent claim 1. (See brief at page 3.) Therefore, we will sustain the rejection of dependent claim 3.

With respect to dependent claim 4, appellant argues that the examiner's combination of teachings is based upon impermissible hindsight. (See brief at page 8.) We disagree with appellant as discussed above. Appellant argues that appellant is only able to have different spacing of address conductors since the second portion is different from the finger tip. (See brief at page 8.) We disagree with appellant. The language of dependent claim 4 and intermediate claims 1 and 2 do not require a different physical portion of the hand to be sensed. The "at least one other hand biometric characteristic" is not necessarily a different physical portion of the hand. Therefore, this argument is not persuasive.

With respect to claim 8, appellant argues that claim 8 recites storage of hand biometric characteristics. (See brief at page 8.) We disagree with appellant. We find that the claim recites a processing means connected to the sensing devices for comparing such with stored biometric characteristics. We find that Ruell teaches comparison of the fingerprint data to stored fingerprint data only when the pulse frequency of the individual touching the sensor is determined and when a filter determines that the pulse frequency is in the frequency range of the human, then the identification process is started. (Ruell at column 9, lines 33-44.) Therefore, the pulse frequency is compared to a human range by way of a filter and the fingerprint is

compared against other fingerprint data. Therefore, a processing means is set forth as broadly recited in the language of dependent claim 8. Appellant argues that pulse data is not stored for comparison with a proffered finger's pulse. (See reply brief at page 4.) We do not find appellant's argument persuasive since the argument is not commensurate with the language of dependent claim 8. Therefore, we will sustain the rejection of claim 8.

With respect to claim 14, appellant argues that at least one of the row and/or column detectors is coupled with both a first sensing element in a first portion and a second sensing element in a second portion. (See brief at page 9.) Appellant argues that the reference (we assume Knapp) teaches row and column conductors used only for connection to sensors sensing a single type of data and that there is no teaching or suggestion in the references that a single row or column conductor could be carrying different types of data. (See brief at page 9.) It appears that appellant is attacking the lack of a teaching in the individual references whereas, the examiner has made it abundantly clear that the teaching would have come from the combination of Knapp and Ruell together. We agree with the examiner's analysis and do not find that appellant has shown error in the examiner's reasoning or identified why two different types of data could not be carried by the same conductor(s). From our review of the

claimed invention, merely another type of data/characteristic is recited without any qualification. From our understanding of data transmission, the limiting factors would be the specific type of sensor, its signal strength and format of the transmission which would limit the application thereof. Here, we have no limitations to any such detail. Therefore, we agree with the examiner and do not find that appellant has shown error in the examiner's *prima facie* case of obviousness of dependent claim 14.

The examiner found that claim 9 distinguishes over the prior art.

With respect to dependent claim 10, appellant attempts to modify the groupings set forth in the brief at page 3 and separately argue claim 10 at page 5 of the reply. For completeness, we will address appellant's argument. Appellant argues that dependent claim 10 recites that the sensors are in a consistent pattern in both regions. (See reply brief at page 5.) From our review of Ruell, we find that the pairs of sensors 31/32 are in a consistent pattern which is different from that of the sensors in the first portion. Here, the language of claim 10 does not limit the size or arrangement of the sensors beyond a substantially lower spatial frequency in the second portion which is present in the teachings of Ruell as discussed above. Therefore, this argument is not persuasive, and we will sustain the rejection of dependent claim 10.

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CONCLUSION

To summarize, the decision of the examiner to reject claim 12 under 35 U.S.C. § 112, second paragraph is reversed, the decision of the examiner to reject claims 1 and 10-13 under 35 U.S.C. § 102 is affirmed, and the decision of the examiner to reject claims 1-4, 6-8, 13 and 14 under 35 U.S.C. § 103 is affirmed.

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

AFFIRMED

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH L. DIXON)	APPEALS
Administrative Patent Judge)	AND
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