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Case Number: T 2398/13 - 3.4.03

Application Number: 09776309.8

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Language of the proceedings: EN

Title of invention:
METHOD AND SYSTEM FOR CHECKING AND MANAGING QUEUE OF VEHICLES AT BORDER-CROSSING

Applicant:
Sivex Kinnisvara OÜ

Headword:

Relevant legal provisions:
EPC Art. 123(2), 153(2)
PCT Art. 19

Keyword:
Amendments - allowable (no)

Decisions cited:

Catchword:

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Case Number: T 2398/13 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 25 April 2017

Appellant: (Applicant)	Sivex Kinnisvara OÜ Õismäe tee 8-25 13511 Tallinna linn, Harju maakond (EE)
Representative:	Urgas, Enn Patendiburoo Turvaja OÜ Liivalaia 22 10118 Tallinn (EE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 3 July 2013 refusing European patent application No. 09776309.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	G. Eliasson
Members:	S. Ward
	T. Bokor

Summary of Facts and Submissions

I. The appeal is against the decision of the Examining Division refusing European patent application No. 09 776 309 on the ground that the claimed subject-matter did not involve an inventive step within the meaning of Articles 52(1) and 56 EPC.

II. At the end of the oral proceedings held before the Board the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the last version of "Corrected Claims (4th auxiliary request)", as submitted during the oral proceedings. All other requests were withdrawn.

III. Claim 1 reads as follows:

"Method for checking and managing a queue of vehicles at border-crossing, utilizing a system comprising:

- *a Module 1 comprising a central server of the system connected to the internet, a database of motor vehicles registered for border-crossing, a sub-module for notification via a mobile communication device, a sub-module for receiving and storing information exchanged with customers, a sub-module for billing of customers, a sub-module for confirming information exchange and a computer program executing a corresponding algorithm,*
- *a Module 2 comprising registration means and operators computer terminals and self-service terminal located in the parking lot of the border-crossing zone and being connected to Module 1 via the Internet, video cameras or RFID (Radio Frequency Identification) readers being connected*

to the registration means, and a computer program executing a corresponding algorithm,

- *a Module 3 comprising registration means connected to Module 1 via Internet, and a computer program executing a corresponding algorithm,*
- *a Module 4 comprising means for controlling an entry gate of the border-crossing checkpoint being connected to Module 1 via Internet, video cameras or RFID readers being connected to the means for controlling the entry gate, and a computer program executing a corresponding algorithm, and being adapted granting entry to the border crossing zone,*
- *a Module 5 that is an information module comprising information displays located in the parking lots of the border-crossing zone, and in front of the entrance to the border-crossing checkpoint, connected to Module 1 via Internet, reflecting the progress of the queue,*

characterized in that:

- *for pre-registration and registration, data concerning a vehicle planning to cross the border entered in the system via Module 3 or via Module 2 are transmitted to the database of Module 1, and the system enables processing of statistical data about vehicles, registered and pre-registered, that is used to change the pre-registration criteria, such as amount of pre-registered vehicles within specific time period, according to forming and managing the entire single logical queue sequence of vehicles, to reduce number of pre-registered vehicles from average throughput of border station and enabling daily effectiveness of border-crossing, providing opportunity to cross a border for preregistered as well as for registered vehicles,*

- *video cameras and RFID readers are used in both in modules 2 and 4 and they have a process-oriented connection to central Module 1, forming thus a virtual "as a circular hard- and software system" for processing and analyzing complex actions that allows one-time use of registered state of a vehicle until the vehicle either exits the border-crossing zone, or is late to the border-crossing checkpoint, or its pre-registration is cancelled excluding the possibility of affecting the work of the system."*

IV. The current request differs significantly from those on which the application was refused, and hence the arguments of the Examining Division are not highly relevant to the present appeal and need not be repeated here.

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

(i) The object of the method was to reduce queues of motor vehicles, e.g. lorries, at border crossing stations. Accordingly, vehicles might pre-register via Module 3, at which point they would be assigned a date and time for border crossing, or they might register via Module 2 located in the parking lot of the border crossing zone when they arrived.

(ii) The case in which all drivers used pre-registration was referred to as the "preferred embodiment", but this corresponded more to a theoretical situation which could not be reached in real life. Experience had shown that some drivers always arrived at the border without pre-registering,

even in countries in which pre-registration was a legal obligation.

(iii) An important aspect of the method was that pre-registered vehicles were guaranteed to be able to cross the border at the exact date and time assigned on pre-registration. This was achieved by limiting the number of pre-registered vehicles to be less than the possible maximum of the station (i.e. the average throughput of the station), so that there was always sufficient capacity to serve pre-registered vehicles at the assigned date and time, even when the actual capacity of the border station dropped to less than the average value of the throughput.

Fig. 1 of "Enclosure 3", filed with the letter dated 4 April 2017, showed statistical data representing the service time for a vehicle crossing a border over a one year period. As shown in this figure, the service time - and the throughput, which is the reverse function of the service time - fluctuated over time around an average value.

Hence, by limiting the number of pre-registered vehicles in a given time to be equal to the minimum value to which the throughput fell according to the prior statistics, all pre-registered vehicles were guaranteed to be able to cross the border at their allotted time. When the actual throughput was higher than this value, the additional capacity could be used to serve the registered vehicles, subject to the condition that when the time specified at pre-registration of a vehicle arrived, that vehicle always had priority over registered vehicles.

The method had been put into practice in Estonia with the following results:

"while more than 1,000,000 vehicles have crossed Estonian border and over 70% of drivers have used pre-registration and even more would like to use it, due to fluctuations of throughput of border stations, the number of vehicles with pre-registration has been limited at this level in order to guarantee border crossings at the pre-registered time even in cases, when the throughput of border stations drops down to minimum."

Of course, the assigned crossing time for pre-registered vehicles could also be guaranteed by setting the number of pre-registered vehicles in a given time to be lower than (rather than equal to) the statistical minimum value of the throughput, but this was not optimal as it reduced the possibilities for pre-registration.

(iv) Due to unforeseeable events, such as power failures, the method could not give an absolute guarantee that pre-registered vehicles would cross the border at the exact date and time assigned on pre-registration, but calculations had shown that the method allowed this to be achieved in 99.6% of cases.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments (Article 123(2) EPC)*

2.1 Article 123(2) EPC reads as follows:

"The European patent application or European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed."

In the present case, the European patent application as filed is the PCT application published as WO 2010/034317 (Article 153(2) EPC), but not including amended claims 1-5 filed under Article 19 PCT.

2.2 In comparison to claim 1 as originally filed (which also defined a method for checking and managing a queue of vehicles at a border-crossing), a first manner in which present claim 1 has been amended is by the inclusion of features of the system defined in original independent claim 7. The Board has no objection to this.

2.3 However, claim 1 has also been amended to incorporate *inter alia* features relating to the processing of statistical data, and the uses to which the processed statistical data is put, which were not defined in either of original claims 1 or 7. In particular:

"the system enables processing of statistical data about vehicles, registered and pre-registered, that is used ... to reduce number of pre-registered vehicles from average throughput of border station".

2.4 The appellant explained that this feature was to be understood as meaning that the number of vehicles pre-registered for a given time period is (or at least, may be) reduced compared to the average throughput, and

that the reduction, i.e. the value below the average throughput at which this number is set, is determined on the basis of the statistical data (in the manner summarised under point V(iii), above). This is also the Board's understanding of the feature.

2.5 While the Board accepts that processing of statistical data *per se* is disclosed in the application as filed, there is no literal basis for this statistical data being used "to reduce number of pre-registered vehicles from average throughput of border station".

2.6 The appellant argues that this feature is implicitly disclosed to the skilled person by a passage on page 6 (lines 3-19), part of which (lines 8-12) reads as follows:

"The most important characteristic of Module 3 is the fact that the number of motor vehicles that can be pre-registered for a specific time period, for example 24 hours, equals the average vehicle throughput of the border-crossing checkpoint within the same time period."

In the opinion of the Board, the use of "can be" in this sentence gives rise to ambiguity.

It could be read as meaning that the number of pre-registered vehicles is always set equal to the average vehicle throughput, and that this "can be" achieved thanks to Module 3. Such an interpretation would not involve any reduction in the number of pre-registered vehicles below the average throughput, and hence would provide no support for the feature in question.

An alternative reading would be that the number of pre-registered vehicles "can be", but does not have to be, set equal to the average vehicle throughput. However, even if this interpretation were adopted, and even if it were accepted that this implies the possibility that, compared to the average throughput of border station, the number of pre-registered vehicles should be *reduced* (which is not said), it would still not be disclosed that this reduction is determined on the basis of the statistical data.

2.7 According to another part of the cited passage (lines 3-4):

"To set the general criteria of forming the border-crossing queue at pre-registration the average vehicle throughput of the border-crossing checkpoint is taken into account."

And later in the passage (lines 12-14):

"In order to take into account this average throughput, prior statistics of vehicles passing through the border-crossing checkpoint are used as a basis, whereas the data mentioned can be recalculated as and when necessary."

Thus, the cited passage discloses that the method takes into account the average throughput, which is determined on the basis of the prior statistics. It does not disclose that prior statistics are used as a basis to *reduce* the number of pre-registered vehicles below the average throughput.

2.8 The appellant also argues that the required disclosure is provided by original claim 5, according to which the

number of pre-registered vehicles "is determined on the basis of" the average number of vehicles passing the border-crossing checkpoint in a unit of time. There is no disclosure even that this determination consists in reducing the number of pre-registrations in a given time to below this average, let alone that this reduction should be made on the basis of prior statistics.

The Board therefore judges that the amendment referred to above under point 2.3 introduces subject-matter which extends beyond the content of the application as filed, contrary to the requirements of Article 123(2) EPC.

2.9 For completeness, it is noted that claim 1 also includes the following features which were not present in claim 1 as originally filed:

- *"forming thus a virtual 'as a circular hard- and software system' for processing and analyzing complex actions ..."*; and

- *"excluding the possibility of affecting the work of the system."*

The Board is unable to find any basis for these amendments in the application as filed.

Moreover, the following features of original claim 1 have been omitted in present claim 1:

- *"at least the data containing the registration number of the vehicle and/or the number of the driver's mobile communications device is retained in the database"*;

- data being *"stored in chronological order to the database created in the central server"*; and

- vehicles being allowed to the border-crossing checkpoint *"after several advance notifications about the expected time of granting access to the border-crossing checkpoint have been transmitted to their drivers automatically by the central server of the system"*.

It is questionable whether the application as originally filed provides a basis for methods not including these features.

Nevertheless, it is not necessary for the Board to examine in great detail whether the amendments mentioned in the two previous paragraphs comply with the requirements of Article 123(2) EPC, since claim 1 has already been found not to comply with these requirements as a result of the amendment mentioned under point 2.3, above.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Sánchez Chiquero G. Eliasson

Decision electronically authenticated