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Datasheet for the decision of 3 December 2009

Case Number: T 0153/07 - 3.2.04

Application Number: 00200399.4

Publication Number: 1027823

IPC: A01J 5/017

Language of the proceedings: EN

Title of invention:
A method of determining the anticipated teat position of an animal

Patentee:
MAASLAND N.V.

Opponent:
DeLaval International AB

Headword:
Algorithm/MAASLAND

Relevant legal provisions:
EPC Art. 54, 123(2), 70(2)

Relevant legal provisions (EPC 1973):
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Keyword:
"Added subject-matter (main request)"
"Lack of novelty (auxiliary request)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0153/07 - 3.2.04

D E C I S I O N
of the Technical Board of Appeal 3.2.04
of 3 December 2009

Appellant: (Opponent)
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Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 8 December 2006 concerning maintenance of European patent No. 1027823 in amended form.

Composition of the Board:

Chairman: M. Ceyte
Members: P. Petti
T. Bokor

Summary of Facts and Submissions

I. In its interlocutory decision dated 8 December 2006, the opposition division found that, having regard to the amendments submitted by the patent proprietor, the European patent No. 1 027 823 met the requirements of the European Patent Convention.

II. On 25 January 2007 the opponent (hereinafter appellant) lodged an appeal against this decision. The appeal fee was paid on 23 January 2007. A statement setting out the grounds of appeal was received on 17 April 2007.

III. Oral proceedings before the board were held on 3 December 2009.

IV. The appellant requested that the decision under appeal be set aside and the patent be revoked.

V. The patent proprietor (respondent) requested that the decision under appeal be set aside and the patent be maintained in an amended version on the basis of claims 1 to 7 filed by letter dated 14 March 2008 (main request) or, in the alternative, on the basis of an auxiliary request comprising a claim 1 in which the term "arithmetic" has been deleted as compared with the main request.

Claim 1 of the main request reads as follows:

A method of determining the anticipated teat position of an animal, such as a cow for example, in which method, at at least two different points of time t1 and t2, the actual teat position for a teat relative to a

reference point is determined and stored in a memory, and in which method, at a point of time t3, the anticipated teat position for the relevant teat relative to the reference point is determined or calculated on the basis of at least the actual teat positions at t1 and t2, **characterized in that** the anticipated teat position at t3 is calculated on the basis of an arithmetic algorithm which is determined after a number of historical data concerning the actual teat position have been collected at different points of time tx.

Claim 1 of the auxiliary request differs from claim 1 of the auxiliary request in that the terms "arithmetic algorithm" have been replaced by "algorithm".

VI. The appellant essentially submitted that

– there was nothing either explicit or implicit in the opposed patent to indicate that determining an algorithm should be understood to mean choosing one algorithm from several ones,

– the phrase "calculated on the basis of an algorithm which is determined after a number of historical data have been collected" had the meaning of "calculated on the basis of an algorithm that included values deduced after a number of historical data have been collected",

– the replacement of the term "algorithm" by "arithmetic algorithm" in claim 1 of the main request introduced added subject-matter and thus contravened the requirements of Article 123(2) EPC

– the subject-matter of claim 1 of the auxiliary request lacked novelty with respect to the article by A. H. Ipema et al, "Design features of the Silsoe automatic system", in "Prospect for automatic milking - Proceedings of the International Symposium for Automatic Milking", Wageningen, 1992, pages 40 to 48 (hereinafter D1).

VII. The respondent essentially submitted that

– determining an algorithm should be understood to mean choosing an algorithm from several algorithms,

– the terms "arithmetic algorithm" (in claim 1 of the main request) represented the corrected translation of the Dutch word "rekenalgoritme" used in the application as originally filed, and

– document D1 did not disclose the feature of choosing an algorithm from several algorithms, so that the subject-matter of claim 1 of the auxiliary request was novel over this citation.

Reasons for the Decision

1. The appeal is admissible.

2. *Main request (Article 123 (2) EPC)*

2.1 Claim 1 of the main request has been amended by replacing the word "algorithm" by the terms "arithmetic algorithm".

The original application has been filed in Dutch. That version is the original application for the purposes of Article 123 (2) EPC (Article 70 (2) EPC) and the translation into an official language of the EPO may be brought into conformity with the original throughout the proceedings.

According to the established case law of the boards of appeal, an amendment should be regarded as introducing subject-matter which extends beyond the originally filed application and is therefore unallowable, if the skilled person is presented with new information which is not directly and unambiguously derivable from the originally filed application taking into account matter which is implicit to the skilled person.

According to the "Novelty test" which can be used when added subject-matter results from making a feature more specific, the above mentioned new information is determined by comparing the amended subject-matter with the originally filed application; if the amended subject-matter is novel over the original disclosure, then there is added subject-matter, contrary to the requirements of Article 123(2) EPC.

As submitted by the appellant, who referred to a "Translator's opinion" filed by letter dated 16 February 2009, the Dutch term "rekenalgoritme" can also be translated as "computational algorithm" or "calculating algorithm".

The respondent asserted that "arithmetic algorithm" is a more precise translation of the Dutch word

"rekenalgoritme" used in the originally filed application, the prefix "reken" having in essence the same meaning as the German word "Rechnen" (calculation).

Thus the amendment made by replacing the more general "calculating algorithm" with the more specific "arithmetic algorithm" is not allowable, since "arithmetic algorithm" is novel over "calculating algorithm".

Accordingly, the skilled person is presented with the new information that the calculating algorithm ("rekenalgorithm") is an arithmetic algorithm, so that this amendment is not allowable.

Therefore, the main request has to be rejected since the amended claim 1 contravenes Article 123 (2) EPC.

3. *The claimed subject-matter (auxiliary request)*

3.1 The respondent took the view that the step in claim 1 of determining an algorithm should be understood to mean choosing one from several algorithms.

The Board is unable to accept such submission:

The wording of the characterising part of claim 1 is clearly unambiguous and means what it says that is: an algorithm is determined after a number of historical data concerning the actual teat position have been collected at different points of time.

All that is required by this part of claim is that an algorithm is determined i.e. followed through to a conclusion, after data relating to the actual teat position at different points of time have been collected. There is nothing either explicit or implied in the claim that it is necessary to choose one from several or all other possible algorithms. The description offers no assistance whatsoever as to how the algorithm should or can be derived. Neither does it suggest different algorithms and how to make a choice between them.

Obviously, the use of the wording that "the algorithm is determined" gives no cause to understand also "choosing one from several algorithms" as meaning the same. If the patent drafter had whished to give the words "determining an algorithm" the meaning of "choosing one among several or all other possible algorithms", he would have done so at least in the description of the patent specification.

The respondent relied upon the sentence, in column 1, lines 53-55 of the patent specification which reads: "The current actual teat position may further be used for completing the above mentioned schedule or for adjusting the algorithm".

As rightly submitted by the appellant, "[t]here is nothing within this statement that can conceivably be thought to suggest that an algorithm is chosen from several algorithms. The sentence appears at the end of a descriptive passage that addresses what can be done after determining an anticipated teat position and it provides no insight as to the essential steps to be

followed in the method applied for determining the anticipated teat position. It is particularly stated, starting at col. 1, line 44:
'After the anticipated teat position has been determined or calculated, according to an inventive feature, the current actual teat position relative to the reference point is measured by means of a sensor, such as e.g. a laser or an ultra sonic sensor, and possibly stored in a memory... The current actual position may be further used... for adjusting the algorithm'.
Plainly adjusting the algorithm after the anticipated teat position has been determined/calculated can not infer that in that in the process of determining the anticipated teat position one algorithm is chosen from several. Furthermore, the reference to "adjusting the algorithm" is more suggestive of having a single algorithm that may be subject to modification as opposed to having several algorithms from which one is chosen.".

3.2 Thus, the board finds that the claim also covers the interpretation submitted by the appellant, namely that the feature "algorithm which is determined after a number of historical data ... have been collected ..." means that the anticipated teat position is calculated on the basis of an algorithm that includes values deduced after a number of historical data have been collected. Here, "determined" is to be read as "applied" or "followed through to a conclusion". The skilled person is particularly guided to this interpretation by the description of the application as filed, which discloses that the algorithm is determined on the basis of historical data (see page 1, line 18)

4. *Novelty (auxiliary request)*

4.1 D1 refers to a method of automatically milking cows using the Silsoe MK2 System (see page 41). In the context of this milking system, D1 discloses a method of determining the anticipated teat position of a cow in which a teat co-ordinates set, corresponding to the determined actual position for a teat relative to a reference point, is stored in a database for each teat on each animal. According to this method (see particularly page 45, 1st paragraph), the expected teat position for the relevant teat is calculated on the basis of the stored teat co-ordinates set and of the animal position information sensed by a mechanical sensor.

The teat co-ordinates set may be either single, i.e. determined at a single point of time, or multiple, i.e. determined at different points of time (t_1, t_2).

According to D1, the use of multiple sets of co-ordinates allows either to determine the teat co-ordinates expected at a point of time (t_3) by selecting one of the stored sets of co-ordinates depending on the yield of the animal and the time elapsed since last milking or the possibility of calculating it by interpolation between the sets of co-ordinates determined at the previous points and stored in the database. Thus, the anticipated teat position for the relevant teat may be determined on the basis of at least two actual teat positions determined at the points of time (t_1, t_2). Furthermore, an interpolation algorithm is defined, i.e. determined, by means of

which the expected teat position at a later point of time (t_3) may be calculated on the basis of a number of historical data concerning the actual teat position collected at the previous points of time (t_1, t_2). It can be derived from D1 that the interpolation permits the determination of the expected teat position at the point of time t_3 in dependence of time elapsed from the last milking, because the elapsed time affects the degree to which the udder is filled and thus the position of the teats.

Thus, the input values used for performing the calculation based on the algorithm are derived from the historical data.

Having regard to the comments in section 3.2 above, D1 discloses a method in which the anticipated teat position is calculated on the basis of an algorithm which is determined after a number of historical data concerning the actual teat position have been collected at different points of time.

Furthermore, according to D1, when a teat cup has been connected to the relevant teat, corrected teat co-ordinates are measured in order to update the historical data, whereafter, at the next milking run of the same animal the algorithm is adjusted on the basis of these new historical data.

Therefore, the method of D1 falls within the terms of claim 1, such that its subject-matter lacks novelty (Article 54 EPC).

4.2 It has to be noted that the interpolation referred to in D1 is an arithmetic algorithm. Therefore, the considerations as to the lack of novelty of the auxiliary request would also have applied to the main request, if the terms "arithmetic algorithm" had been directly and unambiguously derivable from the original application.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

G. Magouliotis M. Ceyte