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(D) [ X ] No distribution


# Datasheet for the decision
## of 1 April 2025


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| **Case Number:** | T 1468/21 - 3.4.03 |
| **Application Number:** | 17382543.1 |
| **Publication Number:** | 3438941 |
| **IPC:** | G07F17/12 |
| **Language of the proceedings:** | EN |

**Title of invention:**
AUTONOMOUS LOCKER WITH SYNCHRONIZED LOCK, SYSTEM AND PROCEDURE FOR THE DELIVERY AND COLLECTION OF GOODS ASSOCIATED WITH SAID LOCKER

**Applicant:**
Citibox Smart Services, S.L.

**Relevant legal provisions:**
EPC Art. 52(1), 56
RPBA 2020 Art. 13(2)

**Keyword:**
Inventive step - (yes) - non-obvious solution
Amendment after summons - exceptional circumstances (yes)

**Decisions cited:**
T 1670/07, T 1741/08

**Catchword:**

Inputting a single piece of information, which represents feedback on a factual, objective situation from a user within a technical process and does not require any mental activity on the part of the user, i.e. no specific reaction by the user to information, does not immediately lead to a "broken technical chain fallacy" (Reasons 3.4.9 to 3.4.13).

Beschwerdekammern

Boards of Appeal

Chambres de recours

Europäisches Patentamt
European Patent Office
Office européen des brevets

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Case Number: **T 1468/21 - 3.4.03**

# D E C I S I O N
## of Technical Board of Appeal 3.4.03
## of 1 April 2025

| | |
|---|---|
| **Appellant:** | Citibox Smart Services, S.L. |
| (Applicant) | Paseo de la Castellana 127, 2° A |
| | 28046 Madrid (ES) |
| | |
| **Representative:** | Hoffmann Eitle |
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| | Paseo de la Castellana 140, 3a planta |
| | Edificio LIMA |
| | 28046 Madrid (ES) |
| | |
| **Decision under appeal:** | **Decision of the Examining Division of the European Patent Office posted on 31 March 2021 refusing European patent application No. 17382543.1 pursuant to Article 97(2) EPC.** |

**Composition of the Board:**

| | |
|---|---|
| **Chairman** | T. Häusser |
| **Members:** | J. Thomas |
| | T. Bokor |

## Summary of Facts and Submissions

I.      The appeal is against the examining division's decision
        to refuse European patent application No. 17 382 543 on
        the grounds that the subject-matter of the then sole
        request on file did not involve an inventive step
        (Article 56 EPC).

II.     During the appeal procedure, the appellant submitted
        requests which were all withdrawn during the oral
        proceedings before the board, apart from the sole main
        request submitted during these oral proceedings.

III.    At the end of the oral proceedings before the board the
        appellant requested that the impugned decision be set
        aside and that a European patent be granted on the
        basis of the following documents:
        - Description: pages 1 to 11 received during oral
          proceedings before the board,
        - Claims: No. 1 to 10 received during oral
          proceedings before the board,
        - Drawings: sheets 1/3 to 3/3 filed in electronic
          form on 4 September 2017.

IV.     Independent device claim 1 of the sole request has the
        following wording (feature numbering in square brackets
        has been added by the board in line with the feature
        numbering used in the impugned decision):

        "*[A] A system for the delivery and collection of goods,
        comprising at least:
        - one locker (1) with a synchronized lock (12),
        comprising a door (11) and an electronic lock (12)
        provided with a keypad (121) for inputting opening*

*codes, storage means (122) and processing means (123), where:*

*[B] the storage means (122) of the lock (12) store, by means of hardware/software,*

*[C] at least one set (A) of opening codes generated by a generation seed for generating said set (A) of codes;*

*[D] the locker (1) being characterized in that the lock (12) also comprises processing means (123) implemented by means of hardware and/or software, where said processing means (123) of the lock (12) are configured with a selection algorithm for identifying when the lock (12) of the locker (1) is open or closed, and*

*[E] for automatically assigning a new opening code from the set (A) to the lock (12) upon opening or closing said lock (12) of the locker (1),*

*[F] wherein the assignment of a new opening code is autonomous with respect to external communications and*

*[G] – one remote server (2) equipped with: storage means (21) configured for storing at least the corresponding generation seed for generating said set (A) of codes; and processing means (22) implemented by hardware/software, said processing means (22) being configured with the same opening code selection algorithm as the one comprised in the processing means (123) of the lock (12) of the locker (1)*

*– one or more terminals (4, 4') connected to the remote server (2) through a communication network (5);*

*[H] wherein the system is characterized in that the opening code of the server (2) is synchronized with the opening code of the locker (1), such that said code can be communicated to the users (3, 3') of the system from the server (2), by means of the one or more terminals (4, 4'), wherein after establishing the new opening code, confirmation information is configured to be sent to the server (2) by means of a terminal of the one or more terminals (4, 4') through the communication*

*network (5), where after sending the confirmation
information to the remote server (2), the remote server
is configured to update its active opening code in a
manner synchronized with the lock (12) of the locker
(1), the remote server configured to send the active
opening code through the communication network (5) to a
new user (3, 3') of the system.*"

Independent method claim 5 of the sole request has the
following wording:

"*A method for the delivery and collection of goods,
which comprises using a system according to any of
claims 1-4, and performing the following steps:
- establishing a first code as the active code of the
    lock (12), where said first code is stored in the
    storage means (122) or computed in the processing
    means (123) from the set (A);
- opening the lock (12) only once when said first code
    is input through the keypad 10 [sic] (121) and
    keeping it closed if any other code is input;
- establishing, by means of the selection algorithm of
    the processing means (123), a second code as the
    active code of the lock (12) and where said
    second code is stored in the storage means (122)
    or computed in the processing means (123) from
    the set (A);
- opening the lock (12) only once when said second code
    is input through the keypad (121) and keeping it
    closed if any other code is input; and
- returning subsequently to the first step;
wherein, after establishing the new opening code in the
lock (12), confirmation information is sent to the
remote server (2) of the system by means of a mobile
terminal (4, 4') through the communication network (5),
where after sending the confirmation information to the*

*remote server (2) of the system, the latter updates its*
*active opening code in a manner synchronized with the*
*lock (12) of the locker (1) and sends it through the*
*communication network (5) to a new user (3, 3') of the*
*system."*

V.      The following document is referred to below:
        D1: WO 01/39638 A1

VI.     The appellant's arguments, insofar as they are relevant
        to the present decision, are summarised as follows:

        The appellant was to be given the opportunity to
        respond to the examining division's surprising
        objection concerning the "*broken technical chain
        fallacy*" by filing an amended claim request. The
        objection concerning the "*broken technical chain
        fallacy*" was raised for the first time during the oral
        proceedings before the examining division and the
        precise reasoning only became clear upon reading the
        examining division's written decision.

        In addition, the "*broken technical chain fallacy*" did
        not apply in the case in hand because the locker and
        the related units, such as the remote server and the
        terminal(s), were only used and controlled by the user,
        which is comparable to what a driver would do with a
        steering wheel when driving a car. As the subject-
        matter of claims 1 and 5 was technical, was novel and
        was not obvious in view of the teaching of document D1
        in combination with the common general knowledge, the
        claim request was to be considered to fulfil the
        requirements of the EPC and a European patent was to be
        granted accordingly.

**Reasons for the Decision**

1.      Admission of the main request

1.1     The main request was filed for the first time during
        the oral proceedings before the board. It therefore
        constitutes an amendment to the appeal case, the
        admission of which into the proceedings is governed by
        Article 13 RPBA.

1.2     According to Article 13(2) RPBA, "*[a]ny amendment to a
        party's appeal case made ... after notification of a
        communication under Article 15, paragraph 1, shall, in
        principle, not be taken into account unless there are
        exceptional circumstances, which have been justified
        with cogent reasons by the party concerned*".

1.3     The examining division raised the objection with regard
        to the "*broken technical chain fallacy*" for the first
        time during the oral proceedings before the examining
        division. In so doing, the examining division put the
        appellant in a difficult situation, since the appellant
        could not respond correctly and promptly to this rather
        specific objection during the oral proceedings before
        the examining division. Moreover, the examining
        division's exact reasoning with regard to this
        objection only became clear to the appellant when it
        read the examining division's written decision.
        Therefore, the board concurs with the appellant that it
        should be allowed to submit a new set of claims in the
        appeal proceedings.

1.4     The appellant's substantive arguments put forward in
        its grounds of appeal as to why the "*broken technical
        chain fallacy*" did not apply to the subject-matter of
        claim 1 became fully comprehensible only during the

discussion in the oral proceedings before the board. In response to this, the appellant submitted a new set of claims which did not require the board to examine any new issues and also overcame all the outstanding objections.

1.5    Under these circumstances the board considers that filing a sole request in which all the outstanding objections have been addressed and which does not give rise to any further objections constitutes exceptional circumstances in the sense of Article 13(2) RPBA.

1.6    Hence, the board exercises its discretion and admits the main request submitted during the oral proceedings before the board into the proceedings (Article 13(2) RPBA).

2.     The invention

The present invention concerns a locker for delivery and collection of goods with an electronic lock. In order to provide secure delivery, the locker comprises a keypad which allows an opening code to be entered which is updated after each use. A valid opening code is transmitted to the user from a remote server synchronised with the valid code of the locker prior to the locker being opened by the user when collecting a delivered good. The locker is supposed to be entirely autonomous with regard to all other structural units, i.e. it is not supposed to communicate remotely with other structural units. This is achieved by storing the same generation seed for generating the opening codes in the locker and in parallel in a remote server. Once an opening code has been used to open the locker, the processing unit of the locker automatically generates and activates a new code in the electronic lock of the

locker. In order to synchronise the remote server with
the locker, the user who has opened the locker and
collected or delivered goods provides feedback to the
remote server via an additional external terminal,
indicating that the previous code has been used. In
response to this feedback from the user, a new code is
also activated in the remote server, using the same
generation seed as the one used in the locker, so that
the updated codes in the locker and the remote server
are identical. For the next delivery, the updated code
can then be distributed to the next user by the remote
server. An entirely autonomous locker is less at risk
of an attack and provides increased security. In
addition, an autonomous locker can be used in locations
in which telecommunication is not available.

3.        Inventive step

3.1       Closest prior art

3.1.1     Document D1 represents a suitable starting point for
          the assessment of inventive step.

          Document D1 deals with a system for delivery and
          collection of goods using a locker whose electronic
          lock is controlled by a central control system remote
          from the locker. Telecommunication means established
          between the locker and the central control system allow
          information to be exchanged between the central control
          system, the users and the locker.

3.1.2     It is undisputed that document D1 discloses feature [A]
          (D1: Figure 1; page 9, lines 6 to 16), feature [B] (D1:
          abstract; Figure 1; page 10, lines 21 to 26) and
          feature [D] (D1: page 11, lines 20 to 30).

3.2      Differentiating features

3.2.1    Features [C], [E], [F], [G] and [H] are not disclosed
         in their entirety in document D1 and are consequently
         the differentiating features. The locker in document D1
         is not autonomous, but is centrally controlled by the
         computer (40) / central control system. The opening
         codes are centrally generated in the central control
         system, which distributes every newly updated opening
         code to the locker and to the user. Hence, the locker
         in document D1 is not autonomous and document D1 does
         not disclose any specific details of how the opening
         codes are selected or created in the central control
         system (40).

3.3      Technical effect - objective technical problem

3.3.1    As identified by the appellant, the differentiating
         features solve the technical problem of providing a
         fully autonomous locker. The board agrees.

3.3.2    Feature [C] relates to a particular way of creating or
         determining the opening code and of storing it in the
         locker.

3.3.3    Features [E], [F], [G] and [H] relate to the specific
         set-up of an autonomous locker and its relationship
         with the remote server / central control system in
         order to correctly distribute the valid opening code to
         the user and synchronise the autonomous locker with the
         central control system.

3.3.4    Although the locker is autonomous with respect to other
         structural units like a telecommunication network or
         the central control system, the opening codes in the
         locker and the remote server need to be updated and

synchronised after the delivered goods have been
collected from the autonomous locker (or delivered to
the locker). The new opening codes have to be generated
and synchronised in both the locker and the remote
server. The synchronisation between the remote server
and the locker is essential in order to issue a new
code to a new user only after the previous code has
been used, i.e. after the delivered goods have been
picked up from the locker (or after the goods have been
delivered to the locker).

3.3.5   The five differentiating features [C], [E], [F], [G]
        and [H] are at least partially linked to the objective
        technical problem of rendering the locker autonomous;
        however, these features solve three separate technical
        "sub-problems" related to the cited technical problem.

3.3.6   The first sub-problem relates to the question of how
        the opening codes are created or selected.

3.3.7   The second sub-problem relates to the question of how
        to provide the same opening codes in the locker and the
        remote server, i.e. how to ensure that the same opening
        code is provided in the locker and the remote server
        which distributes the locker's opening code to the
        user.

3.3.8   The third sub-problem relates to the question of how to
        synchronise both separate units, namely the locker and
        the remote server, in order to ensure that both units
        use the same opening codes for one collection/delivery,
        i.e. that the correct opening code of the locker is
        remotely distributed to the user by the remote server
        only once the locker is available.

3.4     Obviousness

3.4.1    The above sub-problems immediately arise when the
         skilled person tries to render the locker known from
         document D1 completely autonomous. The board has
         illustrated this in Figure 1 of document D1 below by
         circling the locker to show that the locker has to be
         autonomous from external units, in particular from the
         central control system or the telecommunication
         network.
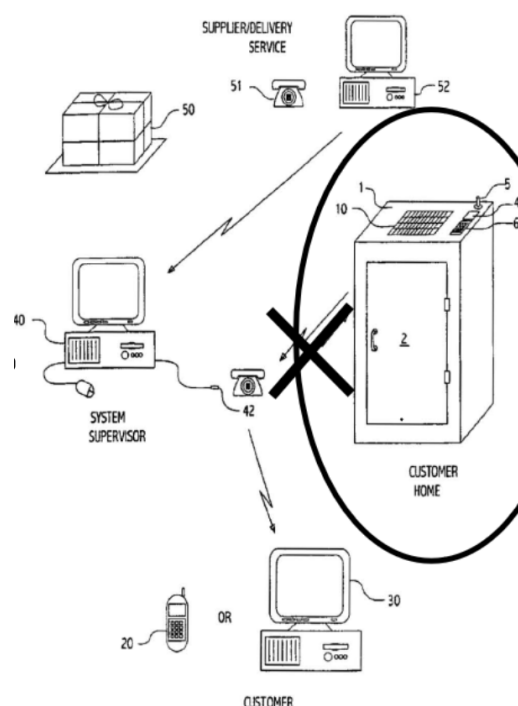


3.4.2    Therefore, when looking at this figure, the technically
         skilled person realises that if the locker should be
         autonomous, the opening codes must be stored or
         provided separately but in parallel in the locker and
         in the central control system, i.e. in the remote
         server. It is consequently obvious to the skilled
         person that the same list of opening codes, i.e. the
         same or a corresponding generation seed, must be stored
         in the remote server and the locker in parallel.
         Therefore, feature [C] must be used in the same way in

the locker and the remote server, resulting in feature
[G].

3.4.3  Concerning the above-mentioned first sub-problem, i.e.
the specific use of a generation seed to generate the
opening codes as defined by features [C] and [G],
document D1 discloses that the opening code is
"*generated*" by the central computer using "*security
code generation means*" (D1: page 2, line 24) or by the
"*system administrator*" (D1: page 10, lines 12 to 14).
On this basis, the use of a "*generation seed*" is
considered to be a well-known technical implementation
in relation to the general wording disclosed in
document D1. Therefore, the use of a "*generation seed*"
as defined in features [C] and [G] is part of the
common general knowledge and cannot contribute to
inventive step.

3.4.4  Features [C] and [G], relating to the first and second
sub-problems formulated under points 3.3.6 and 3.3.7
above, are considered obvious when starting from
document D1 in view of the skilled person's common
general knowledge.

3.4.5  The claimed solution to the third sub-problem relates
to the synchronisation of the opening codes provided in
the locker and in the remote server (for being
distributed to the user) as defined by features [E],
[F] and [H]. The board considers that the solution to
this sub-problem is not obvious to the skilled person
when starting from document D1, for the following
reasons.

3.4.6  In document D1, information of and relating to the
opening code is transmitted from the remote server to
the locker via the telecommunication network, including

not only the opening code itself but also information
concerning its activation, e.g. the time interval
during which the opening code should be enabled (D1:
page 10, line 14 to page 11, line 8). The central
control system might also monitor whether the locker
has actually been opened or closed by means of the
telecommunication network (D1: page 6, line 29 to page
7, line 12). Implementing a similar or alternative
method to that disclosed in document D1 in an
autonomous locker is consequently not feasible, as the
locker should not have any external link, meaning that
no information should be transmitted via the
telecommunication network from or to the locker. This
is illustrated in the reproduced Figure 1 of document
D1 above by the cross, which illustrates the
prohibition of communication with the outside world.

3.4.7     In the present invention and as defined by features [E]
          and [F], the opening code in the locker is updated to a
          new opening code once the door of the locker has been
          opened and/or closed. A detection mechanism to detect
          the door being opened and/or closed after the use of
          the activated opening code is therefore implemented in
          the locker, as also taught by document D1 (D1: page 5,
          line 30 to page 6, line 5).

          However, once the opening code is updated in the
          locker, the remote server has to be informed of this
          update, i.e. the locker and the remote server have to
          be synchronised, so that the remote server can also
          update the opening code to a new one. As long as the
          remote server is not informed of this change of the
          opening code to a new one in the locker, it cannot
          provide a new code to a new user.

Therefore, in the present invention, the synchronisation is attributed to the user who, after collecting the delivery (or after depositing the goods), inputs a single piece of information via the "*one or more terminals (4, 4')*", as defined in feature [H]. The "*one or more terminals (4, 4')*" allow this information to be transmitted to the remote server, notifying the remote server that the current code in the locker has been used. This enables the remote server to update the opening code to a new one.

3.4.8   The use of "*one or more terminals (4, 4')*" to provide the feedback to the remote server, as defined in feature [H], is not obvious when starting from document D1, however. Without any hindsight it cannot be demonstrated that document D1 indicates or suggests the specific synchronisation of opening codes as defined by feature [H]. In document D1 the synchronisation is obtained either by providing specific information via the telecommunication network to the locker (e.g. a predetermined time window for the opening code to be valid in the locker) or by direct monitoring of the locker from the central control system via the telecommunication network. The synchronisation as carried out in document D1 is therefore clearly quite different and the skilled person is not prompted to use the solution as implemented in the present invention. Therefore, the specific synchronisation via the user themselves using "*one or more terminals (4, 4')*", as defined by feature [H], is considered to be inventive.

3.4.9   With regard to the examining division's reasoning regarding the "*broken technical chain fallacy*", it is true that the locker and the "*one or more terminals (4, 4')*" are not technically linked to each other. The user's intervention is required to inform the remote

server, via the "*one or more terminals (4, 4')*", that
the locker door has been opened and/or closed; however,
in the present case, contrary to cases T 1670/07 and
T 1741/08, there is no "*broken technical chain*", since
the user only enters a single piece of objective
information on the "*one or more terminals (4, 4')*"
without any subjective choice or specific mental
activity on their part. They simply provide an
objective piece of information required to synchronise
the autonomous locker with the remote server in the
same way as they enter the opening code on the locker's
keypad to open it. No mental or subjective response by
the user is necessary, but they only provide an
objective piece of information ("*delivered good
collected from the locker*") to the "*one or more
terminals (4, 4')*".

3.4.10  In contrast to this, case T 1670/07 concerns optimising
a shopping itinerary in which the vendors visited are
selected according to the customer's user profile. The
deciding board found that "*the possible final technical
effect brought about by the action of a user cannot be
used to establish an overall technical effect because
it is conditional on the mental activities of the
user*" (point 11 of the Reasons). In the deciding
board's view, the technical effect, if present at all,
depended on the user's reaction to the itinerary. The
deciding board further explained, with reference to
T 1741/08, that a <u>user's reaction</u> to a piece of (non-
technical) information was considered to be a "*broken
technical chain fallacy*".

3.4.11  T 1741/08 concerns a graphical user interface (GUI)
designed to assist the user in making choices on the
GUI. The user's reaction is not a simple confirmation
of a *status quo* by the user to the technical system,

but instead the user responds subjectively to the information provided on the GUI (points 2.1.6 and 2.1.7 of the Reasons).

3.4.12   In contrast to these decisions, it becomes evident that a "*user's reaction to information*" is more than simple "*feedback*" in response to an actual situation. A "*user's reaction to information*" involves a subjective mental act performed by the user that is clearly distinct from simple feedback. Moreover, the user will recognise the simple feedback as an essential element for correctly using a technical system, as in the present case in which the user has no choice (apart from deciding whether or not to provide the expected input). For example, case T 1741/08 is in contrast to this, in which a user's reaction to information consists of a selection from several given and offered possibilities.

It could be argued that the entire process is stopped by a missing or incorrect user input (i.e. simple "*feedback*"); however, in the present case, this process interruption should not be interpreted as a possible "*broken technical chain*" since it is not the technical chain that is broken by subjective intervention of a user involving its reaction to information; the technical chain is merely broken by the claimed technical system being incorrectly used by the user.

3.4.13   Therefore, inputting a single piece of information, which represents feedback on a factual, objective situation from a user within a technical process and does not require any mental activity on the part of the user, i.e. no specific reaction by the user to information, does not immediately lead to a "*broken technical chain fallacy*".

3.5     The board therefore concludes that the examining
        division's decision was incorrect and that the subject-
        matter defined in claim 1 is inventive when starting
        from document D1 in view of the skilled person's common
        general knowledge (Article 52(1) EPC in combination
        with Article 56 EPC).

4.      Independent method claim 5 and dependent claims

        Independent method claim 5 refers to apparatus claim 1
        and defines the use of the autonomous locker in claim
        1. It is therefore inventive for the same reasons as
        claim 1. Since all the remaining claims are dependent
        on either claim 1 or claim 5, they also meet the
        requirement of inventive step.

5.      Conclusion

        The board concludes that since
        -   the subject-matter defined in claims 1 and 5, and
            the invention to which it relates, is novel and
            involves an inventive step, since
        -   this conclusion also applies to the dependent
            claims, and since
        -   the application documents as a whole meet the
            requirements of the EPC,
        a European patent can be granted on the basis of the
        application documents of the sole request.

**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 11 received during oral
              proceedings before the board,
            - Claims: No. 1 to 10 received during oral
              proceedings before the board,
            - Drawings: sheets 1/3 to 3/3 filed in electronic
              form on 4 September 2017.


The Registrar:                          The Chairman:


S. Sánchez Chiquero                     T. Häusser


Decision electronically authenticated