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**Datasheet for the decision
of 2 July 2019**

Case Number: T 1824/14 - 3.4.03

Application Number: 12152304.7

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Title of invention:
Tire management system and method

Applicant:
The Goodyear Tire & Rubber Company

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - main request and auxiliary requests (no)

Decisions cited:
T 1000/09, T 0336/14

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1824/14 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 2 July 2019

Appellant: The Goodyear Tire & Rubber Company
(Applicant) 1144 East Market Street
Akron, OH 44316-0001 (US)

Representative: Kutsch, Bernd
Goodyear SA
Patent Department
Avenue Gordon Smith
7750 Colmar-Berg (LU)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 3 March 2014
refusing European patent application No.
12152304.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Eliasson
Members: T. M. Häusser
T. Bokor

Summary of Facts and Submissions

- I. The appeal concerns the decision of the examining division refusing the European patent application No. 12 152 304 for lack of inventive step (Article 56 EPC).
- II. Reference is made to the following documents:
- D1: EP 1 974 961 A,
D3: US 2010/0023201 A.
- III. At the oral proceedings before the board the appellant (applicant) requested that the decision under appeal be set aside and a patent be granted on the basis of claims 1 to 13 of the main request or on the basis of the first or second auxiliary requests, all filed with the grounds of appeal dated 26 June 2014.
- IV. The wording of the independent claims of the main request and the first and second auxiliary requests is as follows (board's labelling "(a)" to "(g)"):

Main request:

"1. A method of tracking tire-related data for a plurality of fleets of vehicles, the method comprising:

(a) receiving via a web-based interface survey data collected from a plurality of vehicles associated with a plurality of fleets, the survey data including, for each of the plurality of vehicles, a plurality of tire parameters and a plurality of vehicle parameters;

(b) storing the survey data in a database;

(c) in response to a request received through the web-based interface, generating at least one report using the survey data stored in the database, wherein

the report is based upon survey data collected from vehicles associated with more than one fleet; and
(d) receiving via the web-based interface at least one filter defining a set of operating conditions, wherein the report is filtered using the filter."

First auxiliary request:

Claim 1 of the first auxiliary request differs from claim 1 of the main request in that the conjunction "and" is moved from the end of feature (c) to the end of feature (d) and in comprising the following additional feature:

(e) "wherein the report includes a health index representing a composite score for a fleet or model of tire."

Second auxiliary request:

Claim 1 of the second auxiliary request differs from claim 1 of the main request in that the conjunction "and" at the end of feature (c) is deleted and in comprising the following additional features:

(f) "receiving via the web-based interface a fleet specification defined for a fleet, the fleet specification including at least one parameter selected from the group of pull tread depth, tire pressure, average cost and average retread cost, wherein the specification defines separate parameters for trail, drive and steer tires, and

(g) wherein the report compares fleet performance against the fleet specification."

V. The appellant argued essentially as follows in relation to inventive step:

(a) Main request

The subject-matter of claim 1 of the main request differed from the method of document D1 in comprising the features relating to the plurality of vehicle fleets and the reception of a filter, which allowed to provide a more flexible method and a more comprehensive analysis. D1 did not provide any hint or motivation to arrive at the claimed subject-matter which involved therefore an inventive step.

(b) First and second auxiliary requests

The health index was a measure of the physical condition of the tires allowing the user to assess at a glance the health of the tires in a fleet or of a particular tire model. The fact that the health index represented a composite score implied the combination of different parameters. Technical considerations were involved in order to select the relevant parameters making up the health index.

Reasons for the Decision

1. Main request - inventive step

1.1 Closest state of the art

In the decision under appeal the examining division assessed inventive step starting from document D1 as the closest state of the art (see point 6 of the Reasons). Indeed, document D1 discloses - as detailed be-

low - subject-matter that is conceived for the same purpose as the claimed invention, namely for providing a method of tracking tire-related data for a plurality of vehicles, and has the most relevant technical features in common with it. Document D1 is therefore considered the closest state of the art.

1.2 Distinguishing features

1.2.1 Document D1 discloses (see paragraphs [0001], [0035], [0040], and [0051]) a system for fleet management, in particular for tracing and identifying tires and managing the status of the tires on a vehicle. The system includes a passive transponder 1 that is placed in the interior of each tire 2 for the identification of the tires mounted on a vehicle. In the vehicle, a control unit 3 is also installed for identification and storage of vehicle data, such as data about the vehicle identification and the tires, the respective data about pressure, temperature, groove measures, kilometers driven and/or worked hours, data about the motor operation, gathered from a vehicle electronic unit, the place of each tire in the vehicle and useful life status of the tires (new or retreaded). The system further includes a data gathering device 4 that performs the reading of the tire transponder 1 and data providing means 5 comprising a reader of the pressure and the tire groove deepness. These data are sent from the data gathering device 4 to the control unit 3 and also using a GPRS modem 40 through a TCP/IP connection to a remote database 6, where a fleet management software receives the data and events allowing the information analysis and generation of diverse reports.

- 1.2.2 Hence, using the wording of claim 1, document D1 discloses a method of tracking tire-related data for a plurality of vehicles, the method comprising:
- (a)' receiving (by the remote database 6) via a web-based interface (TCP/IP connection) survey data collected from a plurality of vehicles, the survey data including, for each of the plurality of vehicles, a plurality of tire parameters (pressure, groove measures, kilometers driven, worked hours, ...) and a plurality of vehicle parameters (data about vehicle identification and motor operation);
 - (b) storing the survey data in a database (remote database 6);
 - (c)' generating at least one report (survey or report) using the survey data stored in the database (remote database 6), wherein the report is based upon survey data collected from the vehicles.

This is not disputed by the appellant.

- 1.2.3 In the contested decision the examining division held that document D1 disclosed a system for the management of a plurality of fleets (see the Reasons, point 6.2 and point 6.6.1, paragraph 1).

The board notes that the expressions "fleet management" and "fleets management" and similar respective expressions ("management of the fleets" ...) are used interchangeably in document D1 (see the expressions in paragraphs [0001], [0002], [0008], [0016], [0020], [0037], [0039], [0041] and [0051] of D1 and those in paragraphs [0011], [0028], [0030], [0031], [0032], [0035], [0040] and [0053], respectively). Therefore, the board agrees with the appellant in that document D1 merely discloses that the described system manages and tracks data for

one or the other fleet of vehicles, but not for a plurality of fleets.

1.2.4 Consequently, the subject-matter of claim 1 of the main request differs from the method of document D1 in comprising the following features:

- (i) the method being adapted for tracking tire-related data for a plurality of fleets of vehicles, the survey data being collected from vehicles being associated with a plurality of fleets (see features (a) and (c)), and
- (ii) the request being received through the web-based interface (see feature (c)), and receiving via the web-based interface at least one filter defining a set of operating conditions, wherein the report is filtered using the filter (see feature (d)).

1.3 Objective technical problem

1.3.1 The appellant argued that the problem to be solved by the invention was to provide a more flexible method allowing a more comprehensive analysis.

1.3.2 The board agrees with the appellant in that the first set (i) of difference features relating to a plurality of fleets of vehicles allows the tracking of tire-related data of different types of vehicles thus leading to a more flexible tire-tracking method and the opportunity of performing a more comprehensive analysis for generating the claimed report.

1.3.3 In relation to the second set (ii) of difference features it is noted first that document D1 discloses - as indicated above - that the data transmitted to the

remote database 6 are analysed for generating various reports (see paragraph [0051], last sentence):

"Finally, the events, as recorded in the memory of the data gatherer, are sent by GPRS 40 to the remote databank and then they can be worked in the system, issuing diverse reports and analyses."

Furthermore, access to the transmitted data via a website is explicitly disclosed in document D1 (see paragraph [0040]):

"The transmitted data are available for consultation in the Internet through an own 'site' ..."

However, the manner in which the user interacts with the website in order to access the data stored in the database 6 and to generate the desired reports is not described at all in document D1.

Vis-à-vis this disclosure in document D1 the second set (ii) of difference features has the effect of merely implementing the web-based interaction with the database.

1.3.4 Since the two sets (i) and (ii) of difference features are not *functionally interdependent* it is appropriate to formulate partial problems in relation to them (see *Case Law of the Boards of Appeal of the EPO*, 8th edition 2016, section I.D.9.2.2). The objective technical partial problems corresponding to these sets of difference features are therefore considered to be the following:

- to render the tire-tracking method more flexible, allowing a more comprehensive analysis, and

- to implement the web-based interaction with the database.

1.4 Obviousness

1.4.1 The appellant argued that document D1 did not provide any hint or motivation to arrive at the claimed subject-matter.

1.4.2 The claims and the description of the application do not contain any definition of what is meant by a "fleet of vehicles". The board considers the concept designated by this expression to be broad. In particular, any set of vehicles sharing some common characteristics, for example relating to the type, attribute or condition of the vehicles or relating to their registrations may be considered the claimed *fleet of vehicles*.

On the other hand, the method described in document D1 is applicable to any kind of vehicle. Moreover, various details concerning the vehicles and their registrations are in fact gathered and transmitted to the remote database 6, as described for example in paragraph [0043] (explanatory insertions in square brackets by the board):

"For the vehicle registration, it [the software of the data gathering device 4] must be informed the vehicle code, the present odometer counting of the vehicle, the configuration of tires, spare tires and axles of the vehicle and which tire is mounted in each position. All of the data are recorded by the reader of the transponder [i. e. the data gathering device 4] that identifies the tire or the vehicle and, later on, they are sent to the remote database."

It would thus occur to the skilled person - when attempting to render the tire-tracking method more flexible, allowing a more comprehensive analysis - to apply the known tire-tracking method of D1 to various sets of vehicles having, for example, different configurations of axles or tires or different locations or years of registration. The skilled person would thus be led to applying the known method to a plurality of fleets of vehicles.

- 1.4.3 In relation to the second set (ii) of difference features, the board notes first that the claimed "filter defining a set of operating conditions" is understood as concerning those characteristics of the vehicles or tires which relate to their operation, such as tire pressure, tread depth, and mileage. This is also in line with the description and drawings of the application (see Figures 16-22 and the corresponding description on pages 17-19).

The board agrees with the opinion expressed by the examining division in the contested decision (see point 6.4 of the Reasons) that the use of a filter is a standard and basic way to interact with a database. In fact, any manner of restricting the attention to a limited number of entries of a database amounts to the application of a filter.

Moreover, those characteristics of the vehicles or tires which relate to their operation are the most relevant ones which have to be tracked in a tire management system. Accordingly, several such characteristics, for example tire pressure, temperature, groove measures, kilometers driven, and worked hours are gathered in the system of document D1 and stored in the remote

database 6 (see document D1, paragraphs [0035] and [0051]).

Hence, the board considers it to be obvious for the skilled person to implement the web-based interaction with the remote database 6 by applying a filter relating to such operating conditions.

1.4.4 In view of the above the board concludes that the subject-matter of claim 1 of the main request does not involve an inventive step (Articles 52(1) and 56 EPC).

2. First auxiliary request - inventive step

2.1 Claim 1 of the first auxiliary request comprises - compared to claim 1 of the main request - the additional feature (e) relating to the "health index", which is a further difference feature over the closest state of the art document D1.

The appellant argued that technical considerations were involved for selecting the relevant parameters making up the claimed health index.

2.2 The board remarks first that, in accordance with the parts of the description and drawings of the application mentioned above (Figures 16-22 and corresponding description on pages 17-19), the term "report" may be understood as referring to a graphical illustration (using the web-based interface) of the desired information.

Feature (e) exclusively concerns the content of the claimed report, namely that it "includes a health index representing a composite score for a fleet or model of tire". The health index is thus merely destined for be-

ing presented to the user, who may then decide to take technical action or not. As such the health index is considered to relate to the cognitive information content of the presentation. Moreover, claim 1 of the first auxiliary request contains no details in relation to the use of the report by the operator so that a continued and/or guided human-machine interaction process credibly assisting the operator to perform a technical task cannot be considered to be implied by the claim, either (see the headnote of decision T 336/14). Hence, the fact that the report includes the claimed health index is not considered to contribute to the technical solution of a technical problem (cf. decision T 1000/09, point 7 of the Reasons).

2.3 The health index may therefore legitimately appear in the formulation of the technical problem as a given framework within which that problem is posed. Hence, it is to be included in the second partial problem mentioned under point 1.3.4 above as follows:

- to implement the web-based interaction with the database such that the report includes the desired health index.

The implementation of including the given health index representing a composite score for a fleet or model of tire in the report is considered a routine task for the skilled person, a computer systems engineer having experience with databases, and does not require any inventive skills.

Consequently, the subject-matter of claim 1 of the first auxiliary request does not involve an inventive step (Articles 52(1) and 56 EPC).

3. Second auxiliary request - inventive step

- 3.1 Claim 1 of the second auxiliary request comprises - compared to claim 1 of the main request - the additional features (f) and (g), which are further difference features over the closest state of the art document D1.
- 3.2 The examining division held that the subject-matter of claim 1 of the second auxiliary request was not inventive since the comparison of real data with specification data was a basic way of monitoring a device, also citing paragraph [0092] of document D3 in this respect (see the decision, point 8 of the Reasons).
- 3.3 The appellant advanced neither during the written stage of the appeal proceedings nor during the oral proceedings before the board any arguments concerning the inventiveness of the additional features (f) and (g) of claim 1 of the second auxiliary request.
- 3.4 The board sees no reasons to differ from the point of view taken by the examining division and is thus of the opinion that the skilled person would implement the subject-matter of features (f) and (g) in the tire-tracking method of the closest state of the art document D1 without exercising any inventive skills.

Hence, the subject-matter of claim 1 of the second auxiliary request does not involve an inventive step, either (Articles 52(1) and 56 EPC).

4. Conclusion

Since the subject-matter of claim 1 of the main request and of the first and second auxiliary requests does not involve an inventive step, the board confirms the decision of the examining division refusing the applica-

tion. Therefore, the appeal has to be dismissed (Articles 97(2) and 111(1) EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



S. Sánchez Chiquero

G. Eliasson

Decision electronically authenticated