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Datasheet for the decision of 31 January 2018

Case Number: T 1914/13 - 3.2.04

Application Number: 08723833.3

Publication Number: 2154952

IPC: A01K5/02, A01K29/00, A01J5/007

Language of the proceedings: EN

Title of invention:
METHOD OF AND DEVICE FOR MANAGING A GROUP OF DAIRY ANIMALS, AS WELL AS A COMPUTER PROGRAM PRODUCT THEREFOR

Patent Proprietor:
Maasland N.V.

Opponent:
DeLaval International AB

Headword:

Relevant legal provisions:
EPC Art. 52(2)(a), 52(2)(c), 56

Keyword:
Inventive step - mixture of technical and non-technical features - main request (no) - auxiliary request (no)

Decisions cited:
T 0641/00, T 0258/03

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

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Case Number: T 1914/13 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 31 January 2018

Appellant: (Patent Proprietor)	Maasland N.V. Weverskade 110 3147 PA Maassluis (NL)
Representative:	Octrooibureau Van der Lely N.V. Cornelis van der Lelylaan 1 3147 PB Maassluis (NL)
Appellant: (Opponent)	DeLaval International AB P O Box 39 147 21 TUMBA (SE)
Representative:	Jennings, Michael John A.A. Thornton & Co. 10 Old Bailey London EC4M 7NG (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 24 July 2013 concerning maintenance of the European Patent No. 2154952 in amended form.**

Composition of the Board:

Chairman	A. de Vries
Members:	S. Oechsner de Coninck
	C. Heath

Summary of Facts and Submissions

I. Both the Opponent and the Proprietor appeal against the interlocutory decision of the Opposition Division posted 24 July 2013 on the amended form in which the European Patent No. 2 154 952 can be maintained. The Opponent filed the notice of appeal and paid the appeal fee on 9 September 2013, and filed the statement of grounds on 3 December 2013. The Proprietor filed the notice of appeal on 24 September paying the appeal fee the same day, and filed the statement of grounds on 3 December 2013.

II. Opposition was filed against the patent as a whole and based inter alia on Article 100(a) in conjunction with Article 56 EPC for lack of inventive step.

The Opposition Division held that the grounds for opposition mentioned in Article 100 EPC 1973 did not prejudice the maintenance of patent as amended having regard to the following documents in particular:

D3: Duinkerken et al.: "Prototype van een Dynamisch Krachtvoer Advies Systeem voor Melkvee", PraktijkRapport Rundvee 37, Animal Sciences Group, Wageningen, Oktober 2003

III. The Opponent as Appellant requests that the decision under appeal be set aside and the patent be revoked in its entirety.

The Proprietor as Appellant requests that the decision under appeal be set aside and the patent be maintained in amended form on the basis of a main request, filed as Auxiliary Request II with letter of 21 December

2017, alternatively on the basis of either of Auxiliary Requests I and II filed on 31 January 2018 at the oral proceedings before the Board.

IV. Oral proceedings requested by both parties were held on 31 January 2018.

V. The wording of claim 1 of the requests is as follows :

Main request

"Method of managing a group of a plurality of dairy animals, wherein each animal can be recognized individually by means of an animal identification system, wherein the animals are milked and give an individually realized milk yield and

wherein the animals are fed with an individual ration, wherein data regarding the group of dairy animals are collected, which data comprise at least the individually realized milk yields and the consumed rations, wherein subsequent individual milk yields are estimated by means of a dynamic model on the basis of said data,

wherein, for one or more animals, at least one of the individual ration and the milking of individual dairy animals is adjusted in a regulatory step under application of a precondition, wherein the animals are milked automatically by means of a milking device, and wherein the precondition comprises that a total duration of milking all dairy animals by means of the milking device is at the most equal to an effective daily milking time of the milking device."

Auxiliary Request I

Claim 1 is as in the main request but replaces the final feature ("the animals are milked ...") by the following feature:
"the precondition comprises that for the group as a whole, the sum of predicted feed balances of individual dairy animals after the regulatory step is larger than the sum of realized feed balances prior to the regulatory step."

Auxiliary Request II

With respect to claim 1 of the main request the final feature ("wherein the animals are milked automatically ...") is omitted, while the now final feature is modified to read (strikethrough indicates deleted text):
"wherein, for one or more animals, ~~at least one of the individual ration and~~ the milking of individual dairy animals is adjusted in a regulatory step under application of a precondition."

VI. The Appellant Opponent argued as follows :

The features that differentiate the subject-matter of claim 1 (all requests) from D3 are non-technical, and following established case law cannot contribute to inventive step, so that for this reason alone the method defined in claim 1 of any of the requests does not involve an inventive step.

But even if taken into consideration they represent considerations that are obvious or otherwise non-technical.

Thus, for the main request, a dairy farmer obviously adjusts milking to ensure that total milking time does not exceed available capacity. The precondition defined in claim 1 of the auxiliary request merely considers profitability, which is a non-technical consideration and this feature does not contribute to the solution of a technical problem. Finally, the idea of adjusting milking in dependence of some undefined precondition, which in the description may even be purely economic, is per se well-known.

VII. The Appellant Proprietor argued as follows :

The feature in claim 1, all requests, of the adjusting only makes technical, practical sense if read as relating to the actual adjustment and not merely the recalculation of the adjustment values.

The idea (claim 1, main request) of adjusting the feed ration to produce a total milk yield that can be milked within the available milking time of the system is not known or obvious from any of the prior art. In relation to adjusting depending on predicted sum of feed balances as in claim 1 of the auxiliary request I, in D3 the concentrate coefficient as main criterion does not refer to a difference between feed amount and milk yield. Finally, for claim 1 of auxiliary request II, none of the cited prior art mentions adjusting milking depending on a precondition.

Reasons for the Decision

1. Both appeals are admissible.

2. Background

The patent concerns a method of managing a group of dairy animals, in which each animal is recognized, fed with an individual ration and milked to realize an individual milk yield. In order to produce the most economical results, paragraph [0004] of the patent, it proposes the use of a model to estimate subsequent (future) individual milk yields based on collected data of (past) milk yield and consumed ratio. The individual ration or milking of an individual cow is then adjusted dependent on some precondition. In all requests the model is dynamic meaning that model coefficients are time dependent and change depending on the observed variables such as individual milk yield (paragraph [0033] of the patent). Main and auxiliary request I define the preconditions, while auxiliary request II limits adjustment to the milking of individual animals.

3. Inventive Step, all requests

3.1 This decision turns on whether and the extent to which the final feature of claim 1 in all requests contributes to the technical character of the invention. It is established jurisprudence that "[An] invention consisting of a mixture of technical and non-technical features and having technical character as a whole is to be assessed with respect to the requirement of inventive step by taking account of all those features which contribute to said technical character whereas features making no such contribution cannot support the presence of inventive step", see T 641/00, OJ 2003, 352, Headnote I, see also the Case Law of the Boards of Appeal, 8th edition, 2016 (CLBA), I.D.9.1.2 and I.D.9.1.3 and the decisions cited therein . Furthermore, reason 6 of T 641/00, "where a feature cannot be considered as contributing to the solution of any technical problem by providing a technical effect

it has no significance for the purpose of assessing inventive step". Whether or not a feature contributes to the technical character of an invention is thus determined by whether or not it contributes to the solution of a technical problem by providing a technical effect. Following the generous approach adopted in T258/03 (OJ 2004, 575; see also CLBA , I.A. 1.4.3) technical character already results from the use of technical means irrespective of purpose.

3.2 Adopting the approach of T258/03 the Board concludes that the method defined by claim 1 of all requests undoubtedly has technical character, as it includes the use of an animal identification system, as well as milking, feeding and data collection, all of which are technical features. The feature of adjusting individual ration and/or milking in a regulatory step subject to some precondition would also appear, ostensibly, to be of technical character. However, the description, page 2, lines 20 to 22, clearly suggests that this regulatory step may be nothing more than a calculation carried out prior to the actual supply of the ration or the performance of the milking action. This calculation itself is realized (in the description at least) using the dynamic model, in essence a mathematical model. Under Article 52(2)(a) and Article 52(3) EPC mathematical models are not to be regarded as patentable inventions as, see CLBA, I.A.2.2.2, they are of abstract and intellectual nature, i.e. devoid of technical character. If nothing more than a model based calculation and regardless of whether the model input is actually measured milk yield and feed ration, as long as the resultant calculation is not then subsequently applied in a technical process carried out on a physical entity (adjusting the ration and/or milking) it remains entirely in the abstract,

intellectual realm. Indeed the calculation does not require any technical computing means but could in principle be carried out entirely in the mind of a person. Consequently, when reading the final regulatory step in the light of the description it is seen to encompass the possibility that it is not technical.

3.3 Bearing the above reading of claim 1, in particular of its regulatory step in mind, the subject-matter of claim 1 of the main and auxiliary requests is not seen to be differentiated from the prior art of D3 in terms of a technical feature.

3.3.1 It is common ground that D3, cited in paragraph [0002] of the patent specification and which is co-authored by the designated inventor of the patent, already discloses, see sections 3.2, 4.2, 5 and 6 or the English language summary, the use of a dynamic model to generate a dynamic feeding ration recommendation ("dynamisch krachtvoeradvies" or DKAS) for individual cows on the basis of their measured milk yield and feed intake. Thus, in a prototype DKAS system the model was tested so as to determine individual milk response of a given cow from the measured individual feed ration and resultant individual milk yield (page 33, first paragraph) so as to estimate or predict future milk yield (page 7, 3.2.2, page 33, second paragraph) as well as a feed ration recommendation for the cow. The model was then used to adjust the feed ration subject to some precondition (here: "krachtvoercoefficient" or ratio of milk (page 33, 3rd paragraph)). Furthermore, the test system was tested on a group of cows (section 4.2, table 4.1) and naturally involved recognition of individuals using an appropriate system as well as the necessary collection of individualized yield and ration data. Finally, as indicated on page 35, penultimate

paragraph of section 6.3, D3 specifically mentions application to milking robots, i.e. automatic milking systems in which the above steps or functions.

3.3.2 Vis-a-vis this prior art the only possible difference of the claimed method lies in the specific precondition of the regulatory step (all requests), additionally (auxiliary request II) that this regulatory step applies only to milking.

3.3.3 However, these differences do not change the nature of the regulatory step, which as noted need not be technical, i.e. includes non-technical variants. For such non-technical variants, any differences therein are also non-technical and can therefore not contribute to inventive step, see above. Consequently, claim 1 of the main and auxiliary requests I and II encompasses subject-matter that lacks inventive step, contrary to the requirements of Articles 52(1) and 56 EPC.

3.4 Even if the regulatory step in claim 1 of the requests were to be limited or understood to be limited to the actual subsequent adjustment, the Board would arrive at the same conclusion.

3.4.1 With regard to the main request the only difference of the method of claim 1 over D3 resides in the precondition (of the regulatory step) that total milking duration of all dairy animals is at most equal to an effective daily milking time of the (automatic) milking device. Thus, an individual ration or milking is adjusted on condition that total milking time does not exceed milking capacity of the device. Considering the second option, adjusting individual milking so as not to exceed milking capacity of the device, this can be seen to state nothing more than the inevitable

constraint that is imposed by a device that offers limited milking time: once the device's limits have been reached no more milkings can take place. Moreover, common sense dictates to a dairy farmer who is historically concerned with limited resources to get the best out of his machine, and in particular to arrange milkings to fit total machine milking time.

3.4.2 As concerns auxiliary request I the precondition is that the total sum of individual feed balances over all animals of the group is larger after than before the regulatory step. Feed balance is defined in paragraph [0057] as the product of milk yield and price minus the sum of the products of feed quantities and their price. For a given animal it represents the revenue minus costs for that animal. Apart from the fact that D3 itself already clearly suggests the use of similar criteria (page 16, last sentence but two: decision criteria are based on the ratio of milk revenue and feed costs: "besliscriteria ... vastgesteld op basis van de verhouding tussen de melkopbrengst en de krachtvoerkosten"), this precondition is entirely economic in nature. Effectively, milking or feeding should be adjusted to increase profit. Imposing such a precondition constitutes a method for doing business, which under Article 52(2)(c) EPC is not to be regarded as a patentable invention, as essentially non-technical. This difference is thus non-technical in nature and cannot contribute to inventive step, see above.

3.4.3 Finally, turning to the remaining auxiliary request II the regulatory step is limited to adjusting milking of individual animals subject to some undefined precondition. It follows logically from the discussion above under section 3.4.1 for the main request, in

relation to adjusting milking under a specific precondition (total device milking time not exceeded), that that conclusion must hold also for the broader idea without a defined precondition.

4. As none of the amendments proposed in the main and auxiliary requests I and II meet the requirements of Articles 52 and 56 EPC, the Board must revoke the patent pursuant to Article 101(3)(b) EPC.

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 A. de Vries

Decision electronically authenticated