DECISION of 14 December 1995

Case Number: T 0440/94 - 3.5.1

Application Number: 87310060.6

Publication Number: 0268439

IPC: H04N 1/028

Language of the proceedings: EN

Title of invention:
Image reading apparatus

Patentee:
CANON KABUSHIKI KAISHA

Opponent:
Océ-Nederland B.V.

Headword:
Image reading apparatus/CANON

Relevant legal provisions:
EPC Art. 111(1)

Keyword:
"Addition of new features to the claim generate a new situation"
"Remittal to the first instance"

Decisions cited:

Catchword:
Case Number: T 0440/94 - 3.5.1

DECISION
of the Technical Board of Appeal 3.5.1
of 14 December 1995

Appellant: CANON KABUSHIKI KAISHA
(Proprietor of the patent)
30-2, 1-chome, Shimomaruko,
Ohta-ku
Tokyo (JP)

Representative: Beresford, Keith Denis Lewis
BERESFORD & Co.
2-5 Warwick Court
High Holborn
London WC1R 5DJ (GB)

Respondent:
(Opponent)
Océ-Nederland B.V.
St. Urbanusweg 43
NL-5914 CC Venlo (NL)

Representative: Hanneman, Henri W.A.M.
Océ-Nederland B.V.
Patents and Information
St. Urbanusweg 43
P.O. Box 101
NL-5900 MA Venlo (NL)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office dated 15 March 1994
revoking European patent No. 0 268 439 pursuant to
Article 102(1) EPC.

Composition of the Board:
Chairman: P. K. J. van den Berg
Members: R. Randes
          G. Davies
Summary of Facts and Submissions

I. European patent No. 0 268 439 was granted on 10 April 1991 on the basis of European patent application No. 87 310 060.6 filed on 13 November 1987 and claiming priority from Japanese applications 269842/86 and 269843/86, both dated 14 November 1986.

II. Opposition to the patent in its full extent was submitted by the respondent on 9 January 1992, citing as grounds Article 100(a) EPC, in that the subject-matter of the granted claims was held to lack novelty and an inventive step. The opponent submitted four new documents, including:

Document A: GB-A-2 163 620, and

In the course of written proceedings, the Opposition Division also cited


from the European Search Report.

In oral proceedings held on 22 February 1994, the Opposition Division announced its decision to revoke the patent; written reasons were dispatched on 16 March 1994. The proprietor's main request for maintenance of the patent on the basis of a first amended set of claims was found not to be allowable because the new claims did not satisfy Article 123(2) EPC. The subject-matter of the independent claims of this request was further held to lack an inventive step in the light of the combination of documents C and B or A and B. The auxiliary request for maintenance on the basis of a
second amended set of claims was equally found not to be allowable, the subject-matter of the independent claims being also held to lack an inventive step using the same arguments.

III. Notice of appeal was received from the proprietor, with the appropriate fee, on 17 May 1994. New claims 1 to 3 were submitted on 13 July 1994 with the statement of grounds of appeal, these claims forming the basis of a new single request for maintenance of the patent. The description and drawings of this request remain those of the patent as granted.

The respondent (opponent) requests that the appeal be dismissed, arguing that these new claims too lack the requisite inventive step.

Both parties conditionally request oral proceedings.

IV. The independent claim of the sole request reads as follows:

"An image reading apparatus comprising: a plurality of linear sensor means (21-25) for reading an image of a document, each of said linear sensor means comprising a plurality of cells and reading a different portion of a line of a document in a divided manner and different groups of said plurality of cells of each sensor means being arranged to read different colour components of the image; and a plurality of correction means (61, 64, 65) each associated with a respective different one of said cell groups and each comprising:
i) a level control means (81) responsive to a dark current produced by the corresponding sensor means for providing a first adjustment to the level of the signal generated by the cells of the corresponding group;
ii) determining means (65) for determining a variation in said generated signal level on the basis of a black reference signal generated by the cells of the corresponding group by reading a black reference member;

iii) bias means (82, 83) responsive to said determining means (65) and operable for providing a second adjustment to said generated signal level, said biasing means being operable so that said second adjustment is the same for all cells in the corresponding group;

iv) means (65) for controlling the second adjustment applied to the cells of the respective different sensors to bring the adjusted signal levels from the different sensors to substantially the same black reference level; and

v) gain control means (65, 74) operable to adjust the gain of said generated signal level in response to a white reference signal generated by the cells of the corresponding group by reading a white reference member."

The appellant (proprietor) argues essentially as follows:

- The new independent claim is based on the granted claim 1 but is further limited by the features that the cells of each linear sensor means are arranged in groups, one for each colour, that each group has a correction means, and that each correction means performs a number of corrections, viz. a first derived from the "dark current", using optical shield pixels and a clamp circuit, a second depending on the response to reading a black reference member, and a third responsive to sensing a white reference member. Thus the problem is solved that image density variations can arise as a result of different response characteristics of different sensors making up a line reader. The
claimed material cannot be derived from a combination of document A or C with document B.

The respondent (opponent) counter-argues as follows:

- For reasons discussed in document C (and as pointed out during the opposition proceedings) it would be natural to apply one single "black" correction level for the whole of each sensor means and to adjust all the correction values to give the same reference level. However it would be known that the different colour groups would have different spectral responses, and hence it would be obvious to apply the teaching of document C to each colour group.

Reasons for the Decision

1. The appeal is admissible.

2. Clarity and interpretation of the claims

2.1 The newly submitted claim refers to a "dark current". This expression does not apparently occur in the patent specification as granted, but is to be found in document C. The Board interprets this expression as referring to the clamp voltage (rather than current) derived from the output of the "optical shield pixels", a number of cells which are not exposed to light, e.g. covered by an aluminium layer, as described in the specification column 4, lines 40 to 48 and column 6, lines 21 to 26.

2.2 It is further noted that this arrangement is described in an embodiment where the sensors are aligned in two arrays in a staggered manner (column 4, lines 48 to 57).
Inasmuch as it is not immediately apparent to the Board how such optical shield pixels could be used without such a staggered arrangement of sensors, it would seem prima facie that the claim does not satisfy the requirement for clarity of Article 84 in conjunction with Rule 29 EPC in that this apparently essential feature is not included.

2.3 It is not immediately clear to the Board where direct disclosure of the material of the new dependent claim 3 is to be found. The only possibly relevant passage found by the Board (column 7, lines 25 to 30) refers to storage in RAM 77, rather than 65b as indicated in the reference number, and seems anyway to relate to an initial calculation phase (see e.g. column 7, lines 55 to 57), rather than the correction carried out during the actual scanning of a document. Hence it seems possible that objections might be raised to the new claim 3 under Articles 84 and/or 123(2).

3. *Added subject-matter*

The objection under this heading in the decision of the Opposition Division related to the then claimed feature that there was a single level correction value for a whole sensor, which not only was not disclosed by the original application, but was indeed contradicted by dependent claims in which it was specified that there was a separate correction level for each colour group. The current independent claim defines a separate correction level for each colour group, so that this objection clearly no longer applies. The respondent (opponent) has not raised any objection to the newly submitted claims under Article 123(2) EPC, and there is no violation of this article immediately apparent to the Board, other than the possible objection identified in 2.3 above.
4. **Inventive step**

4.1 The newly formulated claims differ from those put forward in the opposition proceedings in at least two ways. Firstly, it is specified in the independent claim that the level control means is responsive to three different sensed signals, the "dark current", a black reference signal and a white reference signal. Secondly it is specified that there is a control means for each colour group within a sensor. In particular, the introduction of the use of the "dark current" for correction is new to the claimed material as a whole, including previous dependent claims. This has the specific effect that a new light is cast on the relevance of the teaching of document C, since this document now has to be interpreted as relating to such a dark current correction rather than to a black level correction derived from a black reference member, this latter being the second correction to a black level specified in claim 1.

4.2 Furthermore, it appears now to be clearly indicated in claim 1 that the "output signals of each pixel in a sensor chip [now "all cells in the corresponding group"] is varied by a same amount" (cf. the decision, in the bridging paragraph of pages 9 and 10). The Opposition Division in its decision stated that this feature, which had been argued by the proprietor (appellant) to distinguish the claimed material from document A in a particular way, could not clearly be identified in the then valid claims, so that the claimed material could be held to lack an inventive step in the light of a combination of documents A and B. Thus this argument, at least as formulated in the decision, no longer seems to apply to the new claim 1.
4.3 The use of two different black corrections simultaneously would appear to serve the purpose that on the one hand the application of the "dark current" as a clamp voltage would provide a protection against drift in the characteristics of a particular sensor during the course of reading a single page (see specification column 6 line 51 to column 7 line 4), whereas on the other hand the reading of a black reference member would be used to equalise the response of the sensors within the line (column 7 lines 35 to 45). It does not appear that such an arrangement can be dismissed as trivially obvious. Nor do the respondent's arguments make it immediately apparent that this subject-matter is not inventive. Indeed, the respondent does not seem to address this point in the response of 8 June 1995. Hence it would appear that a new situation has arisen in comparison to that which the Opposition Division had to consider in making its decision. The appellant has made amendments to the claims (in particular a feature taken from the description has been introduced) that the Opposition Division did not have the opportunity to evaluate. It would appear therefore that the case requires a careful new examination.

5. In these circumstances where the subject-matter of the claims has changed substantially, in order to preserve the opportunity for both parties to argue their case before two instances of the EPO it would therefore appear appropriate to remit the case to the Opposition Division for further prosecution (Article 111(1) EPC).

6. Since this decision taken by the Board cannot be said to be negative in respect of either party, there is no need to appoint oral proceedings according to the conditional requests made (see III above).
Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance for further prosecution.

The Registrar:  

The Chairman:

M. Kiehl  
P. K. J. van den Berg

3685.D