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The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GREG FITZPATRICK, WILLIAM J. JOHNSON,
ROBERT S. KELLER and MARVIN L. WILLIAMS

Appeal No. 94-3823
Application 07/812,249¹

ON BRIEF

Before JERRY SMITH, LEE AND TORCZON, Administrative Patent
Judges.

LEE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the
examiner's final rejection of claims 1-15. No claim has been
allowed.

References relied on by the Examiner

¹ Application for patent filed December 20, 1991.

Appeal No. 94-3823
Application 07/812,249

Highleyman	2,978,675	Apr. 4, 1961
Clark	4,009,466	Feb. 22, 1977
Martin et al. (Martin)	4,876,735	Oct. 24, 1989

The Rejections on Appeal

Claims 1-15 stand finally rejected under 35 U.S.C. § 112, first paragraph, as corresponding to a specification that lacks an enabling disclosure. In addition, claims 1-15 stand finally rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1, 2, 6, 7, 11 and 12 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Martin in view of Clark. Claims 3-5, 8-10 and 13-15 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Martin in view of Clark and Highleyman.

For each of the above rejections, appellants have grouped the claims together for argument purposes in this appeal. Brief at 4.

An amendment was filed on September 3, 1993, and the examiner refused to enter it because it raised new issues (Paper No. 7). Nevertheless, the amendment was inadvertently entered and this Board remanded the case to the Examining Group to remove the amendment from the claims in the file. Such correction occurred and this case was sent back to the Board.

The Invention

The invention is directed to machine recognition of color-coded alphanumeric characters. Such recognition occurs because the characters differ in geometries and because they contain differing color pixels. More specifically, each alphanumeric character has a predominate color, e.g., black, which applies to the whole character. This predominate color is readily distinguishable by humans.

Each character also has a non-predominate color which is intermingled within that character's predominate color and is non-distracting to humans. The non-predominate color, however, is distinguishable to and can be detected by a color scanner. As disclosed, each non-predominate color represents a separate character. Thus, when the scanner recognizes a particular non-predominate color, it can then readily recognize the character associated with that color. In addition, the machine senses the geometry of a character to determine which character has passed.

Claim 1 is directed to a method for recognizing the above-discussed geometric color-coded characters by using a first character recognition system which views the particular

Appeal No. 94-3823
Application 07/812,249

geometries of the characters, and a second character recognition system which views the color that is coded within the characters. Claim 1 is representative of the invention and is reproduced below:

1. A method of recognizing a color coded character, wherein said character comprises plural pixels which are of a first color, said first color pixels being predominate so as to allow humans to distinguish said character and a small amount of a second color associated with said character, said second color being non-predominate so as to be non-distracting to humans, but distinguishable by a color scanner, comprising the steps of:

processing said character in a first processing step by an optical character recognition means selected from an optical character recognition group consisting of geometric optical character recognition and non-predominate color coded optical character recognition; and

processing said character in a second processing step by an optical character recognition means from said optical character recognition group not selected in said first processing step.

Opinion

We do not sustain the four rejections entered by the examiner in this case. This decision is based solely on the rationales as articulated by the examiner.

Enablement rejection

Appeal No. 94-3823
Application 07/812,249

The examiner rejected claims 1-15, under 35 U.S.C. § 112, first paragraph, as corresponding to a specification that lacks an enabling disclosure. In particular, the examiner states:

An integral part of applicant's invention is the use of probabilities [in figures 2 and 3] to select a recognized character. How are these probabilities calculated (especially in regard to the color coded characters)? This is a necessary part of the invention, and has not been addressed in the applicant's specification.

Answer at 4.

Appellants argue that such calculation of probabilities is conventional and would be known to those with ordinary skill in the art, as evidenced by Highleyman. Brief at 4. We agree.

The test for enablement under 35 U.S.C. § 112, first paragraph, is whether one reasonably skilled in the art could make or use the claimed invention from the disclosed subject matter together with information in the art without undue experimentation. United States v. Telectronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988), cert. denied, 490 U.S. 1046 (1989). A disclosure can be enabling even though some experimentation is necessary. Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987). The issue is whether

Appeal No. 94-3823
Application 07/812,249

the amount of required experimentation is undue. In re Vaeck, 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991).

To support the enablement rejection, the examiner refers to two flowchart steps, recited in figures 2 and 3, that read "CALCULATE PROBABILITIES OF TARGETS BASED ON GEOMETRIC OCR" and "CALCULATE PROBABILITY OF H1 BASED ON COLOR CODED OCR." However, Highleyman, which is also directed to a character recognition system, teaches, inter alia, "[p]robability information . . . is generally obtained from an analysis of a large sample of representative characters." Col. 1, lines 34-36. Thus, it was known in the art that probabilities for a viewed character, i.e., attempting to figure out what the character is, could be determined on the basis of knowing what all the possible, or large sample of, representative characters look like. That is, starting with all the possible characters, any image that is later viewed could be analyzed by determining the likelihood or probability that it is one of the possible characters.

The examiner has the initial burden to set forth a reasonable basis to justify questioning the sufficiency of disclosure for enabling one with ordinary skill in the art to make and use the claimed invention without undue experimentation.

Appeal No. 94-3823
Application 07/812,249

In re Angstadt, 537 F.2d 498, 503-04, 190 USPQ 214, 219 (CCPA 1976); see also In re Ambruster, 512 F.2d 676, 678, 185 USPQ 152, 154 (CCPA 1975). However, for this rejection, the examiner has not explained why an "undue" amount of experimentation is necessary given what was known in the art, as demonstrated by Highleyman. Accordingly, we will not sustain the examiner's rejection of claims 1-15 under 35 U.S.C. § 112, first paragraph.

Indefiniteness rejection

The examiner rejected claims 1-15, under 35 U.S.C. § 112, second paragraph, for indefiniteness. In particular, the examiner states:

In all the claims, the use of the terms "predominate", "non-predominate", and "non-distracting" is still indefinite. . . . What is distracting to one person may, or may not be distracting to another person. Similarly, the terms predominate and non-predominate are subjective terms especially in the way used by the applicant. . . .

The use of the phrase "small amount" (for instance, in claim 1, line 5) falls in this same category. That is, the use of the term small recites an unbased comparison.

Claims 11-15 are unclear. . . . What is meant by "A method of permitting recognition" is unclear. . . . The recitation of steps such as "providing a first means for processing" are [sic] unclear. The steps, worded in this way, could be directed to a method that takes place in a factory that assembles the invention, or they could possibly be directed to a programmer

Appeal No. 94-3823
Application 07/812,249

sitting at a terminal writing the software for the invention.

Answer at 4-5. Thus, the examiner views the following claim phrases as indefinite: "predominate"; "non-predominate"; "non-distracting"; "small amount"; "permitting recognition"; and "processing." We disagree, however, with the examiner that the foregoing claim phrases are indefinite within the meaning of 35 U.S.C. § 112, second paragraph, and address each of them below.

We agree with appellants that, in view of the specification and claim language, "predominate" is reasonably viewed, by a person of ordinary skill in the character recognition art, to mean that a single color is visually associated with a character and that color is readily distinguishable by humans. See specification at 4, lines 20-25; claim 1 ("plural pixels which are of a first color, said first color pixels being predominate so as to allow humans to distinguish said character"). Thus, this claim phrase is sufficiently defined. See In re Johnson, 558 F.2d 1008, 1016, 194 USPQ 187, 194 (CCPA 1977) (only a reasonable degree of certainty is required); In re Hammack, 427 F.2d 1378, 1382, 166 USPQ 204, 208 (CCPA 1970) (the purpose

of the definiteness requirement is to provide reasonable notice as to the boundaries of the patent protection involved). Of course, it is implicit that it is the visual sensitivity of the human population as a whole that is being referred to, rather than that of any one individual.

Likewise, in view of the specification and claim language, "non-predominate" reasonably means that a color is associated with a character and that the color is non-distracting to humans but distinguishable by a color scanner. See specification at 4, lines 23-29; claim 1 ("plural pixels which are of . . . a small amount of a second color associated with said character, said second color being non-predominate so as to be non-distracting to humans, but distinguishable by a color scanner").

"Non-distracting" reasonably means indistinguishable by humans. Specification at 4, lines 27-29 ("The non-predominate color is non-distracting to humans, but distinguishable by a color scanner"); claim 1 ("said second color being non-predominate so as to be non-distracting to humans"). In claim 1, "small amount" is used in the context of the non-predominate color being distinguishable to a color scanner but non-distracting to humans. Thus, a person of ordinary skill in

Appeal No. 94-3823
Application 07/812,249

the art would know to use that amount of color which is distinguishable by a color scanning but not by humans.

The examiner also views the following language in claim 11 to be indefinite: "A method of permitting recognition." Answer at 5. However, adding the term "permitting" to language that has already been found to be definite (e.g., claim 1 - "A method of recognizing a color coded character"), does not make the language indefinite. These words reasonably appear to mean what they say and do not, as the examiner argues, suggest "some sort of security measure to prevent access to a recognition system." Answer at 5. Finally, claim 11's phrase "providing a first means for processing" is also reasonably definite because it merely means selecting one of the two optical character recognition means. In view of the above, we will not sustain the examiner's rejection of claims 1-15 under 35 U.S.C. § 112, second paragraph.

Obviousness rejections

The examiner rejected claim 1 under 35 U.S.C. § 103 over Martin in view of Clark and claim 3 under 35 U.S.C. § 103 over

Appeal No. 94-3823
Application 07/812,249

Martin in view of Clark and Highleyman. The examiner states, inter alia, that:

Clark discloses a character coding and recognition system which forms characters which have sections of different colors as shown in figure 1. The characters are formed as follows:

Some of the color sections are predominate (such as the black sections) Therefore the sections of predominate color (as well as those of non-predominate color) do allow humans to recognize the characters.

Answer at 7-8. However, as appellants amply point out, Clark discloses plural colors used in various combinations throughout multiple height bands. This can best be seen by figure 6 of Clark. Since different colors are used for all of the characters, there is no predominate color for any character, i.e., no single color which defines a character to the human eye. Thus, the claim limitation "plural pixels which are of a first color, said first color pixels being predominate so as to allow humans to distinguish said character and a small amount of a second color . . ." (emphases added) is not met by Clark, which has been relied on by the examiner to meet this limitation. The appellants are correct that in Clark the characters do not have a

Appeal No. 94-3823
Application 07/812,249

predominate color which provides a basis for distinguishing the characters, or a second color which is non-distracting to humans. Moreover, the examiner did not find either Martin or Highleyman as disclosing the predominate and non-predominate color features of the appellants' claimed invention.

Absent a teaching of the above limitation concerning the type of characters to be processed, and how they are processed, we may not sustain the obviousness rejection of claim 1. Similarly, since the examiner relied on Clark to meet this same limitation in claim 3, we may not sustain the obviousness rejection of claim 3, which was made in view of Martin, Clark and Highleyman.

Conclusions

The rejection of claims 1-15 under 35 U.S.C. § 112, first paragraph, as corresponding to a specification that lacks an enabling disclosure is **reversed**.

The rejection of claims 1-15 under 35 U.S.C. § 112, second paragraph, for indefiniteness is **reversed**.

The rejection of claims 1, 2, 6, 7, 11 and 12 under 35 U.S.C. § 103 as being unpatentable over Martin in view of Clark is **reversed**.

Appeal No. 94-3823
Application 07/812,249

The rejection of claims 3-5, 8-10 and 13-15 under 35 U.S.C. § 103 as being unpatentable over Martin in view of Clark and Highleyman is reversed.

REVERSED

JERRY SMITH)	
Administrative Patent Judge)	
)	
)	BOARD OF PATENT
)	
JAMESON LEE)	APPEALS AND
Administrative Patent Judge)	
)	INTERFERENCES
)	
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Appeal No. 94-3823
Application 07/812,249

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