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**Datasheet for the decision
of 27 January 2015**

Case Number: T 1040/10 - 3.4.03

Application Number: 00309531.2

Publication Number: 1098277

IPC: G07G1/00, A47F9/04

Language of the proceedings: EN

Title of invention:
Apparatus and method for operating convertable checkout system

Applicant:
NCR International, Inc.

Headword:

Relevant legal provisions:
EPC 1973 Art. 56

Keyword:
Inventive step - main request (yes)

Decisions cited:

Catchword:



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Case Number: T 1040/10 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 27 January 2015

Appellant: NCR International, Inc.
(Applicant) 3097 Satellite Blvd.
Duluth, GA 30096 (US)

Representative: MacLeod, Roderick William
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 1 February 2010
refusing European patent application No.
00309531.2 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Eliasson
Members: V. L. P. Frank
T. Karamanli

Summary of Facts and Submissions

I. This is an appeal against the refusal of European patent application No. 00 309 531 for lack of inventive step (Article 56 EPC).

II. The appellant requested in writing that the decision under appeal be set aside and that a patent be granted on the basis of the following documents:

Claim 1: pages 134, 136 filed as main request with the letter dated 13 November 2014,
page 135 filed as main request with the letter dated 17 November 2014,

Claim 2: filed as main request with the letter dated 13 November 2014,

or alternatively on the basis of claims 1 and 2 filed as auxiliary request with the statement of grounds of appeal;

Description: pages 1-3, 6, 7, 9-133 as originally filed,
pages 4, 5 filed with the statement of grounds of appeal,
page 8 filed with letter dated 10 May 2007;

Drawings: sheets 1-31 as originally filed.

III. Claims 1 and 2 of the main request read as follows (the amendments with respect to the version refused by the examining division were highlighted by the board):

"1. A method of operating a checkout terminal (10), having (i) a customer side (40), and (ii) a personnel side (42) which is opposite said customer side (40),

comprising the steps of:

operating said checkout terminal (10) so as to perform an assisted checkout transaction in which retail personnel enters a first item for purchase of a first customer into said checkout terminal (10) during a first time period, wherein during said step of operating said checkout terminal (10) so as to perform said assisted checkout transaction (i) said retail personnel is positioned on said personnel side (42) of said checkout terminal (10), and (ii) said **first** customer is positioned on said customer side (40) of said checkout terminal (10); and

operating said checkout terminal (10) so as to perform a self-service checkout transaction in which a second customer enters a second item for purchase of said second customer into said checkout terminal (10) during a second time period, wherein during said step of operating said checkout terminal (10) so as to perform said self-**service** checkout transaction said second customer is positioned on said customer side (40) of said checkout terminal (10), wherein;

said checkout terminal (10) further includes an input belt mechanism (20) for transporting said first item for purchase and said second item for purchase;

said input belt mechanism (20) is interposed between said personnel side (42) of said checkout terminal (10) and said customer side (40) of said checkout terminal (10);

said step of operating said checkout terminal (10) so as to perform said assisted checkout transaction includes the step of operating said input belt mechanism (20) so as to advance said first item for purchase toward said retail personnel with said **input** belt mechanism (20), wherein during said step of operating said input belt mechanism (20) so as to advance said first item for purchase, (i) said retail

personnel is positioned on said personnel side (42) of said checkout terminal (10), and (ii) said first customer is positioned on said customer side (40) of said ~~customer~~ checkout terminal (10); and

said step of operating said checkout terminal (10) so as to perform said self-service checkout transaction includes the step of operating said input belt mechanism (20) so as to advance said second item for purchase toward said **second** customer with said **input** belt mechanism (20), wherein during said step of operating said input belt mechanism (20) so as to advance said second item for purchase, said second customer is positioned on said customer side (40) of said checkout terminal (10); wherein

said checkout terminal (10) further has a scanner (24) interposed between said customer side (40) of said checkout terminal (10) and said personnel side (42) of said checkout terminal (10);

said step of operating said checkout terminal (10) so as to perform said assisted checkout transaction includes the step of operating said scanner (24) so as to allow said retail personnel to scan said first item for purchase of said first customer with said scanner (24), wherein during said step of operating said scanner (24) so as to allow **said retail personnel to** scan said first item for purchase, (i) said retail personnel is positioned on said personnel side (42) of said checkout terminal (10), and (ii) said first customer is positioned on said customer side (40) of said checkout terminal (10); and

said step of operating said checkout terminal (10) so as to perform said self-service checkout transaction includes the step of operating said scanner (24) so as to allow said **second** customer to scan said second item for purchase of said second customer with said scanner (24), wherein during said step of operating said

scanner (24) to allow said **second** customer to scan said second item for purchase, said second customer is positioned on said customer side (40) of said checkout terminal (10); wherein

said checkout terminal (10) further includes a terminal having a base **(34)** having a horizontal upper surface; and

said scanner (24) is disposed in a flush mount orientation with said horizontal upper surface, whereby said scanner (24) is accessible to (i) said retail personnel during said first time period, and (ii) said **second** customer during said second time period; characterised in that

said scanner (24) is slidably secured to said terminal base (34) so as to be positionable between an assisted position **adjacent the personnel side** and a self-service position **adjacent the customer side**, further comprising the steps of: operating said scanner (24) so as to allow said retail personnel to scan said first item for purchase; and

sliding said scanner (24) from said assisted position to said self-service position prior to said step of operating said scanner (24) so as to allow said **second** customer to scan said second item for purchase."

"2. A checkout terminal (10), comprising:

a terminal base (34) having (i) a customer side (40), and (ii) a personnel side (42) which is opposite the customer side (40); and

a code entry device (24) secured to said terminal base (34), wherein;

(i) said code entry device (24) is operable in (a) an assisted mode of operation in which a first item **for** ~~form~~ purchase is entered with said code entry device (24) by retail personnel, and (b) a self-service mode of operation in which a second item for purchase is

entered with said code entry device (24) by a customer;

(ii) during operation of said code entry device (24) in said personnel mode of operation (a) said retail personnel is positioned on said personnel side (42) of said terminal base (34), and (b) said customer is positioned on said customer side (40) of said terminal base (34); and

(iii) during operation of said code entry device (24) in said self-service mode of operation said customer is positioned on said customer side (40) of said terminal base (34),

the checkout terminal (10) further comprising an input belt mechanism (20) for transporting said first item for purchase and said second item for purchase, wherein said input belt mechanism (20) is interposed between said personnel side (42) of said checkout terminal (10) and said customer side (40) of said checkout terminal (10); wherein

said code entry device (24) is interposed between said personnel ~~said~~ **side** of said terminal base (34) and said customer side (40) of said terminal base (34); and

said code entry device (24) includes a scanner (24) for scanning a first product identification code associated with said first item for purchase and a second product identification code associated with said second item for purchase; wherein

said terminal base (34) has a horizontal upper surface, and said scanner (24) is disposed in a flush mount orientation with said horizontal upper surface, whereby said scanner (24) is accessible to (i) said retail personnel when said scanner (24) is operated in an assisted mode of operation, and (ii) said customer when said scanner (24) is operated in said self-service mode of operation; characterised in that

said scanner (24) is slidably mounted to said terminal base (34) so as to be positionable between an

assisted position adjacent the personnel side and a self-service position adjacent the customer side;

said scanner (24) is positioned in said assisted position when said scanner (24) is operated in said assisted mode of operation; and

said scanner (24) is positioned in said self-service position when said scanner (24) is operated in said self-service mode of operation."

The claims of the auxiliary request are not relevant to this decision.

IV. The following documents are mentioned in this decision:

D2 = JP 09 056548 A and the corresponding Patent Abstracts of Japan

D4 = US 5 412 191 A.

V. The examining division argued essentially as follows:

- Document D4 represented the closest prior art and disclosed all the features of the preamble of claims 1 and 2.
- The method of claim 1 differed from the conventional method of operating a checkout terminal disclosed in D4 in that the scanner could be slid between an assisted and a self-service position allowing the items for purchase to be scanned, respectively, by the retail personnel or the customer.
- The objective technical problem to be solved could thus be considered as allowing for item-entry in a more ergonomic fashion.

- As D4 contained indications on ergonomical design, the person skilled in the art would consider further ergonomic solutions provided in the field and look into possibilities for making the scanner of D4 more easily accessible for use by two persons. One of the possible solutions would be that provided by document D2 which dealt with improved ergonomics in the field of checkout terminal design and disclosed a checkout terminal with a scanner assembly mounted flush with the horizontal terminal base, which could be slid between two positions so as to facilitate use by either of the two persons operating the terminal.

- Claim 2 related to the checkout terminal equipped to perform the method of claim 1. Therefore a similar reasoning as above applied.

VI. The appellant applicant argued essentially as follows:

- It was not disputed that D4 constituted the closest prior art and that the objective technical problem solved by the present invention, as claimed, was to allow item entry by either a customer or checkout personnel at a checkout terminal in a more ergonomic fashion.

- The sliding of the scanner from the assisted position to the self-service position, which formed the characterising portion of claims 1 and 2 of the main request, involved moving the scanner from the personnel side to the customer side in order to maintain the ergonomic efficiency of the checkout terminal in both the assisted and self-service positions. This contrasted with the

teaching of D2 in which the sliding of the scanner was effected along a longitudinal axis of the checkout terminal to allow the use of the scanner by a single clerk or by two clerks. Thus, the purpose of D2 was to allow the use of a scanner by either a single clerk, or by two clerks, located on the same side of the checkout terminal. D2 did not relate to maintaining ergonomic efficiency of a checkout terminal when used by both checkout personnel and a customer, each of whom was located on respective opposite sides of the checkout terminal. Rather, D2 related to optimising the configuration of an assisted checkout terminal so that the checkout could be done by one or two clerks to allow improved throughput of goods through the checkout terminal. D2 did not mention configuring the scanner for use by a customer at all, it was completely silent in this regard. Accordingly, D2 did not teach, or suggest, the sliding of a scanner from one side of the checkout terminal to the other, ie transverse to the direction of travel of the input belt mechanism, in order to facilitate the use of the checkout terminal by both personnel and customers alike.

- Therefore the combination of documents D4 and D2 did not render the sliding of a scanner between a customer side and a personnel side obvious.

Reasons for the Decision

1. The appeal is admissible.
2. *Amendments*

- 2.1 Claims 1 and 2 of the main request are, respectively, a combination of originally filed claims 1-5 and 6-11.

The specification in the characterising portion of both claims that the scanner 24 is in the assisted position **adjacent the personnel side** and in the self-service position **adjacent the customer side** can be derived from Figures 1, 4, 5 and 8

Hence the board is satisfied that the requirements of Article 123(2) EPC are fulfilled.

- 2.2 The claims were amended in order to solve inconsistencies in their wording. Hence the board considers that claims 1 and 2 are now clear (Article 84 EPC 1973).

3. *Inventive step (Article 56 EPC 1973)*

- 3.1 The only remaining issue is that of inventive step.

- 3.2 It is undisputed that document D4 represents the closest prior art and that it discloses a method of operating a checkout terminal as well as a checkout terminal having all the features of the preambles of claims 1 and 2, respectively (see D4, column 6, line 24 to column 8, line 36, Figures 3-5).

- 3.3 D4 discloses a checkout terminal 100 comprising a fixed first service part 108 and a movable second service part 126. The first service part comprises a good registration area 100 in which an optical scanner bar-code reader is installed. The second service part comprises a screen 136, a data input device 138 and an

output opening 140 for payment receipts (see D4, column 6, lines 28-66; Figures 3-5).

The second service part 126 can be rotated between a self-service and an assisted position so that it faces the customer or the retail clerk, respectively. The first service part 108, comprising the scanner, is however fixed and is not changed or moved when switching the checkout terminal between the self-service mode and the assisted mode (Figures 3 and 4).

- 3.4 It is common ground that the objective technical problem addressed by the present invention can be formulated as to allow item entry by either a customer or the retail personnel at a checkout terminal in a more ergonomic fashion.
- 3.5 The examining division argued that it would have been obvious to the skilled person to adapt the scanner of D4 so as to be slidable between a position close to the customer and a position close to the retail clerk when in the self-service and assisted mode, respectively, since D2 disclosed the use of a slidable scanner. In particular, D2 disclosed that the sliding of the scanner facilitated the use by either of the two persons, ie the retail store clerks, operating the terminal.
- 3.6 Document D2 discloses a checkout terminal that can be operated by one or two clerks (Abstract). When the terminal is operated in the "one-clerk" modus the scanner 4 is slid close to the cash register/data terminal 5, 6 so that the single clerk may operate both devices easily (see Figure 8). In the "two-clerk" modus the scanner is slid as far away from the cash register as possible in order to give the two clerks sufficient

room, ie for ergonomic reasons, to operate the scanner and the cash register independently (Figure 7). It does not disclose however, as argued by the examining division, that the scanner can be operated by either one of the two clerks in the two-clerk modus. The scanner is only moved from one position to the other when the mode of operation is changed.

3.7 The board furthermore agrees with the appellant that document D2 is only concerned with the use of the checkout terminal by the retail clerks and that the scanner slides in a longitudinal direction, ie in the direction of movement of merchandise. D2 is not concerned with a customer using the checkout terminal in a self-service mode. In fact no self-service mode at all is mentioned in D2. A direct combination of documents D4 and D2 would hence result in a checkout terminal having a self-service mode as disclosed in D4 and an assisted mode in which the checkout terminal could be operated by one or two clerks as in D2.

3.8 Although it may be tempting to deduce from D2 a generalised teaching that the scanner can be slid between different positions as needed and then reduce this generalised teaching to arrive at the claimed invention, this would be the result from an *ex-post facto* approach. There are in fact no pointers in D2 to that effect.

Applying the so called "*could-would approach*" illustrates this even clearer. There are no suggestions in D2 that would induce the skilled person to slide the scanner of D4 between a position adjacent to the customer side and a position adjacent to the retail clerk's side, as claimed. The recognition that ergonomics can be improved for both the customer and

the retail clerks by arranging the scanner to be adjacent to their respective positions cannot be derived from D2 nor is it rendered obvious by the available prior art documents.

- 3.9 The board judges for these reasons that the method of operating a checkout terminal of claim 1 and the checkout terminal of claim 2 involve an inventive step within the meaning of Article 56 EPC 1973. The appellant's main request is thus allowable.

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:

Claim 1: pages 134, 136 filed as main request with the letter dated 13 November 2014,
page 135 filed as main request with the letter dated 17 November 2014,

Claim 2: filed as main request with the letter dated 13 November 2014,

Description: pages 1-3, 6, 7, 9-133 as originally filed,
pages 4, 5 filed with the statement of grounds of appeal,

page 8 filed with letter dated 10 May 2007;

Drawings: sheets 1-31 as originally filed.

The Registrar:

The Chairman:



S. Sánchez Chiquero

G. Eliasson

Decision electronically authenticated