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# Datasheet for the decision of 11 October 2023

**Case Number:** T 2426/19 - 3.4.03

**Application Number:** 15178522.7

**Publication Number:** 3082087

**IPC:** G06Q20/20, G06Q20/32

**Language of the proceedings:** EN

**Title of invention:**
MOBILE PAYMENT METHOD

**Applicant:**
Yang, Chien-Kang

**Headword:**

**Relevant legal provisions:**
EPC Art. 52(1), 56, 84, 97(1), 111(1), 123(2)
EPC R. 43(2)
RPBA 2020 Art. 15(1)

**Keyword:**
Inventive step - (yes)

**Decisions cited:**

**Catchword:**

Europäisches Patentamt
European Patent Office
Office européen des brevets

**Beschwerdekammern**

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**Case Number: T 2426/19 - 3.4.03**

# D E C I S I O N
# of Technical Board of Appeal 3.4.03
# of 11 October 2023

| | |
|---|---|
| **Appellant:** (Applicant) | Yang, Chien-Kang<br>19F., No 67, Sec. 2<br>Tun Hwa S. Road<br>Taipei City 10682 (TW) |
| **Representative:** | Zimmermann, Tankred Klaus<br>Schoppe, Zimmermann, Stöckeler<br>Zinkler, Schenk & Partner mbB<br>Patentanwälte<br>Radlkoferstrasse 2<br>81373 München (DE) |
| **Decision under appeal:** | **Decision of the Examining Division of the European Patent Office posted on 27 March 2019 refusing European patent application No. 15178522.7 pursuant to Article 97(2) EPC.** |

**Composition of the Board:**

| | |
|---|---|
| **Chairman** | T. Häusser |
| **Members:** | M. Papastefanou |
| | T. Bokor |

## Summary of Facts and Submissions

I. The appeal is against the decision of the examining division refusing European patent application No. 15 178 522 on the ground that the claimed subject-matter of the sole request then on file did not involve an inventive step within the meaning of Article 56 EPC.

II. The appellant (applicant) requested that the decision under appeal be set aside and that a patent be granted in the following version:

Description, pages:
1 to 23 filed with letter dated 31 August 2023;
Claims, numbers:
1 to 4 filed with letter dated 31 August 2023;
Drawings, sheets:
1/23 to 23/23 as originally filed.

III. Reference is made to the following documents, cited in the decision under appeal:

**D1**: CA 2 893 040 A1
**D2**: US 2007/277044 A1
**D3**: Anonymous: "QR Code Essentials", 2011, pages 1-12, XP055101415, Retrieved from the Internet: URL:http://www.nacs.org/LinkClick.aspx?fileticket=D1FpVAvvJuo=&tabid=1426&mid=4802 [retrieved on 2014-02-11]
**D4**: "smart microSD The Best Approach for NFC", May 2013, XP055213861, Retrieved from the Internet: URL:https://www.sdcard.org/developers/overview/ASSD/smartsd/smartmicrosd-intro.pdf [retrieved on 2015-09-16]
**D5**: Anonymous: "Message authentication code - Wikipedia", 26 December 2014, XP055426679, Retrieved

from the Internet: URL:https://en.wikipedia.org/w/index.php?title=Message_authentication_code&oldid=639669914 [retrieved on 2017-11-20]

IV. Claim 1 of the sole request reads as follows (numbering (a) ... (i) by the board):

*A mobile payment method to be implemented using a transaction electronic device (1) which is configured to interact with a payment electronic device (2), the transaction electronic device (1) and the payment electronic device (2) communicating with a payment institution server (5), the mobile payment method characterized by the steps of:*

*(a) receiving, by the transaction electronic device (1), payment information related to a transaction and to a payment for the transaction, and including details of an identification number of a store, a transaction date, a payment number and a transaction amount;*

*(b) transmitting, by the transaction electronic device (1), the payment information to the payment institution server (5),*

*(c) the payment information enabling the payment institution server (5) to generate a barcode according to the payment information in response to receipt of the payment information, and to transmit the barcode thus generated to the transaction electronic device (1);*

*(d) providing, by the transaction electronic device (1), the payment information to the payment electronic device (2) when the transaction electronic device (1) is brought into proximity of the payment electronic device (2) to scan and to decode the barcode,*

*(e) the payment information enabling the payment electronic device (2) to transmit the payment information to the payment institution server (5)*

*(f) for subsequent enablement of the payment electronic device (2) to generate a payment request based on at least the payment information*

*(g) when the payment institution server (5) determines that the payment information received from the payment electronic device (2) conforms to the payment information received from the transaction electronic device (1),*

*(h) the payment request being provided for subsequent processing of the payment by the payment institution server (5) according to the payment information included in the payment request; and*

*(i) receiving, by the transaction electronic device (1), a payment result from the payment institution server (5), the payment result being generated by the payment institution server (5) after completing the payment.*

V. The appellant argued essentially that the combination of the features distinguishing claim 1 from the prior art provided the technical effect of increased transaction security. Starting from D1, the skilled person would not arrive at the claimed subject-matter in any obvious way.

## Reasons for the Decision

1. The appeal is admissible.

2. Amendments

2.1 Admittance, Article 13(2) RPBA 2020

The amended claims and description filed by the appellant with its letter dated 31 August 2023 are a reaction to the objections raised by the board in its communication under Article 15(1) RPBA 2020.

Since these objections were raised for the first time in that communication, the board considers that exceptional circumstances within the meaning of Article 13(2) RPBA 2020 are present and admits the amended request in the procedure.

2.2 Basis in the originally filed application documents, Article 123(2) EPC

2.2.1 Claim 1 has been amended to specify that the steps of receiving payment information (feature (a)), transmitting the payment information to the payment institution server (feature (b)), providing the payment information to the payment electronic device (feature (d)), and receiving a payment result from the payment institution server (feature (i)) are carried out by the transaction electronic device (1).

Basis for these amendments can be found in Figure 12 (see steps S2, S3', S4, S51, S15 and S16) and in corresponding passages in the originally filed description, see for example page 13, lines 17 to 22, page 22, lines 6 to 16, page 22, line 26 to page 23, line 5 and page 21 lines 12 to 21.

2.2.2 Claim 3 has been amended in a similar way to specify that the steps of receiving the barcode from the payment institution server and outputting it are carried out by the transaction electronic device (1).

These amendments find basis in Figure 12 (steps S5' and

S51) as well as on page 22, line 18 to page 23, line 5 of the originally filed description.

2.2.3 The description has been adapted to the claims.

2.2.4 The board is satisfied that the amended application documents do not contain any subject-matter extending beyond the originally filed content of the application documents and comply thus with the requirements of Article 123(2) EPC.

2.3 Clarity, Article 84 EPC

2.3.1 By specifying which entity carries out which steps of the claimed method, the corresponding objection of lack of clarity raised by the board in its communication under Article 15(1) RPBA 2020 has been overcome.

2.3.2 By deleting independent claim 5 (and its dependent claims 6 and 7), the corresponding objection by the board against the presence of two independent claims of the same category (Rule 43(2) EPC) has also been overcome.

2.3.3 By adapting the description to the claims and removing the ambiguous statements ("spirit", "equivalent arrangements") the corresponding objections raised by the board in its communication have also been overcome.

2.3.4 The board is thus satisfied that all the objections raised by the board in its communication under Article 15(1) RPBA 2020 have been overcome and the requirements of Article 84 EPC and Rule 43(2) EPC are fulfilled.

*3.* Inventive step, Articles 52(1) and 56 EPC

3.1 Closest prior art

It was common ground that D1 represented the most suitable starting point for the assessment of inventive step.

Disclosure of D1 with respect to claim 1:

3.1.1 D1 discloses a mobile payment method with the same entities as those identified in claim 1 (see Figure 1 and paragraph [34]):

- a POS terminal (130), corresponding to the claimed transaction electronic device (1);
- a mobile device (112), corresponding to the claimed payment electronic device (2); and
- a payment processing server (140), corresponding to the claimed payment institution server (5).

The preamble of claim 1 is therefore considered disclosed in D1.

3.1.2 Feature (a): *receiving, by the transaction electronic device (1), payment information related to a transaction and to a payment for the transaction, and including details of an identification number of a store, a transaction date, a payment number and a transaction amount.*

In D1 there is mention of a transaction identifier and transaction details. From the definition of the "payment information" in feature (a), it is evident that this information relates to the transaction and hence corresponds to the "transaction details" of D1. There is no explicit mention in D1 of "receiving" this

information at the POS terminal and the examining division used the term "generating" in this context (see point 1.1 of the Reasons for the decision), i.e. the POS terminal generated this information. In the present application, "receiving" is explained in paragraph [0030] (see published application) according to which the information can be entered by scanning a barcode (of a product) or manually by a user. Paragraphs [54] to [57] of D1 explain that some of the transaction details have to be entered (e.g. amount to be paid), some are stored in the POS terminal (e.g. POS/merchant identifier) and some may be generated by the POS terminal (transaction identifier).

In any case, how this information arrives at the POS terminal plays no role in the invention.

This feature is thus considered disclosed in D1.

3.1.3 Feature (b): *transmitting, by the transaction electronic device (1), the payment information to the payment institution server (5)*

This is disclosed in D1, see e.g. "circle 2" in Figure 3 and paragraphs [55] to [57].

3.1.4 Feature (c): *the payment information enabling the payment institution server (5) to generate a barcode according to the payment information in response to receipt of the payment information, and to transmit the barcode thus generated to the transaction electronic device (1).*

This feature is not disclosed in D1. In the method of D1 it is the POS terminal (corresponding to the transaction electronic device (1) of the claims) that

generates a barcode from the transaction details (see paragraph [58]). There is no transmission of transaction details from the server back to the POS terminal.

3.1.5 Feature (d): *providing, by the transaction electronic device (1), the payment information to the payment electronic device (2) when the transaction electronic device (1) is brought into proximity of the payment electronic device (2) to scan and to decode the barcode*.

This feature is disclosed in D1, see paragraphs [58] and [59]. The barcode is however generated at/by the POS terminal and not at/by the server as in the claims (see previous point).

3.1.6 Feature (e): *the payment information enabling the payment electronic device (2) to transmit the payment information to the payment institution server (5).*

In the method of D1 the mobile device transmits to the server the transaction identifier, but not the transaction details (corresponding to the "payment information" of the claims). It also transmits payment details related to the user/buyer, i.e. mode of payment, bank details, etc., see paragraphs [65] and [66] as well as "circle 4" in Figure 3.

3.1.7 Feature (f): *for subsequent enablement of the payment electronic device (2) to generate a payment request based on at least the payment information*.

In D1 there is no subsequent payment request generated by the mobile device. The request is already sent with the transaction identifier in the previous step (see

also Figures 2 and 3). The payment server, once it starts processing the payment transaction, may generate/transmit a payment request to a card issuing platform or a banking institution according to the received payment information of the user (see paragraph [69]).

3.1.8 Feature (g): *when the payment institution server (5) determines that the payment information received from the payment electronic device (2) conforms to the payment information received from the transaction electronic device (1).*

In the method of D1 the payment server matches the transaction identifier received from the POS terminal (along with the other transaction details) with the transaction identifier received from the mobile device. This is done for the transaction to be completed, as by matching the transaction identifier, the transaction according to the transaction details received from the POS terminal can be carried out according to the user's payment details received from the mobile device, see paragraphs [67] and [68] and "cicle 5" in Figure 3.

3.1.9 Feature (h): *the payment request being provided for subsequent processing of the payment by the payment institution server (5) according to the payment information included in the payment request.*

This is disclosed in D1, see paragraphs [68] and [69].

3.1.10 Feature (i): *receiving, by the transaction electronic device (1), a payment result from the payment institution server (5), the payment result being generated by the payment institution server (5) after completing the payment.*

This is disclosed in D1, see paragraph [69] and "circle 6a" in Figure 3.

3.2 Differences

The subject-matter of claim 1 differs thus from the method of D1 in that

- the server generates a barcode (and not the POS terminal) according to the received transaction details from the POS terminal and sends it back to the POS terminal (feature (c)),
- the mobile device transmits to the server the transaction details (and not only the identifier) obtained when decoding the scanned barcode (part of feature (e)),
- the server compares the transaction details received from the POS terminal and those received from the mobile device and only if they correspond, the mobile device is enabled to generate the payment request and the payment transaction can be completed (feature (f) and part of feature (g)).

3.3 Technical effect and technical problem

3.3.1 In the decision under appeal, the examining division assessed the distinguishing features separately, implying that no synergistic effect was present. It went on to conclude that each one them was obvious for the skilled person (see points 1.2 to 1.10.1 of the Reasons for the decision).

3.3.2 The board, however, agrees with the appellant that the distinguishing features provide together a synergistic technical effect and should not be assessed separately.

3.3.3 Generating the barcode according to the transaction details at/by the server and transmitting it back to the POS terminal, ensure that the transaction details which the mobile device receives by scanning the barcode provided by the POS terminal are the same as those which the POS terminal sent to the server. The possibility for the POS server to transmit different transaction details to the server and to the mobile device is thus eliminated.

3.3.4 The examining division argued that this operation did not exclude the possibility that the POS terminal decoded the barcode from the server, modified the transaction details and generated the barcode again, so that the mobile device would receive different/ manipulated transaction details (see point 1.10.1 of the Reasons for the impugned decision).

The board agrees to this point. However, according to the following steps of the claimed method, the mobile device transmits the transaction details received from the POS terminal via the barcode to the server and the server compares the transaction details received from the mobile device to those received from the POS terminal.

If a manipulation by/at the POS terminal occurred, the barcode presented to and scanned by the mobile device would not be the same as the barcode transmitted from the server to the POS terminal. Therefore, the transaction details received at the mobile device and sent to the server would not be the same as those sent to the server from the POS terminal. The comparison at the server would show this difference because the transaction details compared at the server would not be the same (they would not "conform" in the terminology

of the claims) and so the payment transaction would not be carried out.

Hence, these features together contribute to increasing transaction security by hindering any manipulation by/ at the POS terminal.

3.3.5 It is also to be noted that according to the claimed method, only after a positive outcome of the comparison of the payment information at the server is the mobile device enabled to generate and transmit a payment request. This step also contributes to the increased transaction security, as no payment information of the user is transmitted to the server before the integrity of the transaction details is verified.

3.3.6 In the board's opinion, therefore, the distinguishing features combine together to provide the technical effect of increased transaction security. If follows that the skilled person starting from D1 would be faced with the technical problem of how to increase transaction security.

3.4 Solution, obviousness

3.4.1 In the board's opinion there is no indication or suggestion in D1 for the skilled person faced with the above identified technical problem to modify the described payment procedure and to arrive at the claimed method without exercising any inventive skills. For example, there is no disclosure in D1 of comparing the received payment information from the mobile device to that received from the POS terminal at the server and the board sees no incentive to introduce any such comparison in any obvious way.

3.4.2 The other prior art documents cited in the impugned decision are of no help to the skilled person, either:

- D2 is a patent application describing a data carrier (smart card) with the ability to create TAN (transaction numbers) to be used in electronic payment transactions.
- D3 is a document describing QR codes, how they are generated and how they are (to be) used.
- D4 is a slide-presentation by the SD Association about the use of smart microSD cards in mobile phones for NFC (near field communication) applications.
- D5 is a "WIKIPEDIA" article about message authentication codes, i.e. short pieces of information used to authenticate a message and to provide assurances about the message's authenticity and integrity.

3.5 None of those documents provides, alone or in combination with D1, any suggestion or indication to the skilled person in relation to an electronic payment transaction method as the one in claim 1.

3.6 The subject-matter of claim 1 of the sole request on file involves thus an inventive step (Article 52(1) EPC) within the meaning of Article 56 EPC.

Claims 2, 3 and 4 depend on claim 1 and are thus also found to involve an inventive step.

4. The board concludes therefore that the application and the invention to which it relates meet the requirements of the EPC and a European patent is to be granted according to Article 97(1) EPC (Article 111(1) 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 in the following version:

**Description**, pages:
1 to 23 filed with letter dated 31 August 2023;
**Claims**, numbers:
1 to 4 filed with letter dated 31 August 2023;
**Drawings**, sheets:
1/23 to 23/23 as originally filed.

The Registrar: The Chairman:

S. Sánchez Chiquero T. Häusser

Decision electronically authenticated