

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JUNICHI OHTA

Appeal No. 1998-0669
Application No. 08/507,194

HEARD: April 17, 2000

Before THOMAS, JERRY SMITH, and BARRY, Administrative Patent Judges.

BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the final rejection of claims 1-29. We reverse.

BACKGROUND

The invention at issue in this appeal relates to optical character recognition (OCR) of an image of a document. Although OCR software can differentiate areas of a document as containing character data, figure data, and table data, the software stores the different types of recognized data in a single file. Storage in the same file impedes the use of the different software needed to process each type of data. Furthermore, articles from a newspaper or magazine often comprise blocks of data extending over multiple columns and having a complex shape. Storing optically recognized data in such a format wastes space.

The invention at issue recognizes character data, figure data, and table data in an image of a document and stores the recognized data in separate files. Such a storage arrangement simplifies retrieval of the data by different types of software. The invention also rearranges data recognized from an image of a document into a simpler shape, thereby conserving storage space.

Claims 1 and 13, which are representative for our purposes, follow:

1. A computer implemented method of processing a document, comprising the steps of:

inputting an image of the document, the image including character images and at least one figure;

dividing the image of the document into different areas including at least one character area containing the character images and at least one figure area containing the at least one figure;

processing the at least one character area to obtain character codes representing the character images;

writing the character codes representing the character images into a first file; and

writing the at least one figure into a second file which is different from the first file.

13. A computer implemented method of processing a document, comprising the steps of:

inputting an image of the document including a plurality of columns;

recognizing, using image processing, empty space next to one of said columns; and

moving a portion of another of said columns to said empty space which was recognized using image processing.

The reference relied on in rejecting the claims follows:

Watanabe et al.

5,018,083

May 21, 1991.

Claims 1-29 stand rejected under 35 U.S.C. § 103 as obvious over Watanabe. Rather than repeat the arguments of the appellant or examiner in toto, we refer the reader to the briefs¹ and answers for the respective details thereof.

OPINION

In reaching our decision in this appeal, we considered the subject matter on appeal and the rejections advanced by the examiner. Furthermore, we duly considered the arguments and evidence of the appellant and examiner. After considering the totality of the record, we are persuaded that the examiner erred in rejecting claims 1-29. Accordingly, we reverse.

We begin by noting the following principles from In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a

¹ We rely on and refer to the amended appeal brief, (Paper No. 11), in lieu of the original appeal brief, (Paper No. 8), because the latter was defective. (Paper No. 10.)

prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. Id. "A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

With these in mind, we address the following issues:

- obviousness of claims 1-12 and 15-27
- obviousness of claims 13, 14, 28, and 29.

Obviousness of Claims 1-12 and 15-27

Regarding claims 1-12 and 15-27, the appellant argues, "the dividing step of the image of the document is not disclosed or suggested by Watanabe et al." (Reply Br. at 4.) He adds, "as Watanabe et al do not indicate whether the insertion, deletion, replacement, etc. operates on character codes or character images which have been input, it is improper to jump to the conclusion that the editing means operates on character images which have been input." (Id. at

3.) The examiner replies, "Cutting/ replacing/moving both information data [sic] refers to dividing the image of the document into different areas including at least one character area containing the character images and at least one figure area containing the at least one figure, as seen in figures 21C and 23." (Examiner's Answer at 5.)

Claims 1-12 each specify in pertinent part the following limitations:

inputting an image of the document, the image including character images and at least one figure;
dividing the image of the document into different areas including at least one character area containing the character images and at least one figure area containing the at least one figure
....

Similarly, claim 15 specifies in pertinent part the following limitations:

means for inputting an image of the document, the image including character images and at least one figure;
means for dividing the image of the document into different areas including at least one character area containing the character images and at least one figure area containing the at least one figure

Also similarly, claims 16-27 each specify in pertinent part the following limitations:

An apparatus for processing an image of a document including character images and at least one figure, comprising:

means for dividing the image of the document into different areas including at least one character area containing the character images and at least one figure area containing the at least one figure

In summary, claims 1-12 and 15-27 each recite dividing the image of a document into different areas.

The examiner fails to show a teaching or suggestion of the claimed limitation in the prior art. "A rejection based on section 103 clearly must rest on a factual basis" In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967).

"The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not ... resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis." Id., 154 USPQ at 178.

Here, the figures cited by the examiner are ambiguous at best. Figure 21C of Watanabe shows a display of a document "to which line counters were added." Col. 15, ll. 53-54. The examiner does not allege, let alone show, that the document was generated by dividing an image into different areas.

Figure 23 of the reference "shows an example of display on the CRT 38 in the case where the cutting and inserting function was executed." Col. 17, ll. 24-26. By itself, the figure possibly could be interpreted as teaching the cutting and pasting of an image of a document. The examiner, however, has not shown any evidence to support such an interpretation. To the contrary, he does not deny the appellant's assertion that "known word processing programs have their cut and paste operations operate on characters which are represented by character codes, not images." (Reply Br. at 3.) Accordingly, it is possible, if not probable, that Watanabe's cutting and inserting function also operates on character codes rather than on an image.

In view of the ambiguity of the reference's disclosure and the operation of known word processing programs, we are not persuaded that teachings from the prior art would appear to have suggested the claimed limitation of dividing the image of a document into different areas. The examiner's interpretation amounts to speculation or an unfounded assumption; he has not established a prima facie case of obviousness. Therefore, we reverse the rejections of claims 1-12 and 15-27 under 35 U.S.C. § 103. We next address the obviousness of claims 13, 14, 28, and 29.

Obviousness of Claims 13, 14, 28, and 29

Regarding claims 13, 14, 28, and 29, the appellant argues, "Watanabe et al clearly does not disclose nor [sic] suggest the inputting of an image of the document including a plurality of columns and recognizing empty space next to one of said columns."

(Reply Br. at 6.) The examiner replies, "The reference also teaches 'the column alignment means that the bottom columns are aligned in the column work' (column 9, lines 25-28)."

(Examiner's Answer at 7-8).

Claims 13 and 14 each specify in pertinent part the following limitations: "inputting an image of the document including a plurality of columns; recognizing, using image processing, empty space next to one of said columns" Similarly, claims 28 and 29 each specify in pertinent part the following limitations: "apparatus for processing an image of a document including a plurality of columns, comprising: means for recognizing, using image processing, empty space next to one of said columns" In summary, claims 13, 14, 28, and 29 each recite using image processing to recognize empty space next to a column in an image of a document.

The examiner fails to show a teaching or suggestion of the claimed limitation. Here, the passage of Watanabe on which the examiner relies does teach column alignment. He does not allege, let alone show, however, that the column alignment uses image processing. It is possible, if not probable, that the reference's column alignment operates on character codes rather than on an image.

In view of the ambiguity of the reference's disclosure and the operation of known word processing programs, we are not persuaded that teachings from the prior art would appear to have suggested the claimed limitation of using image processing to recognize empty space next to a column in an image of a document. The examiner's interpretation amounts to speculation or an unfounded assumption; he has not established a prima facie case of obviousness. Therefore, we reverse the rejections of claims 13, 14, 28, and 29 under 35 U.S.C. § 103.

CONCLUSION

To summarize, the rejection of claims 1-29 under 35
U.S.C. § 103 is reversed.

REVERSED

JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JERRY SMITH)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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LANCE LEONARD BARRY)	
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