

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 38

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DONG-HOON PARK

Appeal No. 2001-1336
Application No. 08/736,042¹

HEARD: February 19, 2003

Before GROSS, LEVY, and SAADAT, Administrative Patent Judges.
SAADAT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 1-13 and 17-21. Claims 14-16 have been canceled.

We reverse.

¹ Application for patent filed October 21, 1996, which claims the foreign filing priority benefit under 35 U.S.C. § 119 of Korean Application No. 36343/1995, filed October 20, 1995.

BACKGROUND

Appellant's invention is directed to an image forming apparatus and a method for adjusting the transfer voltage for optimizing image density according to the path a sheet of recording media takes. The path depends on the tray the sheet of recording media originates from such as an automatic feeding cassette and a manual feeding tray (specification, page 5). When a sheet of recording medium is fed through the manual tray and is conveyed toward the image forming unit, a sensor is triggered (brief, page 9) and a signal is generated by an engine controller (brief, page 10). This signal indicates that the recording medium has a thickness greater than the standard thickness and the transfer voltage should be adjusted accordingly (id.).

Representative independent claim 1 is reproduced below:

1. An image informing apparatus using an electrophotographic developing system, comprising:

a photosensitive drum positioned along a path for conveyance of articles of recording media through said system;

a manual paper feed tray attachable to said system while introducing the articles of recording media onto said path via a first avenue;

a cassette associated with said system to introduce other articles of recording media onto said path via a second and different avenue;

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a manual paper feed sensor positioned along said first avenue to automatically sense a passage of a sheet of recording media fed from said manual paper feed tray and produce a first signal when the sheet of recording medium is fed into said path from said manual paper feed tray;

an engine controller generating one of a first control signal and a second control signal in dependence upon reception of said first signal sent from said manual paper feed sensor;

a transfer voltage generator generating a first transfer voltage when said first control signal is received from said engine controller and generating a second transfer voltage different from said first transfer voltage when said second control signal is received from said controller;

a transfer unit receiving one of said first and second transfer voltages applied from said transfer voltage generator to transfer an image representing information, formed by toner on said photosensitive drum to said sheet of recording medium;

an operating panel;

a video controller comprising a computer interface a video control unit, said computer interface being connected between a host computer and said video control unit, said computer interface providing an interface for an input and an output signal between said host computer and said video controller, said video controller comprising a memory storing data input from said operating panel and from said host computer and changing code data received from said computer interface into image data; and

a print control unit comprising a video interface, said engine controller, an input/output interface, a sensor circuit, and said transfer voltage generator, said video interface providing an interface transmitting and receiving signals between said video controller and said engine controller, said engine controller controlling each unit of the print control unit and initiating printing of image data received from the video controller on said recording media, said input/output interface being connected between said

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engine controller and both said sensor circuit and said voltage transfer generator, said sensor sensing operational states of said print control unit.

The Examiner relies on the following references in rejecting the claims:

U.S. Patents

Kimura et al. (Kimura)	5,250,999	Oct. 5, 1993
Lee	5,444,524	Aug. 22, 1995
Kanno et al. (Kanno)	5,486,903	Jan. 23, 1996
		(filed Jul. 7, 1994)

Japanese Kokai²

Kono	6-83142	Mar. 25, 1994
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Claims 1-7, 13 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kimura in view of Kono and Lee.

Claims 8-12³ and 17-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kimura in view of Kono and Lee and further in view of Kanno.

Rather than reiterate the viewpoints of the Examiner and Appellant regarding the above-noted rejection, we make reference to the answer (Paper No. 32, mailed July 31, 2000) for the

² The English translation of this Kokai reference was provided by Derwent™, a copy of which was provided to Appellant as an attachment to paper No. 7, mailed November 18, 1997.

³ Claim 8 is dependent upon independent claim 5 and should have probably been grouped with its base claim.

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Examiner's reasoning and to the appeal brief (Paper No. 31, filed May 11, 2000) and the reply brief (Paper No. 33, filed October 2, 2000) for Appellant's arguments thereagainst.

OPINION

The Examiner relies on Kimura for teaching different elements of a printer except for the claimed manual paper feed tray (answer, pages 4 & 5). The Examiner, however, takes the position that the use of a manual feed tray with a substantially horizontal path is known in the art (answer, page 5). The Examiner further relies on Kono for teaching a sensor in the paper path adjacent the tray and on Lee for teaching a video controller and a print control unit (id.).

Appellant argues that the Examiner, in relying on Kimura for teaching adjustment of the transfer voltage, improperly associates Kimura's manual adjustment performed by the user with the claimed changing of the transfer voltage depending on the path a sheet of recording medium takes (brief, page 7). Appellant further asserts that the proposed combination of Kimura with Kono and Lee lacks proper motivation and would not have resulted in the claimed structure (brief, pages 6 & 7 and reply brief, pages 3 & 4).

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In response to Appellant's arguments, the Examiner asserts that Kimura teaches that the transfer voltage should be adjusted when a user determines the use of transparencies and alerts the printer (answer, page 7). Furthermore, the Examiner refers to tray 7 of Kimura as the straight path tray for special recording media which requires adjusting of the transfer voltage when tray 7 is used or when the type of the paper is sensed as special (id.). The Examiner concludes that the claimed invention "does not differ technically" from the prior art (id.).

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). To reach a conclusion of obviousness under § 103, the examiner must produce a factual basis supported by teaching in a prior art reference or shown to be common knowledge of unquestionable demonstration. Our reviewing court requires this evidence in order to establish a prima facie case. In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). The Examiner must not only identify the elements in the prior art, but also show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead the

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individual to combine the relevant teachings of the references.”
In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir.
1988).

A review of the applied prior art confirms that Kimura relates to a printer that controls the printing parameters once the overhead projection mode is selected (col. 1, lines 44-49). However, as acknowledged by the Examiner, a user has to select the overhead projector (OHP) mode selection key 18 in order to adjust the transfer voltage (col. 3, lines 47-48). Although Kimura teaches that the type of the recording media may be detected automatically (col. 4, lines 31-38), the claimed sensor for detecting the path through which a sheet of recording medium fed from the manual paper feed tray passes is absent from the reference.

Kono, on the other hand, discloses a paper-stuck detection means in an image forming device (translation, section 0008) but provides no further detail of a signal indicating which path the paper is passing through or whether the detection results in changing the transfer voltage. We also find that Lee, in figure 2, merely depicts a print engine controlling circuit and does not teach or suggest the use of any sensors for detecting the passage of a sheet of recording medium from the manual paper feed tray.

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Thus, although we agree with the Examiner that adjusting the transfer voltage for a specific type of recording media is recognized by Kimura, we do not find any specific teaching in the reference that relates to the claimed sensor that automatically senses the passage of a sheet of recording media fed from the manual tray or to production of a first signal which determines the control signal provided to the transfer voltage generator.

We agree with Appellant's assertion (brief, page 7 and reply brief, page 4) that the combination of Kimura with Kono and Lee fails to teach or suggest changing the transfer voltage depending on the path of a sheet of recording media, as recited in claim 1. As discussed above, Kimura only senses the type of paper and not the path the paper takes whereas Kono senses whether a paper is stuck in the apparatus. In our view, even the Examiner's inference that the transfer voltage is adjusted depending on the type of the recording media used (answer, page 7) is inconclusive because Kimura adjusts the transfer voltage either based on the mode selected by a user or the sensed type of the recording media. Thus, assuming, arguendo, that it would have been obvious to combine Kono and Lee with Kimura, as held by the Examiner, the combination would still fall short of teaching or suggesting the claimed sensor that senses the path a sheet of

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recording media passes through for generating signals that control the transfer voltage.

In view of our analysis above, we find that the Examiner has failed to set forth a prima facie case of obviousness as the necessary teachings and suggestions related to the claimed sensor for sensing the path of the recording media, as recited in independent claims 1, 3, 5, 13 and 21, are not shown. Accordingly, we do not sustain the 35 U.S.C. § 103 rejection of independent claims 1, 3, 5, 13 and 21, nor of claims 2, 4, 6 and 7 dependent thereon.

With respect to the rejection of claims 8-12 and 17-20, the Examiner further relies on Kanno for teaching that the transfer voltage should be increased for thick papers (answer, page 6). However, Kanno provides no teaching related to the claimed sensing unit along the path adjacent to a manual feeding tray and fails to overcome the deficiencies of Kimura as discussed above with respect to claim 1. Therefore, the 35 U.S.C. § 103 rejection of claims 8-12 and 17-20 cannot be sustained.

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CONCLUSION

In view of the foregoing, the decision of the Examiner rejecting claims 1-13 and 17-21 under 35 U.S.C. § 103 is reversed.

REVERSED

ANITA PELLMAN GROSS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
STUART S. LEVY)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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