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Datasheet for the decision of 17 April 2020

Case Number: T 1900/16 - 3.5.02

Application Number: 08001906.0

Publication Number: 1953705

IPC: G07B17/00

Language of the proceedings: EN

Title of invention:
Method and system for mitigating errors when processing print stream data

Applicant:
Pitney Bowes, Inc.

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - main request (yes)

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Case Number: T 1900/16 - 3.5.02

D E C I S I O N
of Technical Board of Appeal 3.5.02
of 17 April 2020

Appellant: (Applicant)	Pitney Bowes, Inc. One Elmcroft Road Stamford, CT 06926-0700 (US)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 14 March 2016 refusing European patent application No. 08001906.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	R. Lord
Members:	C.D. Vassoille
	A. Bacchin

Summary of Facts and Submissions

I. The applicant (appellant) has filed an appeal against the decision of the examining division to refuse European patent application no. 08001906.0.

II. The following documents are relevant for the present decision:

D1: EP 0 745 435 A2

D5: Anonymous: "Readers-writers problem - Wikipedia, the free encyclopedia", 15 January 2007 (2007-01-15), XP055238923, Retrieved from the Internet: URL: https://en.wikipedia.org/w/index.php?title=Readers%E2%80%93writers_problem&oldid=100889611 [retrieved on 2016-01-06]

III. In the decision under appeal the examining division came to the conclusion that the subject-matter of claim 1 of each of the main request and the first and the second auxiliary request did not involve an inventive step in view of a combination of documents D1 and D5.

IV. The appellant has requested in writing that the decision under appeal be set aside and a patent be granted on the basis of the main request or, if this was not possible, according to the first or the second auxiliary request, these requests having been filed as auxiliary requests 3, 4 and 5 with letter of 3 February 2016 and correspond to the requests underlying the decision under appeal.

The appellant's main request is based on the following documents:

Claims:
No. 1 to 6 filed with letter of 3 February 2016 for the 3rd auxiliary request;

Description:
Pages 8, 11, 12 as originally filed;
Pages 1, 3 filed with letter of 19 May 2011;
Pages 2, 4a, 4b, 5, 6, 7, 9, 10 filed with letter of 27 June 2012;
Page 4 filed with letter of 3 February 2016 for the 3rd auxiliary request;

Drawings:
Sheets 1/5 to 5/5 as originally filed.

V. Claim 1 of the main request reads as follows:

"A method for processing data generated by application software (60A) residing on a computer (60), the data indicative of pages of mailpiece content material (14) for printing, and for printing the pages to be used in a mailpiece inserter (10) having an integrated printer (12), the method comprising the steps of:
rendering the data into a print control language compatible with the integrated printer (12);
transmitting data from the application software (60A) to a print processor (44) along write (TPW) and read (TPR) paths;
activating one of the write (TPW) and read (TPR) paths such that one of the paths is active while the other of the paths is inactive; and
printing the data to generate the pages of content material (14);
wherein the step of transmitting data includes the steps of:

writing data along the write path (TPW) from the application software (60A) to a spool file (72) via a spooler (70) interposing the application software (60A) and spool file (72); and
reading data along the read path (TPR) from the spool file (72) to the print processor (44);
and wherein the step of activating one of the write (TPW) and read (TPR) paths comprises alternately activating each of the write (TPW) and read (TPR) paths to eliminate synchronous access to the same data location within the spool file by the application software/spooler along the write path and the print processor along the read path."

Claims 2 to 6 are dependent on claim 1.

VI. The appellant's arguments in so far as they are relevant for the present decision are as follows:

The present invention related to the field of mailpiece generation. As explained in the application as filed, the inventors had identified the problem of additional blank sheets that were generated when printing content material to be inserted into mail pieces. Although the inventors had found that a blank sheet was generated with a frequency of only about one sheet in every 20,000, this was still a problem for mail piece generation because a print job could often exceed 100,000 sheets. Furthermore, as each individual mail piece in a batch of mail pieces was filled with, or fabricated from, a respective predetermined number of pages, the generation of an additional blank page disrupted the page count and could cause pages inserted into every subsequent mail piece to be incorrect.

The technical problem to be solved, therefore, was how to prevent additional blank sheets appearing in printed content material that was to be inserted or fabricated into mail pieces.

The solution to this problem according to the distinguishing feature was not obvious to the skilled person.

D1 disclosed a mail piece generation system that would suffer from the same problem, that is, the system of D1 would generate additional blank sheets in the printed content material in the same way as the prior systems described in the present application.

Starting from D1, therefore, the technical problem was the same as that set out in the present application, namely how to prevent additional blank sheets appearing in printed content material that was to be inserted or fabricated into mail pieces.

D1 did not disclose the problem and also did not disclose the cause of the problem. Both the problem and the cause were discovered by the present inventors, as explained in paragraphs [0029] and [0030] of the published application.

When faced with the problem of blank sheets appearing in the content material, there was nothing in D1 to cause the skilled person to associate the blank sheets with synchronous access to the same data location within the spool file by the application software/ spooler along the write path and the print processor along the read path.

In document D5 there was also no mention that synchronous memory access caused the generation of blank sheets in printed material. It was ex post facto analysis to say that the skilled person would have consulted D5 because this would have required the skilled person to have knowledge of the specific printing problem and in particular of its cause.

There was nothing in the prior art that would cause the skilled person to investigate the spool file as a potential cause of the identified printing problem. Consequently, the skilled person would not have investigated this area in order to find a solution of the problem.

In conclusion, the decision of the examining division, formulating the technical problem as "how to ensure that correct printing results are generated", was not correct and caused an incorrect assessment of inventive step.

Reasons for the Decision

1. The appeal is admissible.

2. Main request - inventive step (Article 56 EPC)

2.1 Closest prior art and distinguishing features

2.1.1 The appellant has not disputed that document D1 represents the closest prior art and the board agrees. The board therefore sees no reason to deviate from the decision under appeal on this point.

2.1.2 The appellant also did not object to the examining division's finding that the subject-matter of claim 1 of the main request differs from D1 in the following feature:

"wherein the step of activating one of the write (TPW) and read (TPR) paths comprises alternately activating each of the write (TPW) and read (TPR) paths to eliminate synchronous access to the same data location within the spool file by the application software/ spooler along the write path and the print processor along the read path."

2.2 *Objective technical problem*

2.2.1 The application is concerned with the generation of additional blank sheets in a printed document. While the generation of a single blank sheet can be tolerated in conventional printed documents, which typically require less than 100 sheets of content material, it has severe consequences in a print job for mailpiece inserters, which can exceed 100,000 sheets. Consequently, there is a high probability that a print job for mailpiece inserters experiences this problem, which can result in the need to reprocess the entire print job (see in particular paragraphs [0028] to [0030] of the published application).

In light of the detailed explanations provided in the application as well as by the appellant in the statement setting out the grounds of appeal, the board has no doubts that the problem underlying the invention, as explained above, is plausible. In particular, the objective technical problem corresponds to that set out in the present application, namely how to prevent additional blank sheets appearing in printed

content material that was to be inserted or fabricated into mail pieces.

2.2.2 In conclusion, the objective technical problem that has been formulated by the examining division, namely that of how to ensure that correct printing results are generated, is too general in view of the specific problem set out in the application. The objective technical problem as has been formulated by the appellant, namely that of how to avoid the generation of blank sheets in printed content material, therefore requires neither reformulation nor generalisation.

2.3 Obviousness

2.3.1 The solution to the objective technical problem (see points 2.1 and 2.2 above) is not rendered obvious by a combination of documents D1 and D5.

In the present case, finding the solution presupposes first finding the cause of the problem.

A key point to take into consideration in this context is that the skilled person, when attempting to find the cause of the problem, was faced with a high number of different technical fields to investigate in the overall complex printing process of a mailpiece inserter (see in particular figure 1 and the corresponding description of the application), as has has been convincingly argued by the appellant.

There is, however, nothing in the prior art that would have led the skilled person to believe that the read/write access to the spool file was the cause of additional blank sheets in the print job.

While a mere synchronisation of a read and write access to a specific file location may have been generally known in the art, the realisation that simultaneous read and write access to the spool file is the cause of blank sheet generation in a printing process of a mailpiece inserter, is not obvious.

Document D5 might disclose general teaching concerning read and write access synchronisation to a specific file location, but it does not provide any teaching to the person skilled in the art as to how to solve the problem of blank sheet generation in printed content material, since, as has been convincingly argued by the appellant, D5 does not contain any reference to printing problems. Thus the skilled person attempting to address the problem of blank sheet generation would have consulted D5 only if he had already realised that synchronisation of read/write access was the underlying cause of the problem. However, as indicated above, that realisation was not obvious.

2.3.2 Summarising, the question to answer is not whether the person skilled in the art could have obtained the invention by modifying the closest prior art (D1), but whether the modification would have been made in expectation of solving the objective technical problem because the prior art provided an inducement that the solution would actually solve the problem. The board sees no such inducement or motivation in the prior art and in particular not in the relevant documents D1 or D5.

The opposite conclusion that the teaching of D5 is obviously the solution to the specific problem of a blank sheet generation in D1, must thus be considered to be based on hindsight knowledge of the invention.

2.3.3 The board has therefore come to the conclusion that the subject-matter of claim 1 is not rendered obvious to the person skilled in the art from the prior art documents at hand and consequently involves an inventive step in the sense of Article 56 EPC.

Since the further claims 2 to 6 are dependent on claim 1, this conclusion also applies to these claims.

3. *Final remarks*

Given that the subject-matter of claim 1 of the main request involves an inventive step in the sense of Article 56 EPC and considering that the further requirements of the EPC are also fulfilled, the board had to accede to the appellant's main request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the examining division with the order to grant a patent in the following version:

Claims:
No. 1 to 6 filed with letter of 3 February 2016 for the 3rd auxiliary request;

Description:
Pages 8, 11, 12 as originally filed;
Pages 1, 3 filed with letter of 19 May 2011;

Pages 2, 4a, 4b, 5, 6, 7, 9, 10 filed with letter of 27 June 2012;

Page 4 filed with letter of 3 February 2016 for the 3rd auxiliary request;

Drawings:

Sheets 1/5 to 5/5 as originally filed.

The Registrar: The Chairman:

U. Bultmann R. Lord

Decision electronically authenticated