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**Datasheet for the decision
of 17 November 2023**

Case Number: T 0573/22 - 3.5.01

Application Number: 19186169.9

Publication Number: 3594876

IPC: G06Q10/08, G06Q50/30

Language of the proceedings: EN

Title of invention:

METHOD AND SYSTEM FOR DETECTING DURATION AND CAUSE OF BORDER DELAYS

Applicant:

BlackBerry Limited

Headword:

Detecting border delays/BLACKBERRY

Relevant legal provisions:

EPC Art. 56
RPBA 2020 Art. 12(6)

Keyword:

Inventive step - limiting data acquisition to a border geofence (no - obvious in view of the non-technical requirement specification)

Decisions cited:

T 0258/03, T 2035/11, T 0641/00



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0573/22 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 17 November 2023

Appellant: BlackBerry Limited
(Applicant) 2200 University Avenue East
Waterloo, Ontario N2K 0A7 (CA)

Representative: Murgitroyd & Company
Murgitroyd House
165-169 Scotland Street
Glasgow G5 8PL (GB)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 12 October 2021
refusing European patent application No.
19186169.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Höhn
Members: I. Kürten
L. Basterreix

Summary of Facts and Submissions

- I. This appeal is against the examining division's decision to refuse the European patent application No. 19186169.9 for lack of inventive step (Article 56 EPC).
- II. The examining division held that claim 1 of the main request, as well as of the first and second auxiliary requests, consisted of a mixture of technical and non-technical features. The division found that the technical features were known from several prior art documents, including D4 (WO 2018/068048 A1), and the non-technical features did not contribute to the technical character of the invention. The third auxiliary request was not admitted into the proceedings.
- III. In the statement setting out the grounds of appeal, the appellant requested that the decision to refuse the application be set aside and that a patent be granted based on the main or first to third auxiliary request considered in the decision under appeal. They further requested a refund of the appeal fee on the grounds that the examining division committed a substantial procedural violation.
- IV. In the communication accompanying the summons to oral proceedings, the Board tended to agree with the examining division's findings. The Board was also of the opinion that the examining division did not commit a substantial procedural violation, and there was no basis for refunding the appeal fee.

- V. In a reply, the appellant submitted further technicality and inventive step arguments.
- VI. During the oral proceedings, held by videoconference on 17 November 2023, the appellant confirmed their main and first to third auxiliary requests and withdrew their request for reimbursement of the appeal fee.
- VII. Claim 1 of the main request reads:

A method for providing a notification of a delay due to a border check, the method comprising:

at a vehicle (510):
determining (520) the vehicle (510) position;
obtaining (522) sensor data from the vehicle; and
issuing a report (530) to a network server (512);
and
at the network server (512), correlating (540) the sensor data with the vehicle position from the report;
wherein the sensor data includes a rear door opening event;

characterized in that:

sensor data from the vehicle is obtained (522) in response to the determined vehicle position indicating that the vehicle has entered a border geofence; and
the network server is further configured to:
calculate a shipping delay (720) from the received report; and
provide (722) a notification to a receiving company or customer of the shipping delay.

VIII. Claim 1 of the first auxiliary request adds to the end of the last feature before the characterising portion "*and vibration detection*".

IX. Claim 1 of the second auxiliary request reads:

A method for accounting for delays due to border checks when route planning for vehicles, the method comprising, at one or more vehicles (510), for each vehicle:

determining (520) the vehicle (510) position; obtaining (522) sensor data from the vehicle; and

issuing a report (530) to a network server (512); and

at the network server (512), correlating (540) the sensor data with the vehicle position from the report;

wherein the sensor data includes a rear door opening event and vibration detection;

characterized in that:

sensor data from the vehicle is obtained (522) in response to the determined vehicle position indicating that the vehicle has entered a border geofence; and

the network server is further configured to:

obtain data (912) from one or more vehicles; determine (920) border crossings with delays based on the obtained data;

analyze (922) the operation of a fleet of vehicles; and

reroute (930) a vehicle in the fleet away from a determined border crossing with a delay.

- X. Claim 1 of the third auxiliary request adds to the end of the first characterising feature in claim 1 of the second auxiliary request "*the length of the geofence dynamically updating according to data reporting by border services, or reported border traffic delays*".

Reasons for the Decision

1. *The invention*

The invention concerns determining and notifying a shipping delay of a vehicle caused by a border check, such as a customs check at an international border ([0001] to [0003] of the published application).

Looking at Figure 3, a vehicle detects that it has entered a border area 322 or 332 ("border geofence") based on its position. The vehicle then collects sensor data, such as data indicating a rear door opening or vibration. The sensor data and the vehicle's position are sent to a server, where they are correlated. Finally, the server calculates a shipping delay based on the data and notifies a customer about the delay (Figure 4 and [0070] to [0077]).

Data from multiple vehicles can be used to identify border crossings with delays and re-route vehicles away from these crossings (second and third auxiliary requests, Figure 9 and [0104] to [0107]).

2. *Main request - inventive step*

2.1 It is common ground that D4 is a suitable starting point for assessing inventive step. D4 delineates two main embodiments. In the first embodiment ([0042]), a vehicle periodically gathers sensor data and transmits them to a server. The data may encompass information about the vehicle's position, door opening events and vibrations ([0049]). If the data indicates an anomaly, the server may alert a third party ([0096]). In the second embodiment ([0088]), the vehicle only begins to collect and transmit sensor data, such as its position, when it has detected a door opening or movement in the trailer, indicating a potential theft attempt.

2.2 Claim 1 differs from the first embodiment in that:

- 1) the server calculates a shipping delay due to a border check based on sensor data indicating a rear door opening event and sends a notification about the delay;
- 2) the vehicle obtains and transmits the sensor data to the server in response to the vehicle position indicating that the vehicle has entered a border geofence.

These differences correspond to the differences identified by the appellant in the grounds of appeal, with the additional feature that the sensor data indicates a *rear* door opening event.

2.3 Concerning difference 1), the Board concurs with the examining division's assessment that calculating a shipping delay due to a border inspection and notifying a customer are non-technical administrative aspects. The appellant has not disputed this.

Furthermore, the inference that a vehicle is undergoing a border inspection when its rear door is opened in a border area is based on a non-technical heuristic assumption regarding the anticipated actions of customs officials. This heuristic may stem from simple observations made by a person without technical knowledge or expertise.

- 2.4 Regarding difference 2), the Board agrees with the examining division's view that limiting the monitoring of door opening events to a border geofence is also part of the non-technical administrative method. This requirement may come from an administrative employee of the shipping company solely concerned with delays arising from inspections in border regions, e.g. for non-technical purposes such as measuring KPIs or preparing reports (see, e.g. [0021] of the application).
- 2.5 Therefore, the Board takes the view that the monitoring of door opening events within a border geofence, the calculation of a shipping delay based on such an event, and the subsequent customer notification are non-technical features. In line with established case law, these features can be incorporated into the formulation of the objective technical problem (T 641/00 - *Two identities/COMVIK*).
- 2.6 The appellant argued that the "location-gated data acquisition" in difference 2), i.e. obtaining and sending sensor data *"in response to the determined vehicle position indicating that the vehicle has entered a border geofence"*, required less processing, power and bandwidth than the continuous data acquisition and transmission in D4. Based on this, the appellant defined the objective technical problem as

"how to efficiently warn a user about a delay/inspection at a border geofence".

- 2.7 The Board is not entirely convinced by this problem because the differences over D4 do not pertain to how a user is warned. Instead, they concern obtaining, sending and using sensor data to determine a delay. Therefore, in the Board's view, the objective technical problem should rather be formulated as *"how to adapt D4 to efficiently determine a risk of an inspection delay within a border geofence and notify a customer (in accordance with the non-technical features identified in points 2.3 and 2.4 above)".*

Since the problem is to identify delays within a border geofence, the skilled person is compelled to limit their actions to this area. Therefore, when starting from D4, their first step must be to verify that the vehicle's position is within the border geofence. Once this has been ascertained, they would have to check for the occurrence of an inspection, i.e. an opening of the rear door. Furthermore, considering D4's disclosure that door opening can be detected with suitable sensors (e.g. [0049]) and that sensor data can be analysed at the server (e.g. [0064]), the Board concludes that the skilled person would collect such sensor data and transmit them to the server to assess the risk of a delay due to a border check.

Hence, by simply adhering to the constraints imposed by the objective technical problem and following the guidance given in D4, the skilled person would arrive at the subject-matter of claim 1 in an obvious manner. Any technical effects inherent to the gated data acquisition, such as reduced processing and bandwidth

requirements, are inevitable consequences of this straightforward solution.

- 2.8 The appellant argued that difference 2) should be seen as a technical "switch" involving two interconnected sensors. According to the appellant, the output of an "always-on" position sensor triggered the collection and transmission of sensor data from a "default-off" sensor. This was a different vehicle hardware set-up than the one required in D4. Citing T 258/03 (*Auction method/HITACHI*), the appellant cautioned not to overlook technical features embedded in a largely non-technical context.

However, the Board cannot discern the purported "switch" in claim 1. Firstly, the claim does not require the use of a position sensor; the vehicle's position could also be determined by other means, such as querying a database storing the vehicle's planned route. Secondly, even if a position sensor were employed, the switch described by the appellant requires detecting a change in the vehicle's position from outside to within a border geofence and triggering another sensor only if such a change is detected. Claim 1, however, does not include or imply any such limitations. It is confined to what happens within the border geofence and leaves entirely open what happens outside of that geofence.

The Board identifies no disparity in the vehicle's hardware configuration compared to D4. The hardware components needed by the method in claim 1 (e.g. sensors and a communication module) are already disclosed in D4. While the solution to the objective technical problem may necessitate adjustments to the executed logic (e.g. to confirm the vehicle's location

within a border geofence), the Board considers this to be routine programming well within the skilled person's normal competence.

- 2.9 Finally, the appellant argued that, when starting from D4, the skilled person would not be inclined to limit the data acquisition to the border geofence. Instead, they would retain D4's continuous data acquisition and transmission, and subsequently filter the data at the server to identify rear door opening events within the border geofence. The appellant suggested that, at most, the skilled person might draw inspiration from the embodiment in [0088] of D4 and solve the technical problem by continuously monitoring for a door opening event, and acquiring the vehicle's position only if such an event is detected.

The Board is not convinced by this line of reasoning. The problem formulation already instructs the skilled person to detect border checks, specifically door opening events, when the vehicle is within a border area. The skilled person would recognise that acquiring and transmitting data beyond that area is not only unnecessary for solving the objective technical problem but also entails unnecessary costs, which runs counter to the efficient implementation required by the problem formulation.

- 2.10 Consequently, the Board judges that claim 1 of the main request does not involve an inventive step (Article 56 EPC).

3. *First auxiliary request - inventive step*

- 3.1 Claim 1 of this request adds that the sensor data includes vibration detection.

3.2 The appellant submitted that the presence of vibration indicated that someone had entered the vehicle ([0087] of the application). In the appellant's view, although the business person may have required determining whether there was an inspection or delay at a border, it was beyond their competence to define the specific events indicative of a border check. Using door opening and vibration data for this purpose was something only the technically skilled person was qualified to come up with. Therefore, employing such data to detect border inspections was part of the solution. Since the prior art did not suggest that vibration detection in a vehicle was sufficiently sensitive to indicate a person's entry, claim 1 involved an inventive step.

The appellant also argued that combining vibration and rear door opening detection at a border geofence increased the confidence in determining a vehicle inspection and therefore resulted in a synergistic effect.

3.3 The Board does not find this argument persuasive because the insight that customs officers entering a vehicle might cause vibrations does not require any technical expertise. The abstract idea that vibration could indicate an inspection may occur to a non-technical person, such as an administrative clerk at the shipping company.

Furthermore, the occurrence of vibrations in a vehicle does not necessarily mean that someone is entering the vehicle; a running engine can also be a source of vibrations. Thus, the detection of vibrations does not credibly solve the problem of detecting a border

inspection, irrespective of this problem's technicality.

Finally, the claim does not specify combining door opening and vibration data for detecting a border check. The step of "correlating the sensor data with the vehicle position" does not preclude correlating each data type separately with the vehicle's position. The Board is therefore not convinced that the two data types yield a synergistic effect.

3.4 Accordingly, the Board judges that claim 1 of the first auxiliary request does not involve an inventive step (Article 56 EPC).

4. *Second auxiliary request - inventive step*

4.1 Claim 1 of this request further adds that the server obtains data from one or more vehicles, determines border crossings with delays based on the obtained data, analyses the operation of a fleet of vehicles, and re-routes a vehicle in the fleet away from a determined border crossing with a delay.

4.2 The Board agrees with the examining division that, at the level of generality claimed, the added features pertain to further non-technical aspects of the method. The mere idea of re-routing a vehicle away from a border crossing with a delay is a business consideration related to fleet management. Although the implementation of this idea may involve technical considerations, claim 1 (and the application as a whole) is defined as a desideratum; it fails to furnish any technical details about the identification of border crossings with delays or the route planning of vehicles.

- 4.3 During the oral proceedings, the appellant argued that the implementation involved aggregating sensor data from a plurality of vehicles at the server to determine border crossings with delays.

The Board, however, notes that the method in claim 1 does not involve aggregating data from multiple vehicles. The claimed determination relies on data obtained "from one or more vehicles", which encompasses determining a border crossing with a delay based on the data from a single vehicle.

- 4.4 During the written proceedings, the appellant argued that, in line with T 2035/11 (*Navigation system/BEACON NAVIGATION*), re-routing vehicles was a technical process. This rendered all claimed features technical because they interacted to achieve the technical purpose of re-routing.

- 4.5 The Board, however, agrees with the examining division that the re-routing method in claim 1 cannot be equated with the navigation method in T 2035/11. The method in that case was deemed technical based on several factors, none of which applies to the present case.

Firstly, the invention in T 2035/11 entailed continuously measuring the vehicle's position using technical means and providing real-time route guidance to the user (point 5.2.1). In contrast, in the present case, a vehicle within a fleet is re-routed based on an unspecified analysis of "the operation" of the fleet. This vague language does not imply continuous measurements of the vehicle's position or real-time route guidance.

Secondly, the Board in T 2035/11 held that the choice of route was guided by technical considerations, such as the estimated time or length of travel (point 5.2.3). In claim 1, however, the vehicle is merely re-routed "away from a determined border crossing with a delay". Routing away does not necessarily confer advantages in terms of time or length of travel.

Lastly, in T 2035/11, the new route was calculated using real-time real-world congestion information (point 7.4). In contrast, the determination of border crossings with delays in claim 1 relies on data obtained from one or more vehicles. This data is not necessarily real-time; it may consist of historical information that does not accurately reflect the current situation at a border crossing.

4.6 Accordingly, claim 1 does not involve an inventive step (Article 56 EPC).

5. *Third auxiliary request - admittance*

5.1 The examining division, in exercise of their discretion under Rule 137(3) EPC, decided not to admit this request into the first instance proceedings. The reasons were that the request was filed late (during the oral proceedings) and it did not *prima facie* appear to overcome the inventive step objections raised for the higher-ranking requests.

5.2 According to Article 12(6) RPBA, the Board is empowered to overturn the examining division's decision not to admit a request only if there was an error in the use of discretion or if the circumstances of the appeal justify the request's admittance.

5.3 The appellant argued that the examining division did not exercise their discretion correctly because the *prima facie* assessment was tainted by a preconceived bias against the invention's patentability. This was evident from the division's apparent reluctance to engage in discussions during the first instance proceedings.

5.4 While the Board sympathises with the appellant's felt lack of commitment on the part of the examining division, it is difficult to see how this implies an error in the exercise of discretion in not admitting the third auxiliary request.

Prima facie assessment is a standard criterion when deciding on the admittance of late-filed requests. The examining division reasoned that the additional feature of dynamically varying the border geofence was part of the business requirements and, therefore, did not overcome the previously raised inventive step objections. Hence, it is not apparent to the Board that the examining division applied this established criterion in an unreasonable manner.

5.5 In view of the above, the Board concludes that the examining division correctly exercised their discretion in not admitting the third auxiliary request. Moreover, the Board cannot identify any circumstances justifying the admittance of the request in the appeal proceedings. The request is, therefore, not admitted (Article 12(6) RPBA).

6. Since none of the admitted requests is allowable, the appeal has to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



T. Buschek

M. Höhn

Decision electronically authenticated