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**Datasheet for the decision
of 9 June 2021**

Case Number: T 2469/19 - 3.4.03

Application Number: 14869653.7

Publication Number: 3084729

IPC: G07C1/24, G06K9/20

Language of the proceedings: EN

Title of invention:

SYSTEM AND METHOD FOR EVENT TIMING AND PHOTOGRAPHY

Applicant:

Martin, Todd

Headword:

Relevant legal provisions:

EPC Art. 52(1), 56

EPC R. 103(1)(a)

Keyword:

Inventive step - (no)

Reimbursement of appeal fee - (no)

Decisions cited:

Catchword:



Beschwerdekammern
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Chambres de recours

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Case Number: T 2469/19 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 9 June 2021

Appellant: Martin, Todd
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Representative: Sach, Greg Robert
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 21 March 2019
refusing European patent application No.
14869653.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Eliasson
Members: S. Ward
C. Heath

Summary of Facts and Submissions

I. The appeal is against the decision of the Examining Division to refuse European patent application No. 14 869 653 on the grounds that the subject-matter of claim 7 did not involve an inventive step within the meaning of Article 56 EPC and the subject-matter of claim 1 was not new within the meaning of Article 54 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 based on the request as filed on 9 May 2021; the appellant also requested reimbursement of the appeal fee.

III. The following document is referred to:

D1: DE 10 2006 006 667 A1

IV. Claim 1 reads as follows:

*"A system for identifying and timing an athlete during a timed sporting event in which the athlete is participating, said system comprising:
a camera (106) configured to capture an image of the athlete;
a media database (104) for storing images captured by said camera; and
a processor (102) configured to compare a profile image (110) of the athlete captured prior to the commencement of the sporting event and stored in said media database with an image of the athlete captured during the sporting event using facial recognition technology,*

said processor being configured to associate contact details of the athlete with the athlete's profile image prior to commencement of the sporting event, said processor being configured to associate a time with the athlete's performance in the sporting event based on the comparison between the profile image and the image captured during the sporting event, said processor being configured to determine a finish time of the athlete using solely facial recognition technology for the comparison of the images of the athlete, in combination with a race system clock, without using a bib number or timing chip wearable by the athlete."

Claim 6 reads as follows:

*"A method for timing an athlete participating in a sporting event, the method comprising:
capturing a digital profile image (110) of the athlete prior to commencement of the sporting event;
associating, with a microprocessor (102), contact details of the athlete with the athlete's profile image prior to commencement of the sporting event;
capturing a digital commencement image of the athlete as the athlete commences the sporting event;
assigning a commencement time with athlete's commencement image;
capturing a digital finish image of the athlete as the athlete finishes the sporting event;
assigning a finish time with the athlete's finish image;
determining the athlete's race time with the microprocessor by comparing the commencement image and commencement time of the athlete with the finish image and finish time of the athlete, and without using a bib number wearable by the athlete; and*

identifying the athlete with the microprocessor by comparing the profile image of the athlete with at least one of the athlete's commencement and finish images, the identifying being conducted using only facial recognition technology and without use of a wearable timing chip or race number bib."

- V. Following the summons to oral proceedings, the Board sent the appellant a communication under Article 15(1) RPBA setting out its preliminary view that, taking into account implicit features, it was arguable that the subject-matter of claim 1 lacked novelty over D1 (Article 54 EPC), but at the very least, it did not appear to involve an inventive step (Article 56 EPC).

It was also pointed out that, according to Rule 103(1) (a) EPC, a reimbursement of the appeal fee would require firstly that the appeal was deemed to be allowable, and secondly that such reimbursement was equitable by reason of a substantial procedural violation.

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

In general D1 was a rather complicated document which was not always easy to follow. The system and method of D1 was overly complex, utilising image sequences taken throughout the race and even at a start line to link features.

In D1 an identification feature was used primarily to identify the competitor while the "auxiliary feature" was a fall-back. In cases where the identification feature was obscured at the start or finish line, D1 relied on a series of images taken during the

competition (and not prior to the commencement of the event as in the present invention) until an image existed where an unobstructed view of the identification feature and auxiliary feature was available to identify the competitor. Images of the competitor showing only auxiliary features might then be used to identify the competitor so long as there was an earlier image showing the auxiliary image and also an identity feature which were linked together. Thus, D1 always relied on an identification feature in order to ultimately identify a competitor.

Facial recognition technology was mentioned in D1 only as an auxiliary means of identification, to be used always in combination with a main identification means. The present invention defined a system and method for timing an athlete participating in a sporting event whereby the athlete was identified using only facial recognition technology.

The choice of facial recognition technology ensured that athletes could not cheat by switching chips or bib numbers (see page 19 of the application, third paragraph, final sentence), thereby solving the problem of ensuring the integrity of the sporting event.

D1 disclosed the use of multiple auxiliary features in combination, such as "typical outline shape" and "color distribution", and never the use of only one auxiliary feature. In the claimed invention, facial recognition technology alone was used.

Reasons for the Decision

1. The appeal is admissible.
2. *Inventive step*
 - 2.1 The claims according to the appellant's sole request comprise independent claims to a system (claim 1) and to a corresponding method (claim 6). The Board's assessment of inventive step will focus on method claim 6.
 - 2.2 The closest prior art is document D1, which discloses a number of arrangements for timing an athlete in a sporting event. Possibly the most general statement of the invention of D1 is given in paragraph [0006], which the Board takes as the starting point in the assessment of inventive step. The Board offers the following (non-official) translation of the first part of this paragraph into English (the language of the present proceedings):

"An essential feature of the method according to the invention for automatically determining the results of sporting competitions using digital cameras is that the competitors are not only recorded by one or more digital cameras during the finish pass or during the start pass and finish pass and the recordings are stored for evaluation, but also before the start and/or during the competition and/or before and/or after the finish pass, whereby identification features of the individual competitor are linked with auxiliary features."

Thus, at least one digital image of the competitor is always taken at the finish, and at least one digital image may also be taken at the start (particularly where there is a mass start, as further explained in paragraph [0035] of D1). Further digital images are taken of the competitor to link the competitor's identification feature to auxiliary features. These identification images may be taken before the start, during the competition or even after the finish.

2.3 Paragraph [0006] continues (again in a non-official translation):

"The auxiliary features enable the system for determining the result of the sporting competition to identify the individual competitor at the finish pass or also additionally at the start pass and to assign him an individual start time, an individual finish time and, as the difference, a competition time and a place on the results list, without his identification features being visible to the camera at the finish or at the start and finish."

In other words, in cases where the identification features are obscured at the start or finish of the race, either the start or finish times, or both, may be determined solely by means of the auxiliary features appearing in the images of the start and finish (see also paragraph [0033]).

2.4 Hence, D1 discloses not only a number of different methods for timing an athlete which may be used in different races (e.g. identification images being taken before the start or during the race), but also different timing methods for use in the same race

depending on whether the identification feature is obscured at the start and/or finish.

For the purposes of comparison with the claimed invention, the relevant embodiments of D1 are those where the identification images are taken before the start of the race (see paragraphs [0006] and [0015] and claim 8 of D1) and where the identification feature is obscured at the start and/or finish of the race, so that at least one of the start or finish times is determined solely by means of the auxiliary features (see paragraphs [0006], [0033]).

2.5 In the light of the above, the Board judges that the following features of claim 6 are disclosed in D1:

- (a) A method for timing an athlete participating in a sporting event, the method comprising:*
- (b) capturing a digital profile image of the athlete prior to commencement of the sporting event;*
- (c) capturing a digital commencement image of the athlete as the athlete commences the sporting event;*
- (d) assigning a commencement time with athlete's commencement image;*
- (e) capturing a digital finish image of the athlete as the athlete finishes the sporting event;*
- (f) assigning a finish time with the athlete's finish image;*

(g) *determining the athlete's race time with the microprocessor by comparing the commencement image and commencement time of the athlete with the finish image and finish time of the athlete,*

(h) *and without using a bib number wearable by the athlete; and*

(i) *identifying the athlete with the microprocessor by comparing the profile image of the athlete with at least one of the athlete's commencement and finish images,*

(j) *the identifying being conducted ... without use of a wearable timing chip or race number bib.*

2.6 Hence, claim 6 is seen as differing from D1 in the following features:

(k) *associating, with a microprocessor, contact details of the athlete with the athlete's profile image prior to commencement of the sporting event;*

(l) *the identifying being conducted using only facial recognition technology.*

2.7 In relation to feature (k), it is obvious that the sporting event authorities would create, prior to the event, a list of competitors including *inter alia* names and contact details. In the embodiments of D1 where digital images of the competitors for identification purposes are taken prior to the start of the event, it is equally obvious that such images would be stored in association with the personal details of the respective competitors. The Board therefore finds that feature (k) does not involve an inventive step, and this finding

was not challenged by the appellant at oral proceedings.

- 2.8 The essential difference over D1 is therefore feature (1). Since paragraph [0006] of D1 discloses the use of auxiliary features without disclosing specific examples thereof, the objective problem could be formulated as selecting a suitable candidate for use as an auxiliary feature.

Paragraph [0008] of D1 presents a list of six types of possible auxiliary features, one of which is "*Biometrische Daten des Gesichtes*" (Biometric data of the face). Identifying the athlete using such data, as envisaged in D1, would clearly involve the use of facial recognition technology, as defined in feature (1). While it may be going too far to say that D1 discloses this feature in combination with all of features (a) to (j) listed above, the selection of any one possibility from the disclosed list of six potential candidates could not be seen as involving an inventive step.

- 2.9 The appellant argued at oral proceedings that the choice of facial recognition technology addressed the specific problem of guaranteeing the integrity of the sporting event by ensuring that athletes cannot cheat by switching chips or bib numbers (see page 19 of the application, third paragraph, final sentence).

However, even if this were accepted as the technical problem, the skilled person would be well aware that the chief motivation for the development of facial recognition technology was to provide a secure and effective way of verifying the identity of individuals, and that one of its main benefits is that it reduces

the possibility of identity fraud by individuals using identification means which are either fake or to which they are not entitled. Hence, the skilled person, finding the use of biometric data of the face disclosed in paragraph [0008] of D1, would recognise that this feature would provide a solution to the problem of ensuring the integrity of the event. The Board accepts that the other biometric options presented in paragraph [0008] could equally be seen as providing solutions to this problem. However, an obvious solution to a problem is not rendered any less obvious by the existence of a limited number of obvious alternative solutions.

Hence, on the basis of the appellant's suggested problem also, feature (1) cannot be seen as involving an inventive step.

2.10 The arguments of the appellant that the claimed method was inventive over D1 did not persuade the Board.

2.11 The Board accepts that the embodiment reflected in Figs. 1 and 2 does not correspond closely to the present invention, in that this embodiment requires a sequence of images to be taken throughout the race, and not prior to the commencement of the race, to allow an auxiliary feature to be used for identification.

However, as stated above, it is the Board's view that other embodiments are disclosed in D1, including embodiments in which auxiliary features are determined prior to the start of the event using a digital camera (paragraphs [0006], [0015] and claim 8), and it is these embodiments which are relevant for the assessment of inventive step.

The Board also points out that using individual images taken from a sequence of such images is a possibility which is not excluded by claim 1.

- 2.12 The appellant is correct in pointing out that facial recognition technology is only mentioned in D1 as an auxiliary feature, and that an identification feature is also always defined.

As noted above under point 2.4, D1 discloses methods for timing athletes according to which, *for at least some athletes participating in the event*, identification of the athlete and determination of the start and/or finish times would be made by means of an auxiliary feature alone, one example of which is disclosed as biometric facial data. The fact that D1 also discloses other timing methods is not seen as relevant to the argument.

- 2.13 The appellant argued that D1 disclosed, in all embodiments, the use of a plurality of different types of auxiliary features in combination, which would exclude "using only facial recognition technology".

The Board's view, however, is that it is clear from paragraph [0011] that the use of two or more types of auxiliary features in combination is a further embodiment, and hence the use of a single auxiliary identification feature is clearly contemplated. In the Board's view the use of the plural "auxiliary features" ("*Hilfsmerkmale*") in D1 appears more likely to refer to the fact that even the use of a single type of biometric data (such as facial biometric data) generally involves the determination of a plurality of data values.

2.14 The final feature of claim 6 defines "identifying the athlete ... using only facial recognition technology". It could be argued that the term "identifying" should encompass retrieving the actual name of the athlete (e.g. from a database), and that where auxiliary features are used in D1 to identify the athlete, such auxiliary features are nevertheless linked to an identification feature (e.g. paragraph [0015]), which is implicitly linked to the actual identity of the athlete. It might therefore be argued that the identification chain from the auxiliary features to the name of the athlete also involves the identification feature, and that this represents a further difference over D1, as identification is not conducted using the auxiliary feature (e.g. facial recognition technology) alone.

In the view of the Board it is debatable whether this represents a further difference; the term "identifying" in the final feature of claim 6 appears to be defined purely in terms of a comparison of images, a feature which is disclosed in D1. However, even if a difference were recognised in this regard, the Board would not consider it inventive.

For embodiments of D1 in which a digital image is not taken prior to the commencement of the race, the images being taken along the course, the Board accepts that association of the auxiliary feature and the identification feature would appear to be essential. However, in the relevant embodiments, where the digital image is taken before the start of the race, it would be obvious to the skilled person to do this as part of the registration process, and to link the auxiliary features derived from the image (e.g. facial recognition data) directly to the registered

identification details of the athlete, which would then be directly derivable from the auxiliary features in the start and/or finish images.

2.15 For the above reasons, the Board judges that the subject-matter of claim 6 does not involve an inventive step within the meaning of Articles 52(1) and 56 EPC. As a consequence, the sole request cannot be allowed, and the appeal must fail.

3. *Request for reimbursement of the appeal fee*

3.1 According to Rule 103(1)(a) EPC, the appeal fee shall be reimbursed in full:

"in the event of interlocutory revision or where the Board of Appeal deems an appeal to be allowable, if such reimbursement is equitable by reason of a substantial procedural violation".

3.2 As the present appeal is not allowable, the appellant's request for reimbursement of the appeal fee does not meet the first condition, and is therefore refused.

Order

For these reasons it is decided that:

1. The appeal is dismissed.
2. The request for reimbursement of the appeal fee is refused.

The Registrar:

The Chairman:



S. Sánchez Chiquero

G. Eliasson

Decision electronically authenticated