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**Datasheet for the decision
of 25 October 2021**

Case Number: T 0933/19 - 3.5.05

Application Number: 14193479.4

Publication Number: 3021288

IPC: G07B15/06

Language of the proceedings: EN

Title of invention:

Method and apparatus for trusted recording in a road toll system

Applicant:

Kapsch TrafficCom AG

Headword:

Trusted recording in a road toll system / Kapsch

Relevant legal provisions:

EPC Art. 84, 56

RPBA 2020 Art. 13(2)

Keyword:

Claims - clarity - main request (no) - essential features missing

Inventive step - auxiliary request (yes) - non-obvious modification

Amendment after summons - exceptional circumstances (no)



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Case Number: T 0933/19 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 25 October 2021

Appellant: Kapsch TrafficCom AG
(Applicant) Am Europlatz 2
1120 Wien (AT)

Representative: Weiser, Andreas
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 12 February
2019 refusing European patent application No.
14193479.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: N. H. Uhlmann
E. Mille

Summary of Facts and Submissions

- I. The appellant appealed against the examining division's decision refusing European patent application No. 14193479.4, which was filed on 17 November 2014.
- II. The examining division decided that the subject-matter of the independent claims of the sole request did not involve an inventive step and that the claims did not meet the requirements of Article 84 EPC.
- III. The examining division made reference, *inter alia*, to the following document:

D1 EP 2 423 885 B1
- IV. In its notice of appeal the appellant maintained the sole request as its main request, submitted new auxiliary requests 1 to 3 and set out the grounds of appeal.
- V. The board summoned the appellant to oral proceedings.

In a communication pursuant to Article 15(1) RPBA 2020, the board set out its provisional view of the case.
- VI. With a letter dated 16 September 2021, the appellant submitted new auxiliary requests 1 and 2 and resubmitted the previous auxiliary requests 1 to 3 as auxiliary requests 3 to 5.
- VII. During the oral proceedings before the board, the appellant submitted claims 1-15 of an amended auxiliary request 1, replacing the auxiliary request 1 then on file, and corrected description pages 1 and 1a.
- VIII. The appellant's final requests were that the decision under appeal be set aside and a patent be granted on the basis of the set of claims of the application as

originally filed (main request) or, alternatively, of the amended auxiliary request 1 submitted by the appellant during the oral proceedings before the board or of one of the auxiliary requests 2-5 filed with the appellant's letter dated 16 September 2021, and of corrected description pages 1 and 1a submitted by the appellant during the oral proceedings before the board, description pages 2-18 as originally filed and pages 1-3 of figures as originally filed.

IX. Claim 1 of the main request, the amended auxiliary request 1 and auxiliary request 2 reads as follows:

"A method for trusted recording in a road toll system, the road toll system (1) having a proxy server (10) connected via a mobile network (5) to an onboard-unit (4) of a vehicle(3), the onboard-unit (4) having a position determination device (14) for determining a current position (p_n) of the vehicle (3) / comprising the following steps performed in the onboard-unit (4):

determining a first position ($P_{f,i}$) by means of the position determination device (14) at a first point of time ($t_{f,i}$) and a second position ($p_{l,i}$) by means of the position determination device (14) at a second point of time ($t_{l,i}$);

creating an itinerary record (RC_i) comprising the first or second position ($P_{f,i}$, $p_{l,i}$), the first or second point of time ($t_{f,i}$, $t_{l,i}$) and at least one of: a distance (d_i) calculated using at least the first and second position ($P_{f,i}$, $p_{l,i}$), a segment-id (sid) calculated using at least the first or second position ($P_{f,i}$, $p_{l,i}$), and a distance (d_i) calculated using said segment-id (sid);

sending the itinerary record (RC_i) via the mobile network (5) to the proxy server (10);

receiving a signed itinerary record ($\text{sgn}(\text{RC}_i)$, $\text{sgn}(\text{RC}_i, \text{id})$) from the proxy server (10), and recording said signed itinerary record ($\text{sgn}(\text{RC}_i, \text{id})$) in a memory (17) of the onboard-unit (4)."

- X. Claims 14 and 15 of the main request were deleted in auxiliary request 2.
- XI. The wording of the claims of lower-ranking auxiliary requests is of no relevance for this decision.

Reasons for the Decision

- 1. The application pertains to a method and device for trusted recording of toll-related data. Itinerary records are generated in an onboard unit (OBU) and sent to a proxy server, which signs them and sends them back to the onboard unit. The unit stores the signed records, which may be sent to an enforcement terminal for plausibility checks.
- 2. Document D1, a patent of the appellant, describes a similar method in which the signed data remains in the proxy server.

Main request

- 3. Article 84 EPC
- 3.1 The board holds that independent claim 14 does not include all the features which are essential for the definition of the subject-matter for which protection is sought.
- 3.2 According to the description of the application in suit, the object of the invention is "to provide methods and apparatus for trusted recording which overcome the above mentioned drawbacks of the state of

the art", i.e. that the onboard unit is "complicated to assemble and more expensive in manufacturing" (last two paragraphs on page 1 of the description as filed).

- 3.3 Independent claim 14 pertains to a proxy server and does not explicitly define any features of the OBU. It is apparent that the OBU must be suitable to send and receive records to/from the proxy server; however, claim 14 does not require any recording of the signed records in the OBU. Thus, no trusted recording is possible and the object of the invention, as set out in the description, cannot be achieved by the subject-matter of claim 14.
- 3.4 The appellant argued that claim 14 reflected the novel and inventive structure of the server and that all essential features of the server had been defined.
- 3.5 The board is not persuaded. It may well be that the server is properly defined in claim 14, but it cannot achieve the object of the invention.
- 3.6 The appellant referred to decisions T 47/91 and T 1340/08 and argued that it was sufficient when a technical effect was potentially, or implicitly, present in the claimed invention.

The board notes that these decisions deal with inventive-step issues and do not relate to any clarity aspects. They therefore cannot support the appellant's case.

Furthermore, the board agrees that in the present case it is not necessary to mention a technical effect in the claim. However, those features must be recited which would be causal for achieving the object of the invention.

3.7 The appellant pointed to section F-IV, 3.9.3 of the Guidelines for Examination in the EPO and argued that, in the case of a distributed system, like the one referred to in the claims, the claim set might comprise claims directed to each entity of the system, i.e. directed to the proxy server.

The board agrees that, in general, such claims might be possible. However, the independent claims must include the features which are essential for achieving the object of the invention.

3.8 For these reasons claim 14 does not meet the requirements of Article 84 EPC.

4. Consequently, the main request is not allowable.

Amended auxiliary request 1

5. Admission

5.1 The amended auxiliary request 1 was filed in the course of the oral proceedings before the board.

5.2 The admission of requests submitted at this point of time is governed by Article 13(2) RPBA 2020. This states that any amendment to a party's appeal case will, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party.

5.3 The request was filed during a discussion on added matter regarding claim 14 of auxiliary request 1 but before the board announced any opinion on this issue.

5.4 Having a discussion on added matter regarding an amended claim constitutes a well-established practice and does not amount to "exceptional circumstances". Consequently, amended auxiliary request 1 is not taken into account.

Auxiliary request 2

6. Admission

Claims 14 and 15 pertaining to a proxy server have been deleted. This amendment addresses and resolves an objection raised by the board in its preliminary opinion and does not introduce any new problems. Hence, auxiliary request 2 is admitted into the proceedings.

7. Amendments

The deletion of claims 14 and 15 complies with the requirements of Article 123(2) EPC.

8. Clarity

8.1 The decision under appeal found that independent claims 1 and 11 did not contain all the essential features.

8.2 The board disagrees.

The object of the invention is "to provide methods and apparatus for trusted recording which overcome the above mentioned drawbacks of the state of the art", i.e. that the OBU is "complicated to assemble and more expensive in manufacturing" (last two paragraphs on page 1 of the description as filed).

This object is achieved by letting a proxy (an entity which is external to the OBU) sign an itinerary record, as specified in the last three integers of claim 1, and record the signed record on the OBU.

The recorded signed itinerary record makes it possible to check the record. Furthermore, it is self-evident for the skilled person that the process of signing on the proxy, or on any other computer, involves considerations of trust.

8.3 Thus, claims 1 and 11 contain all the essential features.

9. Inventive step

9.1 The closest prior art is document D1, in particular the embodiment in which the OBU sends records (2) to the proxy server, which then signs the toll data (8) and outputs it (paragraphs 42 and 43, Figure 2, claim 2).

9.2 The description as amended with the submission of the appellant dated 19 May 2016 (page 1, line 32 to page 1a, line 3, "In another embodiment...") appears to suggest that signed itinerary records are created and stored on D1's proxy computer. However, at the oral proceedings before the board, the appellant argued that D1 does not in fact disclose that signed itinerary records are created and stored on the proxy computer. The appellant submitted amended pages 1 and 1a in support of this argument.

The board agrees that according to D1's paragraph 43 the proxy computer signs the toll data (8) and not the position data (3). Furthermore, in view of D1's paragraph 28, the toll data (8) cannot be equated with the claimed "itinerary record" because the toll data does not include a first or a second position.

9.3 The board holds that D1 does not disclose the following distinguishing features of claim 1:

- (a) receiving a signed itinerary record from the proxy server;
- (b) recording this itinerary record in a memory of the onboard unit.

9.4 The technical effect of these distinguishing features is that the signed record is made accessible to roadside infrastructure (toll beacons or monitoring vehicles) which may retrieve the record from passing

vehicles. D1 discloses such a scenario in paragraphs 16 and 22.

9.5 The objective technical problem to be solved is how to make the signed record accessible to roadside infrastructure which may retrieve the record from passing vehicles.

9.6 The board judges that in view of this problem and of the prior art on file the skilled person would not arrive at the subject-matter of claim 1 for the following reasons:

First, document D1 (first sentence in paragraph 42) explicitly teaches that the proxy computer does not send data back to the OBU. In other words, document D1 teaches away from the distinguishing features.

Second, D1 (last sentence in paragraph 42) includes a possibility for providing signed data to the roadside infrastructure. However, the signing takes place in the OBU.

Third, D1's proxy computer signs the toll data and outputs it to the central computer 12 (paragraph 42). Hence, the skilled person would need to modify both the data to be signed and the output direction. However, it is not apparent why they would carry out these two modifications.

9.7 In summary, the board considers that the subject-matter of claim 1, and of the corresponding independent claim 11, involves an inventive step (Article 56 EPC) having regard to the prior art on file.

10. Conclusion

Auxiliary request 2 meets the requirements of the EPC.

Order

For these reasons it is decided that:

The decision under appeal is set aside and the case remitted to the examining division with the order to grant a patent based on claims 1-13 of the auxiliary request 2 submitted with the appellant's letter dated 16 September 2021, description and drawings to be adapted.

The Registrar:

The Chair:



D. Hampe

A. Ritzka

Decision electronically authenticated