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Datasheet for the decision of 9 November 2011

Case Number: T 1739/08 - 3.5.05

Application Number: 00125871.4

Publication Number: 1107104

IPC: G06F 3/12

Language of the proceedings: EN

Title of invention:
Printing system with standby and/or sleep mode

Applicant:
Ricoh Company, Ltd.

Headword:
Print jobs interleaving/RICOH

Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step - yes, after amendments"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1739/08 - 3.5.05

D E C I S I O N
of the Technical Board of Appeal 3.5.05
of 9 November 2011

Appellant: Ricoh Company, Ltd.
3-6, Nakamagome 1-chome
Ohta-ku
Tokyo 143-8555 (JP)

Representative: Strehl Schübel-Hopf & Partner
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 10 March 2008 refusing European patent application No. 00125871.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: A. Ritzka
Members: P. Cretaine
G. Weiss

Summary of Facts and Submissions

I. This is an appeal against the decision of the examining division to refuse the European patent application No. 00 125 871.4. The decision was announced in oral proceedings held on 26 February 2008 and written reasons were dispatched on 10 March 2008.

II. The decision under appeal was based on the ground that the subject-matter of claims 1 to 9 according to a main request did not involve an inventive step having regard to the disclosure of

D1: US 5 930 551.

Three auxiliary requests were not admitted into the procedure because their claims were not filed in extenso but defined merely as being combinations of claims of the main request.

III. Notice of appeal was submitted on 9 May 2008 and the appeal fee was paid on 15 May 2008. The statement setting out the grounds of appeal was submitted on 21 July 2008. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 9 submitted with the statement setting out the grounds of appeal. Oral proceedings were requested on an auxiliary basis.

IV. A summons to oral proceedings to be held on 9 November 2011 was issued on 20 July 2011. In an annex accompanying the summons the board expressed the preliminary opinion that the subject-matter of the independent claims did not appear to fulfil the

requirement of inventive step (Article 56 EPC) in the light of the disclosure of D1. The board also gave its reasons why the appellant's arguments were not convincing.

V. With a letter dated 6 October 2011 the appellant submitted amended claims 1 to 9 as a main request to replace the previous claims, together with arguments in support of inventive step of the independent claims.

VI. Oral proceedings were held on 9 November 2011. During them, the appellant filed amended claims 1 to 9 as main request.

Independent claim 1 according to the main request reads as follows:

"1. A printing system including a printer (9) having a sleep mode, and a first printing data supply equipment (10) connected to said printer, said first printing data supply equipment comprising:

means (51) for generating a start-up job for releasing said printer from the sleep mode before executing a printing job;

means (52) for generating a start-up printing data set for releasing said printer from the sleep mode based on said start-up job;

means (53) for generating a printing data set based on said printing job;

and

spooling means (54) for storing said start-up printing data set and said printing data set on time series,

characterised in that

the spooling means (54) is adapted to store said printing data set after its generation has been completed, even if said printing data set includes plural pages,
said printing system further includes a second printing data supply equipment(11 to 13), and said first printing data supply equipment is adapted to transmit said start-up printing data set and said printing data set independently to said printer (9), so that another printing data set of another printing job from said second printing data supply equipment (11 to 13) may be transmitted to said printer after said start-up printing data set and before completion of generation of said printing data set."

Independent claim 5 according to the main request contains the same features as claim 1 but expressed in terms of a method claim.

VII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 9 filed as main request.

VIII. After deliberation on the basis of the written submissions and the appellant's arguments presented during the oral proceedings, the board announced its decision.

Reasons for the Decision

1. *Admissibility*

The appeal complies with the provisions of Articles 106 to 108 EPC (see Facts and Submissions, point III above), and is therefore admissible.

2. *Inventive step - Article 56 EPC 1973*

2.1 *Closest prior art*

All the prior art documents on file relate to a printing system comprising a printer and a single connected computer. Among these documents, D1 represents the closest prior art since it discloses, as a third embodiment, a computer sending a warm-up command to the printer before sending the data to be printed, both the command and the data being spooled in the computer before transmission.

More specifically, D1 discloses (see Figure 3), using the wording of the claims, a printing system comprising a printer (1, figure 3) having a sleep mode ("idle mode") and a printing data supply equipment ("host computer 400") connected to said printer. The printing data supply equipment comprises means ("driver 420") for generating a start-up printing data set ("warm-up command") for releasing the printer from the sleep mode ("idle mode") before executing a printing job ("printing a text document"). The printing data supply equipment ("host computer") also comprises application software (410, figure 3) for sending plural data pages to be printed to the driver which converts them to the

format required by the printer. Spooling means ("print spooler 430"), in the form of a buffer having a transmit pointer and an end pointer, receives successively the start-up printing data set ("warm-up command") and the converted data pages and stores them in time series in a file memory 460 (see from column 9, line 52 to column 10, line 21). The print spooler sends the start-up printing data set ("warm-up command") immediately to the printer when there is no data of a previous printing job waiting in memory (column 10, lines 33 to 42; figure 12, step S902). After that, the data to be printed is converted and sent to the spooler which sends it to the printer (Figure 12, step S906). The printing data supply equipment ("host computer") thus transmits the start-up printing data set ("warm-up command") and the data pages, each in turn, to the printer. The print spooler 430 together with the file memory 460 are adapted to store plural pages of printing data after completion of their generation.

2.2 The independent claims 1 and 5 define that the printing data supply equipment is able to transmit the start-up printing data set and the printing data "independently" to the printer. In the board's judgment, the term "independently", although it is vague per se, will be interpreted by the skilled person in the context of the claim and in the light of the description. The passage from page 13, line 22 to page 14, line 13 of the description as originally filed (corresponding to paragraph 34 of the published application) describes that the job for the printer starting data and the job for the printing data (i.e. the start-up job and the printing job, using the wording of the claims) are executed independently because the printing process

does not necessarily occur immediately after the warm-up process initiated by the first printing data supply equipment (see Figure 6). With respect to the transmission of the start-up printing data set and of the printing data set, the term "independently" has thus to be construed, in the light of the description, and in particular based on the above-mentioned passage, as meaning that the printing data set generated by the first printing data supply equipment is not automatically transmitted directly after the start-up printing data set generated by the same equipment.

2.3 The differences between the subject-matter of the independent claims 1 and 5 and the disclosure of D1 are thus the following:

- the printing system includes a second printing data supply equipment generating printing data from a printing job and sending said printing data to the printer, whereas in D1 the printer receives printing data from a single printing data supply equipment ("host computer");

- the printing data of the second printing data supply equipment may be transmitted to the printer after the start-up printing data issued by the first equipment but before completion of generation of the printing data of the first equipment.

The technical effects of these differences are that the printer is shared by two computers and is adapted to first print a printing job sent by the second computer even if the warm-up command has been issued by the first computer.

The objective technical problem may thus be formulated as how to upscale the printing system of D1 for a computer network while optimising the printer resources.

It was common knowledge at the priority date of the present application (30 November 1999) to connect several host computers to a single printer in order to share the printer resources. Starting from D1 and trying to solve the above mentioned problem, the skilled person would as a matter of course consider the duplication of the host computer 400 of D1 in order to build a printing system comprising two host computers connected to a single printer. By connecting two host computers 400, as described in D1, to a single printer 1, as described in D1, the skilled person will connect the host interface 201 of the printer to the port drivers 450 of the two host computers. Figure 12 and the corresponding passage from column 9, line 52 to column 10, line 55 describe the procedure followed by the host computer in printing a document. The sending of data between the port driver of the host computer and the host interface of the printer is controlled by the print spooler 430 of the host computer (see column 10, lines 26-27). In particular, the print spooler ensures that one document is printed after the other and that no data from a second document is spooled and transmitted to the printer before the printing of the first document has been completed (see column 10, lines 43 to 52).

The appellant plausibly argued that Figure 12 illustrates a continuous process wherein all the pages of a single document are printed within one

communication session. This communication session is established when the printer receives a StartDoc request from the host computer (step S901, Figure 12), comprises the sending of a warm-up command to the printer, and is released when the printer sends an End-Doc notification to the host computer (step S913, Figure 12). During said communication session, it is foreseen that no other document sent by the host computer could be printed (see column 10, lines 48 to 52). The skilled person, when adding a second host computer to the printing system, would follow the teaching of D1 in respect of the communication protocol between printer and computer. He would thus design a printing system adapted to establish a single dedicated communication session between the printer and a host computer at a time, whereby the document pages sent by this computer are immediately transmitted after the warm-up command sent by the same computer. The skilled person, starting from D1 and using its routine development capacities, would thus not arrive at a printing system according to claims 1 and 5, wherein, due to the independent transmissions of the warm-up command and the document pages of a host computer, pages sent by the second host computer could be printed before pages sent by the first host computer which issued the warm-up command.

Instead of connecting two host computers 400, as described in D1 (see Figure 3), to the host interface 201 of printer 1 (see Figure 1) in order to build a printing system, the skilled person, motivated by the teaching of D1 on column 4, lines 64 to 66, that the application software 410 comprises several programs generating printing data, may consider to have two host

computers sharing the same printer driver 420. However, it is also clear from D1, column 10, lines 27 to 52, that the documents issued by the programs of the application software 410 are transmitted immediately after their associated warm-up command, in the order they are received by the printer driver, without any interleaving possibility as defined in claims 1 and 5. Therefore, even in that case, the skilled person would have no motivation to depart from the teaching of D1 and to transmit independently a warm-up command and its corresponding document.

Moreover, the distinguishing features of claims 1 and 5 ensure an efficient use of the printer resources by enabling a second printing job of the second equipment to be executed before a first printing job of the first equipment having warmed-up the printer, in case the second printing job needs less time to be generated and spooled than the first printing job.

In view of the foregoing the board judges that the subject-matter of independent claims 1 and 5 is not rendered obvious by the disclosure of D1. Thus, independent claims 1 and 5 meet the requirements of Article 56 EPC 1973, having regard to the prior art documents on file. Claims 2 to 4 and 6 to 9 are dependent claims and as such also meet the requirements of Article 56 EPC 1973.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to grant a patent in the following version:
   - claims 1 to 9 filed at the oral proceedings on 9 November 2011;
   - description
     pages 1, 4, 7 to 28 as originally filed;
     2, 3, 5, 6 as filed with letter of 10 February 2006;
   - drawings sheets 1/9-9/9 as originally filed.

The Registrar: The Chair:

K. Götz A. Ritzka

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Case Number: T 1739/08 - 3.5.05

D E C I S I O N
of 8 February 2012 correcting errors in the decision of the Technical Board of Appeal 3.5.05 of 9 November 2011

Appellant: Ricoh Company, Ltd.
3-6, Nakamagome 1-chome
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Tokyo 143-8555 (JP)

Representative: Strehl Schübel-Hopf & Partner
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D-80538 München (DE)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 10 March 2008 refusing European patent application No. 00125871.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: A. Ritzka
Members: P. Cretaine
G. Weiss

In application of Rule 140 EPC, the decision of the Technical Board of Appeal given on 9 November 2011 is hereby corrected as follows:

on page 10, **Order**, point 2, the paragraph:

"- description
pages 1, 4, 7 to 28 as originally filed;
2, 3, 5, 6 as filed with letter of
10 February 2006"

is replaced by:

"- description
pages 1, 4, 7 to 21 as originally filed;
2, 3, 5, 6 as filed with letter of
10 February 2006".

The Registrar The Chair:

K. Götz A. Ritzka