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**Datasheet for the decision
of 6 September 2021**

Case Number: T 0893/17 - 3.4.03

Application Number: 04253772.0

Publication Number: 1496482

IPC: G07F19/00

Language of the proceedings: EN

Title of invention:
Self-service terminal

Applicant:
NCR International, Inc.

Headword:

Relevant legal provisions:

EPC Art. 52(1), 123(2)
EPC 1973 Art. 56

Keyword:

Inventive step - (yes)
Amendments of application - allowable (yes)

Decisions cited:

T 0862/10

Catchword:



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Case Number: T 0893/17 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 6 September 2021

Appellant: NCR International, Inc.
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Representative: Secerna LLP
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 24 February
2017 refusing European patent application No.
04253772.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Eliasson
Members: S. Ward
C. Heath

Summary of Facts and Submissions

- I. The appeal is against the decision of the Examining Division to refuse European patent application No. 04 253 772 on the grounds that the claimed subject-matter did not involve an inventive step within the meaning of Article 56 EPC.
- II. By letter dated 23 March 2021 the appellant requested that the decision of the Examining Division be set aside and that a patent be granted on the basis of the claims filed with the statement of grounds of appeal, description pages 1-10 filed with said letter dated 23 March 2021 and the drawings as originally filed.
- III. The following documents are referred to:
- D1: EP 0 924 668 A2
D2: US 5 666 498
D2 was mistakenly cited as "EP-A-5666498" under point 14 of the contested decision.
- IV. Claim 1 of the main request reads as follows:
- "A self-service terminal (10) comprising a user interface (14) including a display (30) having a display area (80) for presenting transaction information to a user (12), and a sensor (16) for sensing people in the vicinity of the terminal (10), characterised in that the terminal (10) further comprises a screen controller (74) configured to present the transaction information as a full size screen/s with respect to the display area (80) in response to the sensor (16) not sensing a person other*

than the user in the vicinity of the terminal (10), and to present the transaction information as a reduced size screen/s with respect to the display area (80) in response to the sensor (16) sensing a person other than the user in the vicinity of the terminal (10)."

Claim 7 of the main request reads as follows:

"A method of improving privacy on a self-service terminal (10), the method comprising: presenting information to a user in a display area (80) of a display (30) of the terminal (10); and sensing a person other than the user in the vicinity of the terminal (10); characterised in that the method further comprises presenting the transaction information as a full size screen/s with respect to the display area (80) in response to the sensor (16) not sensing a person other than the user in the vicinity of the terminal (10), and presenting the transaction information as a reduced size screen/s with respect to the display area (80) in response to the sensor (16) sensing a person other than the user in the vicinity of the terminal (10)."

V. The findings of the Examining Division, insofar as they are relevant to the present decision, may be summarised as follows:

The following feature of claim 1 was not anticipated by D1: "configured to present the transaction information as a full size screen/s with respect to the display area, and to present the transaction information as a reduced size screen/s with respect to the display area in response to the sensor sensing a person other than the user in the vicinity of the terminal".

D1 disclosed that the services offered by the ATM were varied or changed or adapted according to the sensed number of persons. The problem to be solved by the distinguishing feature could be posed as: "how are varied those services of D1 or how is changed the user interface of D1 upon detecting person(s) in the vicinity".

Although D1 did not explicitly mention the word "security", D1 related to ATMs and money processing and said applications implicitly required a high level of security. A user of a windows environment minimized or reduced the size of a window upon realizing somebody was approaching in case the content of the window was sensible. The skilled person in view thereof and wishing to automate said human behaviour would provide the above feature into D1 in an obvious manner for the purpose of solving the problem.

In addition, it might be doubted that the problem to be solved was a technical problem, because reducing the size of predetermined content to be represented could also be considered as a mere presentation of information and the distinguishing feature referred to the design of a user interface without achieving any technical effect.

The applicant argued that the skilled person would not combine D1 and D2 because D1 referred rather to decrease the waiting time of the ATM users and D2 referred to reduce the window size after a predetermined time period of non-use in a GUI environment. However, the above mentioned human reaction of concealing the screen or reducing the size of the screen in response to detecting a person close to his/her computer was a natural, direct and obvious

reaction. It would be obvious to implement screen reduction as a further service offered by the ATM of D1, even without using the teaching of D2.

The applicant's argument that the technical problem was to increase privacy and that D1 and D2 were silent on this problem was not persuasive. Security and privacy were intrinsic concerns of ATMs.

Reasons for the Decision

1. *Article 123(2) EPC*

1.1 During examination (see e.g. the communication of 29 November 2016) the Examining Division raised an objection under Article 123(2) EPC against the feature in claim 1 that the screen controller was configured to present the transaction information as a full size screen/s:

"in response to the sensor (16) not sensing a person other than the user in the vicinity of the terminal (10)".

As a result, the appellant deleted this feature in the claims on which the decision was based. This feature has been reinstated in the present main request.

1.2 The Board considers that this feature has a basis in the application as originally filed. On page 7, lines 4-7 the application introduces an "example of a typical transaction" shown in Figs. 3A-3F. During the example "the ATM 10 does not detect any other person in the

vicinity of the ATM 10". Figs. 3A-3F show the transaction details being displayed in full screen mode, and this is confirmed on page 9, lines 4-6, where it is stated that in "the previous example (Figs 3A to 3F), the screen controller 74 allowed screens supplied by the ATM applicaton [sic] 72 to be presented full-size without any modification".

- 1.3 This feature is also implicit from original claim 7 or from page 4 lines 16-23, according to both of which there is provided:

"a method of improving privacy on a self-service terminal, the method comprising: presenting information to a user on a display; sensing people in the vicinity of the terminal; and confining transaction information to a sub-portion of the display area in response to the sensor sensing a person other than the user in the vicinity of the terminal."

Since "transaction information" is being displayed, a transaction is evidently in progress, and hence there must be at least one person (the user) in the vicinity of the terminal in order to instigate the transaction (e.g. by inserting a card). The ATM then senses whether there is at least one person other than the user in the vicinity of the terminal, and if so confines the transaction information to a sub-portion of the display area (either automatically or with the agreement of the user).

It is implicit that if the result of the sensing action was to confirm that only the user was present, the transaction information would not be confined to a sub-portion of the display area, otherwise the provision of

a sensor to distinguish between these two cases would be pointless.

The Board is therefore satisfied that claim 1 (and for similar reasons, claim 7) complies with the requirements of Article 123(2) EPC. Dependent claims 2-6, 8 and 9 have a basis in claims 2-6, 8 and 9 as originally filed.

2. *Inventive Step: Article 56 EPC 1973*

2.1 As in the contested decision, D1 is seen as the closest prior art. D1 discloses (see Figs. 1, 2) a self-service terminal (10) comprising a user interface including a display (12) having a display area for presenting transaction information to a user (A), and a sensor (camera 22 and its associated image processing software 23) for sensing people (A, B, C) in the vicinity of the terminal and a screen controller configured to present the transaction information on the display area (the processor controls the information provided to the display screen, see Fig. 2).

2.2 Claim 1 differs from D1 in that the:

"screen controller (74) [is] configured to present the transaction information as a full size screen/s with respect to the display area (80) in response to the sensor (16) not sensing a person other than the user in the vicinity of the terminal (10), and to present the transaction information as a reduced size screen/s with respect to the display area (80) in response to the sensor (16) sensing a person other than the user in the vicinity of the terminal (10)".

2.3 According to the application the problem solved by these features is to improve the privacy and security of transactions at a self-service terminal (see page 1, line 25 to page 2, line 15; page 4, lines 16-23; and page 8, line 14 to page 9, line 4).

It is a common occurrence that a queue of people may be waiting to use, for example, an ATM, and this leads to the risk that a third party may be able to view a transaction (page 2, lines 12-15), in particular someone standing behind the user looking over the user's shoulder (page 2, lines 6-8). This problem is plausibly solved according to the present invention by presenting the transaction information as a reduced size screen with respect to the display area in response to the sensor sensing a person other than the user in the vicinity of the terminal, thereby making it more difficult for that person to view the transaction.

The Board sees no reason to reformulate this problem, nor was any such reason given in the contested decision. The problem is therefore seen as improving the privacy and security of transactions at a self-service terminal.

2.4 The ATM of D1 includes a camera and appropriate software for the purpose of managing queue lengths. If one or two persons are sensed, all available services may be enabled (paragraphs [0013] and [0014]). If three or more persons are sensed, the services available at the ATM may be limited, for example by dispensing cash only or by allowing users only a single transaction (paragraph [0016]). Ultimately the aim is not to lose business from users who may be discouraged by long waiting times (paragraph [0002]).

The output of the sensor in D1 (camera 22 and its associated image processing software 23) plays no role in providing security and privacy for transactions, nor is this problem anywhere mentioned.

- 2.5 D2 discloses a computer system in which information is presented on a graphical user interface in conventional windows (column 1, lines 17 to 45). Focus may be transferred to a new window, e.g. by the user single clicking over a window not previously positioned on top of the stack of windows. This transfer of focus is detected and leads to an automatic reduction of the size of windows not having focus. The aim is to avoid a desktop being "cluttered with many open default windows that occupy large amounts of real estate, preventing the user from viewing several desired windows" (column 2, lines 8-12).

D2 is not concerned with ATMs or self-service terminals, and providing security and privacy for transactions is not mentioned. No sensing of persons is disclosed in D2, but only the ability to detect mouse manipulations.

- 2.6 In summary, neither D1 nor D2 discloses anything concerning privacy or security of transactions, nor do they provide any hint that the features described therein have, or could have, any role in preventing third parties accessing transaction data. The Board does not dispute the point made by the Examining Division that "security and privacy are intrinsic concerns of ATMs", but they are concerns about which the cited prior art has nothing to say.

- 2.7 The Board is also not persuaded that, starting from the ATM of D1, the distinguishing features of claim 1 would

be obvious to the skilled person as an automation of human behaviour in a "windows environment" whereby, for reasons of privacy or security, the size of a window would be minimized or reduced when somebody was approaching.

2.8 Firstly, the user of a typical ATM, such as that disclosed in D1, stands directly in front of the display, with those waiting in the queue standing in a line directly behind the user. In a "windows environment" (for example, in an office) a PC user is typically seated at a desk, and a person approaching the desk (for example, to engage in conversation) would normally be standing (but generally not directly behind them). The two situations are therefore not comparable, and the Board sees no reason why a skilled person would look to a "windows environment" for a solution to the problem of the privacy and security of transactions in an ATM.

Secondly, while it is possible that a PC user might, for reasons of privacy, minimise a window completely so that it was no longer visible on the desktop to an approaching person, no evidence has been adduced that, in a windows environment, merely reducing the size of a window with respect to the display area would be commonly regarded as a privacy or security measure.

2.9 The Board therefore sees no plausible path by which a skilled person aiming to improve the privacy and security of transactions in the ATM of D1 would arrive in an obvious manner at the distinguishing features of claim 1 on the basis of the cited prior art and common general knowledge.

2.10 The Examining Division also expressed a doubt whether reducing the size of predetermined content constituted a technical feature or whether it was a mere presentation of information without achieving any technical effect (Reasons for the Decision, point 16).

2.11 In the case underlying decision **T 862/10**, auxiliary request 1 concerned a notification system comprising an information display object which was configured to employ sound localisation methods to localise an audio signal associated with the display object in a position at or near the location of the physical rendering of the display object. This feature solved the problem of making it easier for the user quickly to locate the position of the display object on the display screen.

The deciding Board considered that both the problem and the means to solve it were technical since they "do not depend on psychological or other subjective factors but on technical parameters (based, inter alia, on human physiology) that can be precisely defined" (Reasons for the decision, point 4.2, fourth paragraph).

2.12 In the present case, based on typical adult heights, typical queue spacings, the size of a display area etc. it would be possible to define, by modelling or measurement, the extent of the problem, i.e. how much of the display area would be visible to someone standing behind an ATM user and looking over their shoulder (see page 2, lines 6-8 of the present application). It would be equally possible to model or measure the improvement in this respect provided by the reduced screen size according to claim 1.

Hence, the problem of improving the privacy and security of transactions at a self-service terminal is

considered to be a technical problem and the measures proposed in claim 1 represent a technical solution to this problem.

- 2.13 The Board therefore concludes that the subject-matter of claim 1 of the main request involves an inventive step within the meaning of Article 52(1) EPC and Article 56 EPC 1973. This conclusion also applies, for the same reasons *mutatis mutandis*, to the subject-matter of independent claim 7. Claims 2-6, 8 and 9 are inventive at least by virtue of their dependencies.

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 1-9 filed with the statement of grounds of appeal;

Description: pages 1-10 filed with the letter dated 23 March 2021; and

Drawings: sheets 1/3 - 3/3 as originally filed.

The Registrar:

The Chairman:



S. Sánchez Chiquero

G. Eliasson

Decision electronically authenticated