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Datasheet for the decision of 17 May 2024

Case Number: T 0035/20 - 3.5.01

Application Number: 16703893.4

Publication Number: 3251068

IPC: G06Q20/40, G06Q20/42, G06Q20/36, G06Q20/32

Language of the proceedings: EN

Title of invention:
USER INTERFACE FOR PAYMENTS

Applicant:
Apple Inc.

Headword:
Double press to pay/APPLE

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - double press on button with integrated fingerprint sensor to pay with phone - (yes - not a mere user requirement)

Decisions cited:
T 0641/00, T 1188/04, T 1463/11, T 2019/12

Catchword:

The term "user requirement" is often used when assessing the technicality of features of user interfaces. The Board understands the term to refer to needs and preferences defined by the end user of a system, who does not possess any technical understanding of the system. Under the Comvik approach (T 641/00 - Two identities/COMVIK), such user requirements may appear in the formulation of the technical problem as they do not make any technical contribution. It was confirmed in T 1463/11 - Universal merchant platform/CardinalCommerce that non-technical (user) requirements cannot normally specify any technical matter or be based on technical considerations. That is not to say that they cannot refer to the underlying technical system at all. Just like the technically skilled person, the user starts from the technical system of the prior art; user requirements do not appear in a vacuum. Thus, if the user uses software on a computer, he may formulate non-technical requirements relating to this software (see e.g. T 2019/12 - Angabe einer Order/Lacqua). Analogously, if, as in the present case, the system is a mobile phone, the user may formulate requirements relating to the use of the phone, as long as they do not involve technical considerations or require technical understanding.

(See point 8 of the reasons)

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Case Number: T 0035/20 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 17 May 2024

Appellant: (Applicant)	Apple Inc. One Apple Park Way Cupertino CA 95014 (US)
Representative:	Zacco Denmark A/S Arne Jacobsens Allé 15 2300 Copenhagen S (DK)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 24 July 2019 refusing European patent application No. 16703893.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	W. Chandler
Members:	A. Wahrenberg
	D. Rogers

Summary of Facts and Submissions

I. This case concerns the appeal against the examining division's decision to refuse European patent application No. 16703893.4 for added subject-matter (Article 123(2) EPC) and lack of inventive step (Article 56 EPC).

II. The examining division considered that the claimed invention represented a user requirement definition of when and how to enable the payment functionality of a well known smartphone. The user requirements were given to the skilled person to implement and the implementation would have been obvious. Therefore, an inventive step was lacking.

III. In the statement of grounds of appeal, the appellant requested that the decision to refuse the application be set aside and that a patent be granted on the basis of the main request or one of the first to third auxiliary requests filed with the grounds of appeal.

IV. In a communication pursuant to Rule 100(2) EPC, the Board was minded not to admit the main request into the appeal proceedings as it was broader than the refused main request. Moreover, the Board tended to the view that claim 1 of the first to third auxiliary requests lacked inventive step over iPhone 6, which was commercially available at the priority date. The following documents were cited:

A1: The Verge: Apple Pay allows you to pay at the counter with your iPhone 6, 9 September 2014, https://www.theverge.com/2014/9/9/6084211/apple-pay iphone-6-nfc-mobile-payment

A2: CNET: Apple takes NFC mainstream on iPhone 6; Apple Watch with Apple Pay, 9 September 2014, https://www.cnet.com/tech/mobile/apple-adds-nfc-to iphone-6-with-apple-pay/.

V. In a reply dated 12 July 2023, the appellant argued that the claims of the first to third auxiliary requests involved an inventive step in view of iPhone 6. The appellant furthermore filed a new main and fourth and fifth auxiliary requests.

VI. The Board summoned the appellant to oral proceedings. In the communication accompanying the summons, the Board was minded not to admit the newly filed main request since also this request was broader than the requests examined by the examining division. The Board maintained the view that claim 1 of the first to third auxiliary requests lacked inventive step (Article 56 EPC). Furthermore, the Board was inclined not to admit the fourth and fifth auxiliary requests.

VII. Oral proceedings took place by videoconference. The appellant withdrew its main request. The final requests of the appellant were to set aside the decision under appeal and to grant a patent upon the basis of the first, second, or third auxiliary request filed with the grounds of appeal, or the fourth or fifth auxiliary request filed with the letter of 12 July 2023.

VIII. Claim 1 of the first auxiliary request (now main request) reads:

A method, comprising:

at an electronic device with a short-range

communication radio and a physical input mechanism that includes an integrated biometric sensor:

while the electronic device is locked and in a first short-range communication radio payment mode, wherein the first short-range communication radio payment mode is a mode in which the device is not enabled to participate in payment transactions via the short-range communication radio:

detecting activation of the physical input mechanism;

detecting a fingerprint using the integrated biometric sensor;

determining whether the fingerprint is consistent with an enrolled fingerprint; and

determining whether a set of one or more criteria is met, wherein the set of one or more criteria includes a criterion that is met when the physical input mechanism is reactivated within a predetermined period of time after the activation of the physical input mechanism;

in accordance with a determination that the fingerprint is consistent with the enrolled fingerprint and a determination that the set of one or more criteria is met, transitioning to a second short-range communication radio payment mode different from the first short-range communication radio payment mode, wherein the second short-range communication radio payment mode is a mode in which the device is enabled to participate in payment transactions via the short-range communication radio, and forgoing unlocking the device;

and in accordance with a determination that the fingerprint is consistent with the enrolled fingerprint and a determination that the set of one or more criteria is not met, unlocking the device and forgoing

transitioning to the second short-range communication radio payment mode, wherein the second short-range communication radio payment mode is a mode in which the device is enabled to participate in payment transactions via the short-range communication radio.

Reasons for the Decision

1. The claimed invention concerns simplifying contactless payment with a mobile phone by removing the need for the user to unlock the device and open the payment app (paragraph [338] of the published application). Also, by enabling payment from the lock screen, the device remains protected while the user pays.

2. The phone has an input mechanism (Figure 15A: button (204) called the "home button") containing an integrated fingerprint sensor. To activate the payment mechanism from the lock screen, the user double presses the home button (Figure 15B).

The device detects the first press, reads the fingerprint (this may happen before or after the first press, see paragraph [342]), and determines whether the read fingerprint matches an enrolled fingerprint. The device also detects if there is a second press within a predetermined time after the first press (e.g. 300 ms in Figure 15E). If there is not, (1530 and paragraph [384]), the device merely unlocks (Figure 15C). If, however, both conditions are met, the device is enabled for contactless payment (1540, Figure 15D and paragraph [385]). Thus, the user input required to pay, namely a double press, is distinguished from the user input to merely unlock the device by simply placing a finger on

the fingerprint sensor, optionally combined with a single press on the home button.

3. The examining division argued that the subject-matter of claim 1 lacked an inventive step over a well-known smartphone comprising a display, a short-range communication radio such as NFC, and a physical input mechanism including a fingerprint reader, the smartphone being capable of switching between a locked state and an unlocked state.

4. In the communication accompanying the summons to oral proceedings, the Board had doubts whether such a smartphone with both a fingerprint reader and NFC for contactless payment was notoriously known at the priority date such that no documentary evidence was necessary. This rather seemed to have been the state of the art technology at the time.

5. IPhone 6, which was released before the priority date, had a fingerprint sensor integrated in the home button. The fingerprint sensor was used both for unlocking the device and for authenticating contactless NFC payments. The appellant did not contest this. In the oral proceedings, it was common ground that iPhone 6 was the closest prior art.

6. In iPhone 6, the user had to, as described above in point 1, first unlock the device using the fingerprint sensor, and, second, open the payment app to authenticate the payment, again using the fingerprint sensor integrated in the home button. There was no possibility to pay directly from the lock screen, and there was no double press activation of the payment functionality.

7. The examining division essentially argued that the invention was a specification of user requirements about "when and how" to enable the payment functionality of a smartphone (points 2.2.5, 2.2.8), which according to the Guidelines for Examination at G-II 3.7.1 was not technical. Therefore, the problem to be solved was how to implement the user requirement.

8. The term "user requirement" is often used when assessing the technicality of features of user interfaces. The Board understands the term to refer to needs and preferences defined by the end user of a system, who does not possess any technical understanding of the system. Under the Comvik approach (T 641/00 - *Two identities/COMVIK*), such user requirements may appear in the formulation of the technical problem as they do not make any technical contribution. It was confirmed in T 1463/11 - *Universal merchant platform/CardinalCommerce* that non-technical (user) requirements cannot normally specify any technical matter or be based on technical considerations. That is not to say that they cannot refer to the underlying technical system at all. Just like the technically skilled person, the user starts from the technical system of the prior art; user requirements do not appear in a vacuum. Thus, if the user uses software on a computer, he may formulate non-technical requirements relating to this software (see e.g. T 2019/12 - *Angabe einer Order/Lacqua*). Analogously, if, as in the present case, the system is a mobile phone, the user may formulate requirements relating to the use of the phone, as long as they do not involve technical considerations or require technical understanding.

9. In the Board's view, this would cover requirements such as "simplify payment", "pay faster" or "pay in as few steps as possible". The user may arguably even formulate the requirement that the device should remain locked, as this does not require any technical understanding of how the phone works internally. In some sense, a lock merely disables a number of functions, and the non-technical user could formulate a requirement along the lines of "enable only payment".

10. Furthermore, the Board considers that a user requirement may also include simple mappings of user inputs to functions. For example, pressing a button "pay" in order to pay, may be considered a user requirement if the technical means as such are known and the mapping does not involve any further technical effects or considerations.

11. The examination division essentially considered that user requirements covered all user interactions with the mobile phone, including double clicking within a certain time and using the unlocking authentication for the payment instead of using a separate authentication in the payment app. These were referred to as aspects of "how" to enable the payment functionality. However, the Board considers that the constraint not to involve technical considerations limits the extent of such aspects of user requirements.

12. The difficulty arises from the fact that some of these requirements, although apparently actions of the user, such as a double click or using the existing way of authentication for payment, involve technical considerations to see if the requirements are even possible. In other words, the user is saying things that even the skilled person would have to check. In

other words, the user is over-stretching the non-technical requirements, going beyond what a "notional" user could require. In particular, the double press to activate the payment functionality in combination with the fingerprint reading is not a simple mapping of an input to a function. In the Board's view, it involves technical considerations, for the following reasons.

13. Using a button with an integrated fingerprint sensor for both activating the payment functionality and authenticating the payment transaction is a technical choice which goes beyond a mere mapping between input and function. Furthermore, as explained by the appellant during the oral proceeding, using the home button on the iPhone for activating payment from the lock screen was not without technical difficulty, as the same button and fingerprint sensor were already used for unlocking the device. Those are technical considerations for a technically skilled person, and the solution to use a double press defined by a predetermined time interval between a first and a second press, is a technical solution.

14. The Board considers that the objective technical problem to be solved is "how to simplify payment with fingerprint authentication".

The appellant argued that the technical effects of the distinguishing features were faster activation of the payment functionality *and* improved security. Thus, the technical problem to be solved was "how to provide a more efficient electronic device for contactless payments with enhanced transaction security".

The Board does not agree that increased security is a technical effect of the invention, as this is provided

by the technical implementation of the lock, which was known from iPhone 6. At best, increased security is a "bonus effect" of providing a "payment only mode" as described in point 9 above. Such bonus effects can not render an invention inventive if the skilled person would anyway have arrived at the claimed solution in an obvious manner with the aim to obtain another advantageous effect (in this case to simplify payment).

15. The solution to the problem of simplifying payment with fingerprint authentication in claim 1 is the double press on the home button to activate the payment functionality in combination with fingerprint authentication of the payment using the fingerprint sensor integrated in the home button.

16. The Board judges that the solution in claim 1 is not obvious, for the following reasons.

Firstly, there is no prior art showing an input means with an integrated sensor having a dual function as in claim 1. This is different from e.g. single and double mouse clicks which do not involve considerations of the input command in combination with a sensor reading. Furthermore single and double mouse clicks were typically used for interaction with a graphical user interface including icons.

Secondly, as the appellant explained during the oral proceedings, the home button on the iPhone was "overloaded" which would have deterred the skilled person from using it for yet another function, especially since there were other alternatives. On iPhone 6, the user could already access functionality directly from the lock screen. For example, the user could open the camera app by swiping left. This

function had a similar purpose as the present invention, namely it allowed the user to access the camera quickly, and to hand the phone to someone else (e.g. for taking the user's picture) without opening up the phone. Thus, there were other input mechanisms available to the skilled person for activating functionality from the lock screen.

17. The considerations in favour of inventive step appear analogous to those in T 1188/04 (*Graphical user interface/SHARP*). In that case, the invention was a way of shortcutting or simplifying the processing when a first icon (e.g. a document) was dragged to a second icon (e.g. a printer). The number of times the first icon was oscillated was used to set a parameter in the processing (e.g. set the sheet size of the printer). Various actions to affect processing when the first icon was over the second icon were known, including hovering the first icon to bring up a window in which to set parameters and clicking on various parts of the second icon. The invention was thus seen as an alternative shortcut to allow direct setting of parameters.

18. The Board evaluated the situation as follows:

- The user would ask the GUI programmer for a shortcut command, this being an option familiar from conventional text processors (point 6.1).
- The skilled person seeking an alternative solution would have to contemplate some other manipulation of the mouse pointer (with the icon dragged) instead of merely pausing it over the second icon (point 6.2).
- The general idea of attaching a meaning to the movement of the icon may have been obvious and that the oscillating movement of the icon was basic (point 6.4).

- None of the prior art suggested a graphical type of shortcut command which selectively allows a document to be processed and a plurality of processing conditions to be set directly by applying various ways of interaction between two icons, in particular, the number of times the first icon is oscillated with respect to the second icon (point 6.5).
- With the benefit of hindsight, it may have been conceivable to design a graphical user interface which used a modified value setting technique of the prior art for selecting a parameter, but there was no obvious inspiration to do so to that general level (point 6.5).

Thus, as in the present case, the aim in T 1188/04 originated from the user, whereas the specific interaction was not a mere input mapping but involved technical considerations relating to the implementation of the GUI.

19. For these reasons, the Board judges that claim 1 of the first auxiliary request (the final main request) involves an inventive step (Article 56 EPC).

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 with the following claims and a description to be adapted:

Claims: 1 to 13 of the first auxiliary request filed with the statement of grounds of appeal.

The Registrar: The Chairman:

T. Buschek W. Chandler

Decision electronically authenticated