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Datasheet for the decision
of 26 January 2023

Case Number:	T 0768/17 - 3.5.01
Application Number:	13175965.6
Publication Number:	2824628
IPC:	G06Q20/20, G06Q20/32, G06Q20/38, G06Q20/40
Language of the proceedings:	EN

Title of invention:
Direct debit procedure

Applicant:
Vodafone Holding GmbH

Headword:
Authenticating wireless payments/VODAFONE

Relevant legal provisions:
EPC Art. 56
RPBA 2020 Art. 13(2)

Keyword:
Inventive step - authenticating a wireless payment by comparing information about a transaction provided independently by a customer's mobile device and a merchant system (no - obvious implementation of a business requirement)

Decisions cited:

T 0641/00

Case Number: T 0768/17 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 26 January 2023

Appellant: (Applicant)	Vodafone Holding GmbH Mannesmannufer 2 40213 Düsseldorf (DE)
Representative:	Jostarndt Patentanwalts-AG Philipsstraße 8 52068 Aachen (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 11 November 2016 refusing European patent application No. 13175965.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	M. Höhn
Members:	W. Zubrzycki
	E. Mille

Summary of Facts and Submissions

I.   This is an appeal against the decision of the examining
        division to refuse European patent application
        No. 13175965.6 for lack of inventive step (Article 56
        EPC) in view of D1 (WO 2010/019670 A2).

II.   The contested decision held that the features
        distinguishing the claimed invention from D1
        constituted the obvious implementation of a
        non-technical requirement.

III.   In the statement setting out the grounds of appeal, the
        appellant requested that the decision of the examining
        division be set aside and a patent be granted on the
        basis of the refused main, or one of the first to
        fourth auxiliary requests, all re-filed therewith. The
        appellant also requested that the appeal fee be
        reimbursed.

IV.   In a communication pursuant to Rule 100(2) EPC, the
        Board set out its preliminary view that the
        subject-matter of all requests lacked inventive step
        over the disclosure of D1 and that the reimbursement of
        appeal fee was not justified.

V.   With a reply dated 2 June 2021, the appellant filed a
        new fifth auxiliary request and submitted supporting
        arguments.

VI.   The Board arranged for oral proceedings. In a
        communication accompanying the summons, the Board
        tended to consider that the subject-matter of all
        requests lacked inventive step over D1, all auxiliary
        requests contained added subject-matter (Article 123(2)

EPC) and the fifth auxiliary request was not clear
(Article 84 EPC).

VII.   With a reply dated 28 November 2022 the appellant filed
       a new main and first to fifth auxiliary requests to
       replace the previous requests and provided arguments in
       favour of their allowability.

VIII. Oral proceedings were held by videoconference on
       26 January 2023. During the oral proceedings the
       appellant filed a new main request. The Board did not
       admit this request into the proceedings under Article
       13(2) RPBA 2020. The appellant withdrew the request for
       the reimbursement of the appeal fee.

IX.   The appellant's final requests were that the decision
       under appeal be set aside and a patent be granted on
       the basis of one of the auxiliary requests 1 to 5
       submitted by the appellant with their letter dated 28
       November 2022.

X.   Claim 1 of the fifth auxiliary request reads:

       *"A system comprising a mobile communication device
       (110) and a backend system (105), wherein the mobile
       communication device (110) comprises*

            *a radio interface (112) for receiving at least
         a part of an identifier provided by means of a
         backend system (105);*

            *a secure element (115) being adapted to store
         the transmitted identifier;*

            *a processor for preparing a transaction to a
         reader device (120) by means of at least a part of
         the transmitted identifier and first information
         about the transaction;*

            a transaction interface (116) for transferring

*at least the part of the transmitted identifier and
the first information about the transaction to a
reader device (120) for starting the transaction;
and*

  *wherein the processor is adapted to prepare
second information about the transaction and the
radio interface (112) is adapted to transmit the
second information about the transaction to the
backend system (105) after starting the
transaction;*

*and wherein the backend system (105) comprises a
backend processor (102) for generating the identifier,
the backend system further comprises a backend memory
(101) for storing the identifier and a backend
interface (103) for transmitting at least a part of the
identifier to the mobile communication device (110);*

  *the backend interface (103) being further
adapted to receive via a first communication
channel a request of confirmation comprising at
least the part of the identifier transferred to the
reader device (120) and first information about the
transaction;*

  *the backend interface (103) being further
adapted to receive the second information about the
transaction from the mobile communication device
(110) via a different second wireless communication
channel;*

  *the backend processor (102) being adapted to
compare the first and second information about the
transaction;*

  *the backend processor (102) being further
adapted to authenticate the request and to prepare
a confirmation to verify the identifier transferred
to the reader device (120) if the comparison
reveals that the first and the second information
coincide within certain limits, and*

the backend interface (103) being further adapted to transfer the confirmation for initiating a payment by means of a bank system (130), if the request is authenticated."

XI.   Claim 1 of the fourth auxiliary request differs from claim 1 of the fifth auxiliary request, in that it does not contain the wording "*if the request is authenticated*" at the end. It also replaces the wording "*second information*" in the penultimate feature by "*the second information*".

XII.   Claim 1 of the third auxiliary request reads:

"A mobile communication device (110) being adapted for direct debiting a user, the mobile communication device (110) comprising:

a radio interface (112) for receiving at least a part of an identifier provided by means of a backend system (105);

a secure element (115) being adapted to store the transmitted identifier; a processor for preparing a transaction to a reader device (120) by means of at least a part of the transmitted identifier and first information about the transaction;

a transaction interface (116) for transferring at least the part of the transmitted identifier and the first information about the transaction to a reader device (120) for starting the transaction;

and wherein the processor is adapted to prepare second information about the transaction and the radio interface (112) is adapted to transmit the second information about the transaction to the backend system (105) after starting the transaction."

XIII.   Claim 1 of the first and second auxiliary request
        reads:

        "*A method of direct debiting a user by means of a
        mobile communication device (110) comprising a secure
        element (115), the method comprising the steps of:
            - receiving at least a part of an identifier
        provided by means of a backend system (105) by means of
        the mobile communication device (110);
            - storing the transmitted identifier in the secure
        element (115);
            - initiating a data connection between the mobile
        communication device (110) and/or the secure element
        (115) and a reader device (120) for preparing a
        transaction;
            - transferring at least a part of the transmitted
        identifier to the reader device (120);
            - verifying the identifier to be transferred to the
        reader device (120) or transferred to the reader device
        (120) in order to release a payment by means of a bank
        system (130), wherein the step of verifying comprises
        the steps of:
                - receiving via a first communication channel a
            request for confirming the transaction and/or the
            payment by means of the backend system (105) by
            providing at least the part of the identifier
            transferred to the reader device (120) and first
            information about the transaction;
                - submitting second information about the
            transaction by means of a radio interface (112) of
            the mobile communication device (110) to the
            backend system (105) via a different second
            wireless communication channel;
                - comparing the first and second information
            about the transaction by means of the backend
            system (105);*

– authenticating the request by means of the backend system (105) if the comparison reveals that the first and the second information coincide within certain limits; and

– transferring the confirmation from the backend system (105) to the bank system (130) of the user."

XIV.   Claim 1 of the main request filed during the oral proceedings replaces the wording "*if the request is authenticated*" at the end of claim 1 of the fifth auxiliary request by the following one:

"*the backend interface (103) being further adapted to stop the transaction it the comparison reveals that the first and the second information does not coincide within certain limits
the backend interface (103) requesting an independent authentication of the user of the mobile communication device, the authentication process comprising individual information and being performed by means of the mobile communication device or by means of another communication device if the transaction is blocked, and the backend interface (103) being further adapted to release the transaction or future transactions after the independent authentication of the user."*

XV.   The appellant argued as follows:

The business person giving a non-technical requirement to the technically skilled person would not have considered comparing the first and second information in the claimed manner. This solution detected human mistakes, fraudulent data manipulation and transmission disturbances and, therefore, improved transaction security which was a (further) technical effect.

The technical problem was to enable data exchange
between the relevant devices such that the manipulation
of electronically processed transaction data could be
detected.

Verifying transactions by comparing the first and
second information was quite similar to using checksums
which was technical. The condition that the first and
second information coincided within certain limits,
rather than being identical, reflected the fact that
the technical system in the real world incurred some
error which should be allowed for.

Using two separate communication channels to
authenticate the transaction was not obvious in view of
D1. Although the system of D1 included such channels,
it used them in different embodiments. There was no
hint to use the channels jointly for authenticating one
transaction. Indeed, the second channel of D1 was not
used for transaction authentication at all, but rather
for the softcard provision.

The main request filed during the oral proceedings was
admissible because the amendments overcame all raised
objections and were straightforward and directly
derivable from the application.

Reasons for the Decision

1.   Admittance

1.1   Auxiliary requests 1 to 5

        The Board admits the first to fifth auxiliary requests

into the proceedings under Article 13(2) RPBA 2020. The reason is that these requests are a *bona fide* attempt to resolve issues under Articles 84 and 123(2) EPC raised by the Board for the first time. Also the amendments made are minor and do not present the Board with any new complex issues.

1.2   The Board does not admit the main request filed during the oral proceedings into the proceedings for the following reasons.

Firstly, claim 1 of this request contains extensive amendments based on the description and the Board cannot see an exceptional circumstance in the sense of Article 13(2) RPBA 2020 which would justify making such amendments at an advanced stage of the proceedings. This is all the more so considering that the objection of lack of inventive step, which the amendments seek to overcome, was raised in the contested decision and expanded in the Board's two communications. Accordingly, the appellant had ample opportunity to introduce these amendments earlier.

Secondly, contrary to the appellant's view (see section XV above), it is not *prima facie* clear and would have to be carefully examined whether the amendments indeed overcome the objection under Article 56 EPC and do not give rise to new issues. Conducting such examination at an advanced procedural state contradicts the need for procedural economy laid down in Article 13(1) RPBA 2020.

2.   Since the new main request replacing the previous main request was not admitted, the Board has to only decide on the auxiliary requests filed with a letter dated

28 November 2022.

3.   The invention

3.1   The invention concerns the authentication of a wireless
payment transaction at a point of sale (POS) (see
published application, paragraphs [6] and [7]).

3.2   Looking at Figure 3, the core idea is to receive
independently information about a payment transaction
from the POS's reader device (120 - "first information
about the transaction" in the claims) and a customer's
mobile communication device (110 - "second information
about the transaction") and to accept the transaction
only if those information items "coincide within
certain limits", see [12] and [16]. This effectively
means that the transaction is rejected if the mobile
device and the POS terminal provide inconsistent
information about it.

3.3   Payments are conducted using a payment identifier which
the mobile communication device receives from a backend
system (105). While not claimed, but disclosed in the
application, the identifier may be for example an IBAN,
see [5] and [38].

In order to carry out a payment at the POS, the mobile
communication device wirelessly transfers the
identifier, stored in a secure element (115), to the
reader device ([6]) along with the first information
about the transaction ([12] and [13]). The reader
device forwards the received data to the backend
system, which is entrusted with the transaction
authentication, via a first communication channel.
Additionally, the mobile device prepares the second
information about the transaction and sends it to the

backend system via a second wireless communication channel, see [12], [16], [25] and [28].

The backend system compares the first and second information and if they coincide within certain limits ([16]), it instructs a bank system to effect the payment ([40]).

4.   Fifth auxiliary request, Article 56 EPC

4.1   The Board finds it efficient to analyse the most specific fifth auxiliary request first.

4.2   It is common ground that D1 is the closest prior art. Using the wording of claim 1, D1 discloses (claim wording in italics; references to D1 and the Board's comments in brackets):

A system comprising a mobile communication device (page 6, line 4: an NFC-enabled mobile device) *and a backend system* (page 5, lines 15 to 17: a merchant server),

wherein *the mobile communication device (110) comprises a radio interface (112) for receiving at least a part of an identifier provided by means of a backend system* (page 8, lines 26 to 30 and page 10, lines 4 to 9: a softcard's personalisation data is sent wirelessly from the merchant server to the NFC-enabled mobile device);

a secure element (115) being adapted to store the transmitted identifier (page 10, lines 10 to 11);

a processor for preparing a transaction to a reader device (120) by means of at least a part of the transmitted identifier and first information about

*the transaction and a transaction interface (116)
for transferring at least the part of the
transmitted identifier and first information about
the transaction to a reader device (120) for
starting the transaction* (page 10, lines 25 to 30:
transmission of the softcard personalisation data
and further information concerning card balance and
payment amount to a wireless device reader (118) at
the POS).

*the backend system (105) comprises a backend
processor (102) for generating the identifier, the
backend system further comprises a backend memory
(101) for storing the identifier* (page 8, lines 19
to 25) *and a backend interface (103) for
transmitting at least a part of the identifier to
the mobile communication device* (page 8, lines 26
to 30 and page 10, lines 4 to 9).

Furthermore, D1 discloses a communication channel
connecting the POS system to the merchant server (page
11, lines 12 to 17) which corresponds to the first
communication channel in claim 1. The system of D1 uses
this communication channel for validating an
authorisation code provided to a non NFC-enabled mobile
device. D1 discloses further an over-the-air
communication channel connecting the merchant server to
the mobile device (page 9, lines 9 to 11 and page 10,
lines 4 to 7) which corresponds to the second wireless
channel in claim 1.

4.3   The subject-matter of claim 1 differs from D1 in that
        (lettering added by the Board):

        A) The backend interface (103) is further adapted to
        receive via a first communication channel a request of

confirmation comprising at least the part of the
identifier transferred to the reader device (120) and
first information about the transaction;
B) The backend interface (103) is further adapted to
receive the second information about the transaction
from the mobile communication device (110) via a
different second communication channel;
C) The backend processor (102) is adapted to compare
the first and second information about the transaction;
D) The backend processor (102) is further adapted to
authenticate the request and to prepare a confirmation
to verify the identifier transferred to the reader
device (120) if the comparison reveals that the first
and second information coincide within certain limits;
E) The backend interface (103) is further adapted to
transfer the confirmation for initiating a payment by
means of a bank system, if the request is authenticated
(130).

4.4   As set out above, the distinguishing features implement
        the idea that the transaction is accepted if the
        information about it provided by the customer and the
        POS coincide within certain limits. Like the contested
        decision and contrary to the appellant's view (see
        decision, pages 5 to 6 and section XV above), the Board
        judges that this is a business idea which does not
        involve any technical considerations. Entrusting the
        backend instance with authenticating transactions is a
        further business decision.

4.5   Accordingly, the Board judges that the distinguishing
        features implement a non-technical business method,
        wherein:

        - The transaction is accepted if the first information
        about it received from the POS and second information

about it created by the customer coincide within
certain limits.
- The first and second information about the
transaction are independently provided to the backend
instance which performs the authentication and forwards
accepted transactions to a bank for initiating a
payment.

4.6   Contrary to the appellant's view, the Board cannot see
        that, at the level at which they are defined, the
        distinguishing features enable detecting transmission
        disturbances between the user mobile device and the
        reader device.

        Firstly, the claim says that the first and second
        information are independently prepared and, in fact,
        covers the case that they are quite different.
        Secondly, the criterion that those information items
        coincide within certain limits covers any kind of
        subjective semantic similarity. Contrary to the
        appellant's argument, the Board cannot see how applying
        this broad semantic criterion credibly addresses the
        fact that a real-life data processing system might
        incur some error at a bit level.

        Hence, the claim covers comparing different
        independently created information using a broad
        semantic criterion. The Board cannot see how this
        contributes to detecting transmission errors between
        the mobile device and the POS or elsewhere in the
        claimed system.

4.7   Furthermore, in view of the lack of detail concerning
        the content of the compared information and the
        vagueness of the comparison criterion, the Board doubts
        that the alleged effect of detecting a human mistake or

fraudulent manipulation of transaction data is achieved over the whole scope of the claim. However, even assuming that in some cases a human mistake and manipulation could be detected, these effects would result from the aforementioned business idea and not from its technical implementation and, therefore, would not count towards an inventive step.

4.8   Furthermore, the Board disagrees that, from the technical perspective, the claimed solution is comparable to the use of checksums in order to establish integrity of electronically transmitted data. Firstly, checksum algorithms operate at a bit level and, unlike the claimed method, are not concerned with the information semantics. Secondly, a checksum is calculated on transmitted information, whereas the claimed method compares two different, independently created information items.

4.9   In line with the COMVIK principle (see T 641/00 - Two identities/COMVIK), once the aforementioned requirement specification has been provided to the skilled person within the framework of the technical problem, he would have found the claimed implementation obvious without the need for inventive skills.

4.10   Starting from D1, it would have been obvious to program the POS system to forward the information received from the mobile device to the merchant server over the communication channel connecting the merchant server and the POS.

       Furthermore, it would have been obvious to adapt the NFC-enabled mobile device to create second information about the transaction. The requirement specification asking that the second information be transmitted

independently of the first information translates in an
obvious manner, at the technical level, to transmitting
this information via a channel different from the one
connecting the POS and the merchant server.
Accordingly, it would have been obvious to use the
wireless connection between the merchant server and the
mobile device for this purpose.

Finally, it follows directly from the requirement
specification that the merchant server needs to be
adapted to determine whether the first and second
information coincide to some extent and, if so, to
provide the accepted transaction to a bank system for
initiating a payment.

4.11   Contrary to the appellant's argument, the Board judges
        that the fact that in D1 the channel between the
        merchant server and the mobile device is not used for
        the same business purpose as in the claim and the fact
        that the channels of D1 are used in different
        embodiments would not have prevented the skilled person
        from adopting the above solution.

        Also the appellant expressed the opinion that a skilled
        person would deem a second channel necessary if he was
        unsure of the discretion of the first channel and that
        a comparison would be obsolete, if both sets of
        information were transmitted via the same channel (see
        page 3, third paragraph of the letter dated
        28 November 2022). The Board agrees with this point of
        view and concludes that the skilled person would have
        considered the use of a second communication channel
        without the need for inventive skills.

        Furthermore, the use of the channels already disclosed
        in D1 has the evident advantage that no technical

modification to the system of D1 is required.

4.12   Hence, claim 1 lacks an inventive step (Article 56
        EPC).

5.   First to fourth auxiliary requests

        Since claim 1 of the first to fourth auxiliary requests
        are broader than claim 1 of the fifth auxiliary
        request, they lack an inventive step for the above
        reasons.

6.   Accordingly, none of the requests fulfils the
        requirements of the EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

                                              M. Höhn
T. Buschek

Decision electronically authenticated