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**Datasheet for the decision
of 13 July 2021**

Case Number: T 0907/14 - 3.5.06

Application Number: 04789244.3

Publication Number: 1695202

IPC: G06F7/00

Language of the proceedings: EN

Title of invention:

METHODS AND SYSTEMS FOR TRACKING DELIVERY ITEMS

Applicant:

UNITED STATES POSTAL SERVICE

Headword:

Tracking delivery items/US POSTAL SERVICE

Relevant legal provisions:

EPC 1973 Art. 56

Keyword:

Inventive step - (no)

Decisions cited:

Catchword:



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Case Number: T 0907/14 - 3.5.06

D E C I S I O N
of Technical Board of Appeal 3.5.06
of 13 July 2021

Appellant: UNITED STATES POSTAL SERVICE
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 28 October 2013
refusing European patent application No.
04789244.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Müller
Members: A. Teale
B. Müller

Summary of Facts and Submissions

I. This is an appeal against the decision, dispatched with reasons on 28 October 2013, to refuse European patent application No. 04 789 244.3 on the basis that the claimed subject-matter lacked inventive step, Article 56 EPC, in view of either of the following documents:

D1: WO 97/08628 A and

D2: US 6 208 910 B1.

II. A notice of appeal and the appeal fee were received on 23 and 24 December 2013, respectively. The appellant requested that the decision be set aside and that a patent be granted on the basis of the documents on file. The appellant also made an auxiliary request for oral proceedings.

III. In a statement of grounds of appeal received on 28 February 2014, the appellant requested (main request) grant of a patent based on the claims of the main request in the decision, received on 25 March 2011, or on the basis of the first and second auxiliary requests received on 16 May 2013. The appellant reiterated the auxiliary request for oral proceedings.

IV. In a communication pursuant to Rule 100(2) EPC dated 12 December 2019 the board, in another composition, expressed doubts as to whether the subject-matter of claim 1 of all requests involved an inventive step, Article 56 EPC 1973, in view of D2.

- V. With a response dated 8 April 2020, the appellant filed an amended description and amended claims according to a main and first to third auxiliary requests. If none of these requests were allowable, then oral proceedings were requested.
- VI. On 28 January 2021 the board composition changed to the present one.
- VII. In an annex to a summons dated 23 March 2021 to oral proceedings the board set out its provisional opinion that the subject-matter of claim 1 according to the main and all three auxiliary requests did not involve an inventive step, Article 56 EPC 1973, in view of D2.
- VIII. The appellant did not submit amendments or arguments in response to the summons.
- IX. At the oral proceedings, held on 13 July 2021, the appellant requested that the decision under appeal be set aside and that a European patent be granted on the basis of claims 1 to 28 according to a main or first to third auxiliary requests and amended description pages 1 to 16, all documents filed with the letter dated 8 April 2020, and pages 1/4 to 4/4 of the drawings as published. At the end of the oral proceedings the board announced its decision.
- X. Claim 1 of the main request reads as follows:
- "1. A system for tracking the nesting of delivery items, comprising:
a first container for holding delivery items;
a first device for transmitting first identifying information regarding the first container in response

to a portable interrogation device coming within range of the first device;
a moveable transport container for holding the first container before and while the delivery items are being delivered;
a second device associated with the transport container for transmitting second identifying information to the portable interrogation device regarding the transport container in response to the portable interrogation device coming within range of the second device associated with the transport container;
the portable interrogation device being further configured to transmit the first and second identifying information and third identifying information regarding the portable interrogation device; and
a computing system for receiving the first, second and third identifying information from the portable interrogation device and associating the first container with the transport container in response to the first, second and third identifying information."

XI. Claim 1 of the first auxiliary request differs from that of the main request in the additional feature "wherein the first device is stationary"; see line 5.

Claim 1 of the second auxiliary request differs from that of the main request in setting out the additional features that a condition for transmitting the first identifying information is a "first indication" that the first container is moved by a handler and that a condition for transmitting the second identifying information is a "second indication" that the first container is placed in the transport container by the handler.

Claim 1 according to the third auxiliary request sets out the additional features according to both the first and the second auxiliary request.

Reasons for the Decision

1. Summary of the invention
 - 1.1 In the following the paragraph numbers refer to the amended description received on 8 April 2020.
 - 1.2 The invention relates to the manual or automatic (see [20]) loading of transport containers (e.g. trolleys; see figure 4 and [21]) with trays of deliverable items, such as letters, and concerns automatically determining which tray (see figure 1; 104) a mail handler (114) has picked up and into which container (116) the mail handler then places the tray. The process is illustrated in figure 2. Hence a data set associates the mail handler, the tray and the container, and the system can verify that the container is the correct one; see [29, 33]. The tray and the container "nest" in the sense that the tray can be placed into the container. Other examples of "nesting" at other hierarchical levels are letters placed in trays and containers loaded onto a vehicle. The ultimate aim is to track the progress of an individual mail item through the mail system; see [2].
 - 1.3 To do this, each tray is labelled with a bar-code (108) which is recognised by a fixed scanner (110) at the point where the handler picks up the tray (104). The scanner (110) and the container (116) each have an RFID (Radio Frequency IDentification; see [22,27]) tag which is read by a portable RFID interrogator device (120,

see [18]) carried by the mail handler. The RFID tag on the scanner (110) transmits the tray barcode information to the interrogator device when it comes into range; see [29]). Thus it is not the interrogation device that scans the bar-code on the tray, but the fixed scanner which passes this information via the RFID tag (112) to the interrogator device (120).

1.4 The mail handler's interrogator device can be part of a PDA (Personal Digital Assistant; see [23]) and is linked via WLAN (Wireless Local Area Network; 122, see [25]) to a computer system comprising an application server (124) connected to a database (126). The interrogator device (120) transmits information identifying itself, the first container (tray 104) and the transport container (trolley 116) to the computer system.

2. The board's understanding of the invention

2.1 "RF Tag 122"

The description contains a contradiction in referring to "RF Tag 122" (see [28-30]) as well as "wireless transceiver 122" (see [30]). In the light of figure 1, which shows a WLAN transceiver 122, the board considers that the skilled person reading the application would understand "RF Tag 122" to mean "RF Tag 112" which, according to figure 1, forms part of scanner 110.

2.2 Mail handlers

Mail handlers are first mentioned in the independent claims of the second and third auxiliary requests. According to paragraph [20], a handler can be human (see figure 1; 114), an automatic robotic handler or

"any form of transport means". This decision assumes that the mail handlers are human beings, as this is shown in figure 1.

2.3 The "moveable transport container" holding the "first container for holding delivery items" in claim 1

The amended description gives the examples of trays holding letters, containers (see the trolley in figure 4) holding trays and transportation (understood to mean "vehicles") holding containers. As a "letter" seems to be a "delivery item", the board takes the view that the "moveable transport container" and "first container for holding delivery items" in claim 1 can be understood according to the third scenario as the trolley 116 and the tray 104, respectively, as illustrated in figure 1.

2.4 The first device

According to claim 1, the first device (110) transmits information identifying the first container (tray 104) to the portable interrogation device (120). In the light of figure 1 and [29], the first device is understood to be RFID tag 112 which is connected to the bar-code scanner 110 at the end of the conveyor belt 106; see [18].

2.5 The second device

The second device (128) transmits information identifying the transport container (trolley 116) to the RFID interrogator (120). According to paragraph [22], the second device is understood to be the RFID tag (128) on the trolley (116) which responds to the RFID interrogator (120) when it comes within range.

2.6 The portable interrogation device

In the light of paragraphs [22-23, 29], this is understood to be the RFID interrogator (120) which is part of the mail handler's portable communication device (PDA, 118).

2.7 Tracking

In general terms, the invention relates to tracking delivery items (see [2,40]). The board understands this to mean knowing where delivery items are. More specifically (see [8] and original claim 1), the invention aims to track the nesting of delivery items. The description of the related art (see [3]) mentions mail delivery services tracking mail to ensure its efficient processing and taking "nesting into account so that items can be grouped and tracked at a macro level while still being able to track at the micro level".

3. Document D1 (WO 97/08628 A1)

3.1 D1 relates to real time tracking (understood to mean continuous tracking; see page 2, lines 23 to 26) of the location of shipping containers between their point of departure and their final destination. As shown in figure 1, goods receiving areas, such as docks (D1-D4) are each assigned a unique designator (Y1-Yn); see page 5, lines 6 to 14. Containers (C) (also referred to as "trailers") are pulled by vehicles (V) (also referred to as "carriers"), each vehicle being identified by a unique (SCAT) code, and each container being identified by a unique container number; see figure 4, first and third columns.

- 3.2 The container monitoring control system (CMCS; 10) comprises a central computer (11) with a database (12) and one or more data input terminals (14). The data input terminals may be hand-held RF/optical bar code scanners; see page 6, lines 36 to 40.
- 3.3 The identity of a container and the identity of the vehicle carrying it are recorded when the vehicle approaches the gate of a plant; see page 7, lines 20 to 25. Hence a container can be tracked on its journey; see page 9; lines 28 to 30. The carrier/container combination of data for each arriving container is stored in the computing system (10); see page 7, lines 35 to 42.
- 3.4 The board regards the container/trailer (C) in D1 as the "first container" in the claims and the vehicle/carrier (V) as the "moveable transport container". The RF optical scanner (14) (see page 6, lines 36 to 40) in D1 is regarded as the "portable interrogation device" in the claims. The bar-codes on the container and the vehicle are regarded as the "first device" and the "second device", respectively. The container monitor control system (CMCS) (10) in D1 including the CMCS database (12) is regarded as the computing system in the claims.
- 3.5 Hence, in the terms of claim 1, D1 discloses:

A system for tracking the nesting of delivery items (container load), comprising: a first container (C) for holding delivery items; a first device (container bar-code) for transmitting first identifying information regarding the first container in response to a portable interrogation device (see page 6, lines 36 to 40) coming within range of the first device; a moveable

transport container (V) for holding the first container before and while the delivery items are being delivered; a second device (vehicle bar-code) associated with the transport container for transmitting second identifying information regarding the transport container in response to the portable interrogation device coming within range of the second device associated with the transport container; the portable interrogation device being further configured to transmit the first and second identifying information; and a computing system for receiving the first and second identifying information from the portable interrogation device and associating the first container with the transport container in response to the first and second identifying information; see page 7, lines 35 to 42.

4. Inventive step, Article 56 EPC 1973

4.1 The main request

4.1.1 Claim 1 of the main request is the same as that of the first auxiliary request in the decision. In its decision, the examining division found item tracking, in particular the choice of which items to track and how to associate them, to be an administrative procedure which could not contribute to inventive step. In particular, the transmission of the third identifying information was seen as not solving a technical problem.

4.1.2 The board agrees with the conclusion regarding the third identifying information but has doubts regarding the broader finding that the choice of which items to track and how to associate them is an administrative procedure which cannot contribute to inventive step.

The validity of this broader finding is however not decisive in the present case.

- 4.1.3 Returning to the decision, as D1 disclosed the technical framework of the invention and the subject-matter of claim 1 differed from the disclosure of D1 only in the administrative tracking features, the subject-matter of claim 1 did not involve an inventive step in view of *inter alia* D1. The feature added to claim 1 in the then first auxiliary request, that the first and second identification were transmitted when the portable interrogation device came in range was a known measure in data acquisition.
- 4.1.4 The appellant has argued that claim 1 sets out simple technical means for making the processing and shipping of delivery items robust against human error, since the association of delivery items with transport containers is recorded and can be checked. These measures also speed up processing, since, for instance, multiple checks by a handler that the delivery items are being loaded into the correct transport container can be avoided. The appellant has disputed whether the portable interrogation device transmitting first to third identity information was an obvious implementation of a purely organisational requirement specification. On the contrary, the claimed arrangement provided a simple and efficient way of collecting and transmitting information on the nesting of delivery items to a central database with a limited number of devices required to process, record and identify the delivery items. The appellant also argued that several human mail handlers could share one portable interrogation device. Hence the claimed subject-matter was inventive in view over *inter alia* D1.

- 4.1.5 The board finds that the subject-matter of claim 1 of the main request differs from the disclosure of D1 in the following features relating to the third identifying information:
- a. the portable interrogation device is configured to also transmit third information regarding the portable interrogation device and
 - b. the computing system also receiving the third identifying information and using it in associating the first container with the transport container.
- 4.1.6 In the annex to the summons the board questioned (see points 8.7 and 8.8), albeit in the context of D2, whether associating the first container with the moveable transport container - or, more generally, the tracking of mail delivery items - required the "third identifying information". The question arose of what technical problem the third identifying information solved. It appeared to identify the mail handler that placed the first container in the transport container, by virtue of the interrogator device held by the mail handler. According to the description, each mail handler had a personal interrogator (120) in their PDA (118); see page 15, para. [58]. In the oral proceedings the board raised the same objection in the context of D1, and the appellant stated that it was unable to give a technical problem solved by the third identifying information. In particular, it played no role in associating the first container with the moveable transport container.
- 4.1.7 The appellant has argued that the claimed subject-matter had the advantage that several handlers could

share an interrogator, but not pointed to any disclosure of this in the original application. The board has not found any such disclosure. In the oral proceedings the appellant qualified this argument by stating that each mail handler had an interrogation device, but passed it to another handler at the end of their shift. It was in this sense that the mail handlers "shared" the interrogation devices.

- 4.1.8 Paragraph [3] of the description mentions mail being tracked to ensure its "efficient processing", and the appellant has argued (grounds of appeal, page 4, para. 1) that the claimed invention is "robust against human error". Thus the board finds it reasonable to assume that the purpose of collecting data on the handler is to measure handler performance, a common business activity. In the oral proceedings this point was raised in the context of D1, but the appellant had no further comment to make.
- 4.1.9 The board finds that differences "a" and "b" follow directly from the non-technical aim of monitoring handler performance, as explained above.
- 4.1.10 Consequently the board finds that the subject-matter of claim 1 of the main request does not involve an inventive step, Article 56 EPC 1973, in view of D1.
- 4.2 The first auxiliary request
 - 4.2.1 At the oral proceedings the appellant stated that it had no further comments to make on the auxiliary requests.
 - 4.2.2 Claim 1 of the first auxiliary request is restricted to the first device (understood by the board to be the RF

tag 112 on scanner 110) being stationary. The board regards it as implicit in D1 that, when the bar-code on a container is scanned at the gate of the plant (see page 7, lines 20 to 25), the vehicle carrying the container, and therefore also the container with its bar-code, are stationary (at least temporarily so, which the board judges to fall within the term as claimed).

4.2.3 Hence the additional feature is known from D1 and thus unable to lend inventive step to claim 1, Article 56 EPC 1973.

4.3 The second auxiliary request

4.3.1 Compared to the previous request, claim 1 of the second auxiliary request sets out the following additional features:

- i. a condition for transmitting the first identifying information is an indication that the first container is moved by a handler and
- ii. a condition for transmitting the second identifying information is that an indication the first container is placed in the transport container by the handler.

4.3.2 These features are based on paragraphs [28-29], according to which identifying information is sent to the interrogator when it comes within range of the first device (RFID tag 112) and the second device (RFID tag 128). The two associated events, namely moving the first container and placing the first container in the transport container, relate to recording the actions of the mail handler.

- 4.3.3 The appellant argued that D1 was concerned only with tracking containers and vehicles on arrival, not at the point of shipment and that, therefore, at least feature "ii" was not obvious over D1.
- 4.3.4 The board however considers it to be obvious that the end of any delivery will necessarily be the start of the next, and that a container may well, as a matter of course, be placed on a different vehicle for the next leg of the delivery journey.
- 4.3.5 Moreover, the board notes that features "i" and "ii" do not imply that a person physically moves a container or loads it onto a vehicle, and certainly not without the help of suitable machinery.
- 4.3.6 Accordingly, the board considers, firstly, that the "indication that the first container is moved by the handler" merely represents an action performed by the person checking and (partly or entirely) unloading the container and is, therefore, implied by D1; and, secondly, that it is obvious, even in the context of D1, to consider an act of placing a container on a vehicle in the context of D1 which primarily discloses the recording of arrival events.
- 4.3.7 Either way, acting in response to actions performed by "a handler", these actions, being obvious *per se*, contribute to fulfilling the non-technical aim of measuring handler performance.
- 4.3.8 Hence these features are also unable to lend inventive step to claim 1, Article 56 EPC 1973.

4.4 The third auxiliary request

4.4.1 Claim 1 according to this request combines the additional features according to the first and second auxiliary requests and is consequently open to the same objections *mutatis mutandis* as those requests.

4.4.2 Hence the additional features according to this request are unable to lend inventive step to claim 1, Article 56 EPC 1973.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



A. Voyé

M. Müller

Decision electronically authenticated