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Datasheet for the decision of 19 October 2007

Case Number: T 1050/05 - 3.5.02

Application Number: 94101532.3

Publication Number: 0619563

IPC: G07B 17/00

Language of the proceedings: EN

Title of invention:
Transaction system with modular printer

Patentee:
Pitney Bowes, Inc.

Opponents:
Neopost Ltd
Francotyp-Postalia Aktiengesellschaft & Co. KG

Headword:
-

Relevant legal provisions:
EPC Art. 76(1), 123(2)

Keyword:
"Added subject-matter - yes (all requests)"

Decisions cited:
-

Catchword:
-

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Case Number: T 1050/05 - 3.5.02

D E C I S I O N
of the Technical Board of Appeal 3.5.02
of 19 October 2007

Appellant 01: (Opponent 01)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 18 July 2005 rejecting the opposition filed against European patent No. 0619563 pursuant to Article 102(2) EPC.

Composition of the Board:

Chairman: M. Ruggiu
Members: M. Rognoni
E. Lachacinski

Summary of Facts and Submissions

I. Both the opponent 01 (appellant 01) and the opponent 02 (appellant 02) appealed against the decision of the opposition division rejecting the oppositions filed against the European patent No. 0 619 563.

II. In the decision under appeal, the opposition division held, *inter alia,* that the claims of the patent as granted met the requirements of Article 76(1) EPC, because their subject-matter could be directly and unambiguously derived by the skilled person from the disclosure of the parent application WO 88/01818 as originally filed. Furthermore, the subject-matter of claims 1, 6 and 12 as granted also met the requirements of Article 52(1) EPC with respect to inventive step (Article 56 EPC).

III. In a communication dated 17 July 2007 accompanying the summons to attend oral proceedings, the Board addressed some questions to be discussed concerning, *inter alia,* the requirements of Article 76(1) EPC.

IV. In reply to the summons to oral proceedings, the representative of the appellant 02 informed the Board with a letter dated 26 July 2007, that the appellant 02 would not attend the oral proceedings. The requests filed on 8 August 2005 were however maintained.

V. In reply to the summons to oral proceedings, the representative of the appellant 01 informed the Board with a letter dated 1 October 2007 that also the appellant 01 would not attend the oral proceedings.

VI. The oral proceedings before the Board took place on 19 October 2007 in the absence of the appellants 01 and 02.

VII. The appellant 01 requested with the notice of appeal dated 15 September 2005 that the decision under appeal be set aside and the patent be revoked.

The appellant 02 requested with the notice of appeal dated 8 August 2005 that the decision under appeal be set aside and the patent be revoked.

VIII. The patent proprietor (respondent) requested that the appeals be dismissed (main request), or that the patent be maintained in amended form either on the basis of claims 1 to 12 filed as first auxiliary request with a letter dated 24 March 2006 or on the basis of claims 1 to 6 filed as second auxiliary request with the same letter.

IX. Claim 1 of the patent as granted reads as follows:

"A modular printer for a transaction terminal (20) which has an input section (31) for inputting a request for printing a value indicia and an operating section (30) for enabling the terminal to execute the printing of the requested value indicia on an article, characterized in that:

the modular printer (40) includes a printhead and a dedicated microprocessor (41) for controlling the printhead physically permanently bonded together such that the printhead microprocessor (41) cannot be

physically tampered with without disabling the printhead;
the modular printer is removably mounted in the terminal (20); and
the modular printer includes an interface coupled to the printhead microprocessor (41) for establishing an operative data path connection to the terminal operating section (30) to receive a print instruction signal from the terminal (20)."

Claims 2 to 5 are dependent on claim 1.

Claim 6 of the granted patent reads as follows:

"A transaction terminal (20) comprising:

an input section (31) for inputting a request for printing a value indicia;
an operating section (30) for enabling the terminal to execute the printing of the requested value indicia on an article; and characterized by a modular printer removably mounted in the terminal (20) and including a printhead and a dedicated microprocessor (41) for controlling the printhead physically permanently bonded together such that the printhead microprocessor (41) cannot be physically tampered with without disabling the printhead, and an interface coupled to the printhead microprocessor (41) for establishing an operative data path connection to the terminal operating section (30) to receive a print instruction signal therefrom."

Claims 7 to 11 are dependent on claim 6.

Claim 12 of the patent as granted reads as follows:

"Use of a modular printer as claimed in any one of Claims 1 to 5 in a transaction terminal."

Claim 1 according to the first auxiliary request differs from claim 1 of the main request in that the feature "the modular printer is removably mounted in the terminal" recited in the latter is replaced by "the modular printer is a separate element in the terminal". In claim 6 of the first auxiliary request the expression "a modular printer removably mounted in the terminal" is replaced by "a modular printer which is a separate element in the terminal".

The claims 1 to 5 of the second auxiliary request correspond to claims 1 to 5 of the first auxiliary request.

X. The arguments submitted in writing by the appellant 01 may be summarised as follows:

The claims of the granted patent comprised some keywords which were not in the parent application. They either were synonyms of originally disclosed terms, and thus superfluous and redundant, or introduced new subject-matter. In the latter case, the divisional application, on which the contested patent was based, violated Article 76(1) EPC.

XI. The arguments submitted in writing by the appellant 02 and still relevant to the present decision may be summarised as follows:

Claim 1 of the patent in suit, granted on the basis of a divisional application of the international application WO 88/01818, contained the following features which were not disclosed in the earlier application:

- 'modular printer',
- 'the modular printer is removably mounted',
- 'the modular printer includes an interface'.

According to the opposition division, the person skilled in the art, reading the original international application in an attempt to make technical sense out of it, would regard the disputed features as disclosed. If this were the case, however, it should be asked why the patent proprietor had decided to include such features in claim 1 of the divisional application, although they were not present in the description or in the claims of the earlier application. This nourished the suspicion that the patent proprietor had made such changes in order to limit the claimed invention with respect to the state of the art. This however was only admissible if disclosed features were employed.

The term 'modular' was generally used to define prefabricated self-contained units which could be connected together into bigger units without having to interfere with the single units. A modular construction often implied that the modules were removably mounted in a bigger apparatus. In fact, every component of a technical apparatus was ultimately 'removably mounted'. The question was what means had to be used for removing a particular unit from the apparatus in which it was mounted. However, it was customary to speak of a

module, which was removably mounted in an apparatus, when it was possible to remove the modular unit without damaging the apparatus or the unit itself. In the present case, the features 'modular' and 'removably mounted' were supposed to mean that the claimed printhead was a self-contained unit, which could be easily mounted in the terminal and easily replaced. Although this could be generally regarded as advantageous and was also commonly done, it was not disclosed in the earlier application. In fact, the originally disclosed system could perfectly work if the single components of the printhead in the terminal were mounted without forming a 'module' and also without being easily removable from the terminal. There was therefore no compelling case for arguing that the person skilled in the art would necessarily read the contested features into the earlier application as originally filed.

The same could be said for the feature of claim 1 relating to the fact that the printhead had an interface coupled to the printhead microprocessor. It was evident to the person skilled in the art that there had to be a connection between the microprocessor of the printhead and the microprocessor of the terminal if there was an exchange of data between them. According to the wording of claim 1, the interface was manifestly an active unit which was part of the modular printhead and coupled within the printhead with the printhead microprocessor. Evidently, the applicant had tried with this additional feature to underline the modular character of the printhead and the fact that this unit was easily replaceable. This solution, however, was not derivable from the earlier application. Apart from the

electrical connection required for the exchange of data between the microprocessors, there was no need to provide the printhead with a specific interface or to integrate it in the modular printhead. If present, an interface could be placed outside the modular printhead. In summary, the additional features, *i.e.* the provision of a modular printer which was removably mounted and comprised an interface, limited the claimed printer in a way that was not originally disclosed. On the other hand, by deleting undisclosed features, the subject-matter of the claim 1 of the patent in suit would be amended in such a way as to extend the protection conferred. Hence, the patent had to be revoked pursuant to Article 76(1) or Article 123(3) EPC.

XII. The respondent's arguments relevant to the present decision can be summarised as follows:

As regards the question whether the subject-matter of the contested patent extended beyond the content of the application as originally filed, which in this case meant the content of the PCT application published as WO 88/01818, it was submitted that this document had to be read through the eyes of a person skilled in the art. Such a person would recognize that the printhead of a printer as shown in the parent application had to be a removable component, since such items had a limited life, were expandable and were intended to be replaced at intervals. Accordingly, when a person skilled in the art read in the original document that the printer microprocessor was physically permanently bonded in the printing section, and more particularly bonded to the printhead, he deduced that the

microprocessor would also be a removable component. Moreover, the skilled person also deduced immediately that a connector of some kind had to be provided in order to enable the microprocessor of the printer to be connected to the remaining components of the terminal. Therefore, for a person skilled in the art, on the basis of the disclosure of the original document, it was immediately clear that the printer consisted of a removable unit comprising the printhead, the dedicated microprocessor and a connector. This interpretation was clearly supported by the description and the drawings of the originally filed application. In particular, Figure 1 showed an item 40, *i.e.* a printer, which comprised a printhead, a printer microprocessor and a memory. On page 15, line 26 to page 16, line 11 of the description, it was specified that a handshake procedure was preferably performed with a secure microprocessor embedded in the actual value dispensing section of the terminal which was a separate element in the terminal. The microprocessor was made physically secure, such as by embedding it in epoxy, so that any attempt to tamper with it would result in rendering the printhead inoperative. Claim 12 of the application as originally filed also specified that the printer microprocessor was physically permanently bonded in the printing section. The fact that the printer section constituted a separate element with an embedded microprocessor was supported by the disclosure on page 16, line 24 to page 17, line 14, whereas on page 20, lines 7 to 13, it was pointed out that the card and the value dispensing section could each remain autonomous and protected against counterfeiting or fraudulent use even if the security of the other had been breached. Since they were autonomous, the cards

and terminals could be distributed widely with a low risk of breach of the system without the need for strict access controls.
As to the feature 'removably mounted', it was pointed out on page 16, lines 4 and 5, that the value dispensing section was a separate element in the terminal. The person skilled in the art would consider this as meaning that the printhead was removable.
As to the feature that the printer included an 'interface', this was a necessary consequence of the fact that the printhead was an independent unit and that, in order to establish the communication between the terminal and this unit, some kind of connection, *i.e.* an 'interface', had to be provided. Furthermore, the term 'interface' was used in the description where it was specified (see page 16, lines 17 to 21) that the terminal microprocessor 30 controlled the interface with the card and the operation of the various parts of the terminal including, *inter alia*, the value dispensing section of the terminal.
Claim 11 of WO 88/01818 referred to a data communication path between the user card microprocessor and the printer microprocessor. Such data communication path was in effect an interface.

In summary, there could be no doubt that the claims of the contested patent were adequately supported by the original application documents and that the divisional application, on which the contested patent was based, satisfied the requirements of Article 76(1) EPC.

In claim 1 of the first auxiliary request the phrase 'removably mounted' was replaced by the expression 'separate component', in order to overcome the

objection raised in relation to the phrase 'the modular printer is removably mounted in the terminal'.

In the second auxiliary request, granted claims 6 to 11 were removed. As claim 1 was directed to the modular printer, and not to the transaction terminal as a whole, the requirement that the modular printer was "removably mounted in the terminal" had no limiting effect. Accordingly, at least in claim 1, this phrase could be amended without having any effect on the scope of protection.

Reasons for the Decision

1. The appeal is admissible.

Respondent's main request

2.1 The patent in suit is based on a divisional application of an earlier International patent application (WO 88/01818 hereafter referred to as 'parent application') and thus has to comply with the provisions laid down in Article 76 (1) EPC.

2.2 The appellants 01 and 02 have, *inter alia,* based their requests for the revocation of the patent in suit on the ground that the claim 1 contained subject-matter extending beyond the content of the parent application (Articles 76(1) and 100(c) EPC).

In particular, the appellant 02 has submitted that the following features recited in claim 1 were not disclosed in the parent application:

- modular printer,
- the modular printer is removably mounted,
- the modular printer includes an interface.

3.1 The parent application is concerned with an automated transaction system which employs a user card having a microprocessor for executing secure transactions. The transactions involve an article or item of value which is dispensed from a terminal. In particular, the parent application relates to a postage transaction system in which a postage account is maintained within the microprocessor card and is used in transactions with postage printing or metering terminals.

The system involves in particular off-line transactions between a user with an authorised card and a terminal not connected to a central account system (see parent application, page 2, second paragraph). Consequently, a *"principal object of the invention is to provide an interactive card/terminal system in which the card and the terminal each have a security feature which prevents the completion of a requested transaction unless a secure handshake recognition procedure is mutually executed between the card and the terminal such that they each recognize the other as authorized to execute a transaction"* (parent application page 5, lines 12 to 18).

In other words, the gist of the invention disclosed in the parent application consists essentially in using a card with a secure, resident microprocessor which operates to confirm that a requested transaction is authorised and then initiate an interactive handshake

recognition procedure with a *"resident microprocessor in the value dispensing section of an automated terminal"* (parent application page 6, lines 10 to 11). In a particular application relating to postage meters (parent application, page 7, lines 13 to 15), the *"dispensing section"* of the terminal is *"a print head with a secure microprocessor which interacts with the card microprocessor"*. Thus, the required postage transaction is essentially carried out by two microprocessors, one located in the user card and the other in the printhead, which communicate with each other.

3.2 With reference to a *"Postage Metering Terminal",* the parent application specifies on page 15 (last paragraph) that the card microprocessor MPU 60 executes an internally stored program (firmware) for checking whether a requested transaction is authorised, and for performing a secure handshake recognition procedure with a microprocessor in the terminal.

The procedure is *"performed with a secure microprocessor embedded in the actual value dispensing section of the terminal. The value dispensing section is a separate element in the terminal, and its microprocessor is made physically secure, such as by embedding it in epoxy, so that any attempt to tamper with it would result in rendering the value dispensing section inoperative. For the postal transaction terminal of the invention, the microprocessor is embedded in the printer unit which prints the postmark"* (parent application: page 16, lines 2 to 11, emphasis added).

On page 17, lines 6 to 14, of the parent application, it is further specified that the MPU 41, namely the microprocessor of the printhead, is *"formed integrally with the print head 42, such as by embedding in epoxy or the like, so that it cannot be physically accessed without destroying the print head. Thus, according to the invention, the print head 42 of the postage metering terminal 20 can only be operated through the MPU 41, and will print a postmark only when the handshake recognition procedure and a postmark print command have been executed between the card MPU and the printer MPU 41."*

The *"card and the value dispensing section therefore can each remain autonomous and protected against counterfeiting or fraudulent use even if the security of the other has been breached. Since they are autonomous, the cards and terminals can be distributed widely with a low risk of breach of the system and without the need for strict access controls"* (parent application: page 20, lines 7 to 13).

3.3 In summary, the parent application explicitly discloses a printhead and a dedicated microprocessor for controlling the printhead which are physically permanently bonded together.

The fact that the *"value dispensing section"* (*i.e.* the printhead) is defined as a *"separate element"* with an embedded microprocessor might be understood by the person skilled in the art as an indication that the printer could be built as a standardized and easily replaceable unit, *i.e.* as a *"module"*. However, the skilled reader does not find in the parent application

any explicit features that would clearly and unambiguously point to a modular construction of the printhead, such as means for correctly positioning and holding the printhead within the terminal, as shown for instance in connection with the user card (see insertion slot 11 in Figure 1).

3.4 Hence, the features *"modular"* printer and *"removably mounted"* are supported by the parent application only as far as they reflect the trivial fact that the printer is a separate element within the terminal 20 and that, as a component part of the terminal, it can be removed from it.

4.1 Claim 1 of the contested patent further includes the following wording which is not explicitly disclosed in the parent application:

"an interface coupled to the printhead microprocessor (41) for establishing an operative data path connection to the terminal operating section (30) to receive a print instruction signal from the terminal (20)".

4.2 According to the parent application (Figure 2a, page 20, line 22 to page 21, line 1), *"when the "Print" key signal is received by the terminal MPU 30, the latter opens a channel 61 of communication between the card MPU 60 and the printer MPU 41. A "commence" signal and the amount of the requested transaction, i. e. postage, is then sent from the terminal MPU 30 to the card MPU 60, and a similar "commence" signal to the printer MPU 41, in order to prepare the way for the handshake procedure."*

After the handshake procedure has been successfully completed, the card MPU debits the postage amount from the card balance, and then sends a print command and the postage amount to the printer MPU (parent application, page 22, lines 1 to 7).

Thus, the parent application discloses a system in which a direct data communication path is established between the MPU embedded in the printhead and the MPU of the user card via a communication channel controlled by the terminal MPU in response to a postage printing request (see claim 11 of the parent application).

4.3 The term *"interface"* occurs in the description of the parent application only in relation to the *"user card"*. The corresponding passage on page 16, lines 17 to 21, reads as follows:

"The terminal MPU 30 controls the interface with the card and the operation of the various parts of the terminal, including a keyboard 31, a display 32, such as an LCD, and a postmark printer 40, which is the value dispensing section of the terminal."

Hence, the parent application specifies that the terminal MPU controls the interface with the card, while it controls the operation of the printer and of the other component parts of the terminal. As the card is meant to be used with different transaction systems, it must have some kind of standardized interface suitable for communication with different terminals. However, in the embodiment shown in the parent application, the printer is an integral, albeit separate, element of the terminal and thus requires

only an electrical connection between its embedded microprocessor and the terminal MPU. As neither the description nor the figures of the parent application disclose any details of such connection, it must be assumed that its nature is immaterial for the operation of the system according to the invention.

4.4 It could be argued, as pointed out by the respondent, that the expression *"interface coupled to the printhead microprocessor"* simply referred to the connection of the printer with the terminal's microprocessor. However, claim 1 further specifies that the interface included in the modular printer is *"for establishing an operative data path connection to the terminal operating section (30) to receive a print instruction signal from the terminal (20)"*. This function attributed by the claim to the interface seems to be directed to underscoring the modular nature of the printer as a standardized and self-contained unit capable of communicating with the MPU terminal in the same way as a user card when inserted in the terminal. Thus, within the context of the claimed subject-matter, "*interface*" cannot only define a simple electrical connection.

Furthermore, claim 1 of the patent in suit specifies that an interface coupled to the printhead microprocessor is included in the modular printer. However, if some kind of interface between the printer and the terminal MPU were desired, it would not be necessary to integrate it into the printhead.

4.5 In summary, the term *"interface*" recited in claim 1 of the patent as granted covers embodiments which go

beyond the mere electrical connection between the printhead microprocessor and the terminal microprocessor and thus involves features which cannot be derived directly and unambiguously from the disclosure in the parent application (Articles 76(1) and 100(c) EPC).

Respondent's first and second auxiliary requests

5.1 Claim 1 according to the first and the second auxiliary requests differs from claim 1 of the main request only in that the feature *"the modular printer is removably mounted"* is replaced by "*the modular printer is a separate element".*

5.2 As claim 1 of both auxiliary requests includes the same feature relating to the *"interface"* of the modular printer recited in claim 1 of the granted patent, for the reasons given above, it covers subject-matter which extends beyond the content of the parent application (Article 76(1) EPC).

6. In the result, the Board considers that the claims 1 of the respondent's requests contain subject-matter which is not clearly and unambiguously derivable from the parent application as originally filed. As neither claim 1 of the granted patent nor claims 1 of the auxiliary requests 1 and 2 comply with the requirements of Article 76(1) EPC with respect to the parent application, the patent in suit has to be revoked (Article 100(c) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

U. Bultmann M. Ruggiu