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D E C I S I O N
of 10 November 1999

Case Number: T 0616/97 - 3.2.3

Application Number: 89902652.0

Publication Number: 0401260

IPC: E01B 35/00

Language of the proceedings: EN

Title of invention:

A method of and an equipment for determining the position of a track

Patentee:

Henttinen, Matti

Opponent:

Geotronics AB

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 84, 100(a), 100(b), 114(1)

Keyword:

"Amendments to claims as maintained by the Opposition Division
- not allowable"

"Re-introduction of ground of opposition under Article 100(b)
not maintained before the Opposition Division into the appeal
procedure - allowed"

"Novelty - yes (after amendments)"

"Inventive step - yes"

Decisions cited:

T 0523/89, T 0015/91, T 0472/92

Catchword:

-



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Boards of Appeal

Chambres de recours

Case Number: T 0616/97 - 3.2.3

D E C I S I O N
of the Technical Board of Appeal 3.2.3
of 10 November 1999

Appellant: Geotronics AB
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Decision under appeal: Interlocutory decision of the Opposition Division
of the European Patent Office posted 2 April 1997
concerning maintenance of European patent
No. 0 401 260 in amended form.

Composition of the Board:

Chairman: C. T. Wilson
Members: J. B. F. Kollar
M. K. S. Aúz Castro

Summary of Facts and Submissions

I. By its decision of 2 April 1997 the opposition division maintained European patent No. 0 401 260 in amended form in view of the following state of the art:

D1: Geodimeter 140 (pamphlet 1)

D2: Field system for Tacheometry (pamphlet 2)

D3: Geodat 126 (pamphlet 3)

D4: Hydropac (pamphlet 4)

D5: Geodimeter 142 (pamphlet 5)

D6: US-A-3 821 933

D7-2: pamphlet "Geodimeter 140T", second edition, printed in Sweden 03/88 (filed with letter of 19 October 1995) and

D7-1: pamphlet "Geodimeter 140T", first edition, printed in Sweden 11/87 (filed with letter of 18 November 1996) in combination with a copy of an order to a printing company, dated 11 November 1987.

III. Independent claims 1, 5, 8 and 9 underlying the decision read as follows:

"1. A method of determining the position of a track (1) for moving the track (1) to a desired position, wherein the deviation of the actual position of the

track (1) from the desired position of the track (1) in a given set of coordinates at a predetermined point along the track in the longitudinal direction thereof is determined in at least one direction transversely to the longitudinal direction of the track (1) by measuring, by means of at least one survey line (11; 11') going through a point of reference (A) having a known position in said set of coordinates, the deviation of the position of a measuring point (C) determined to be positioned at a determined point relative to the track (1) in the transverse direction thereof at said longitudinal point along the track (1) from the calculated position of a hypothetical point (D) positioned at a corresponding point relative to the track (1) with the track (1) in the desired position, characterised in that

the survey line (11) is a straight line between the point of reference (A) and the measuring point (C), said survey line turning about the point of reference (A) following the position of the measuring point (C);

the direction of the survey line (11) in said set of coordinates is measured by means of a measuring device (6);

the longitudinal position of the measuring point (C) along the track (1) is determined;

both the measuring of the direction of the survey line (11) and the determination of the longitudinal position of the measuring point (C) is carried out continuously and automatically:

deviations of the position of the measuring point (C) both in the vertical and the horizontal direction of the track (1) from the calculated position of the hypothetical point (D) are calculated on the basis of the direction of the survey line (11) and the longitudinal position of the measuring point along the track (1); and

the track is displaced to the desired position utilising the deviation values so determined."

"5. Survey apparatus for carrying out the method according to any of claims 1 to 4, comprising means for determining a survey line (11), and a measuring device (6, 6', 27) and calculating means (20) for measuring and calculating differences between the positions of a measuring point (C) and a hypothetical point (D) characterised in that

the survey apparatus comprises means for determining the longitudinal position of the measuring point (C) along the track (1);

said means for determining the survey line comprises a follower device (15; 24) associated with the measuring device (6; 6'), the follower device being arranged to be positioned automatically in alignment with the survey line (11); and

the measuring device (6; 6'; 27) and the follower device (15; 24) are connected to the calculating means (20) whereby the calculating means (20) is connected to measure and calculate deviations between the positions of the measuring point (C) and the hypothetical point

(D) on the basis of the direction of the survey line (11) and the longitudinal position along the track (1) continuously and automatically."

"8. A method of displacing a track (1) from an actual position to a desired position comprising the steps of:

- (a) providing a system of coordinates;
- (b) providing a measuring device (6) defining a point of reference (A) having a known position in the system of coordinates;
- (c) providing a measuring carriage (5) on the track (1) at a predetermined longitudinal position on the track;
- (d) providing a measuring point (C) on the measuring carriage (5) at a determined point relative to the actual position of the track;
- (e) calculating a hypothetical point (D) at a corresponding determined point relative to the desired position of the track;
- (f) providing a survey line (11); and
- (g) advancing the measuring carriage (5) and measuring point (C) along the track;
characterised by
- (h) providing the survey line (11) from the point of reference (A) to the measuring point (C);

- (i) determining the longitudinal position of the measuring point (C);
- (j) measuring the direction of the survey line (11) in the system of coordinates by the measuring device (6);
- (k) determining the transverse vertical and horizontal deviation of the position of the measuring point (C) from the position of the hypothetical point based upon the direction of the survey line (11) and the longitudinal position of the measuring point (C) continuously and automatically;
- (l) changing the direction of the survey line (11) by following the position of the measuring point (C);
- (m) repeating steps (i), (j), (k), (g) and (l) for a desired number of repetitions; and
- (n) displacing the track (1) both vertically and horizontally to the desired position using the determined deviations."

"9. An apparatus for displacing a track (1) in a system of coordinates from an actual position to a desired position, comprising:

a measuring device (6) defining a point of reference (A) having a known position in the system of coordinates;

a measuring carriage (5) on the track;

a measuring point (C) on the measuring carriage (5) at a determined point relative to the actual position of the track;

means for calculating a hypothetical point (D) at a corresponding determined point relative to the desired position of the track;

means for providing a survey line (11);

and means for advancing the measuring carriage (5) and measuring point (C) along the track;
characterised by:

means for providing the survey line (11) between the point of reference (A) and the measuring point (C);

means for determining the longitudinal position of the measuring point (C);

means for measuring the direction of the survey line (11) in the system of coordinates by the measuring device (6);

means for determining transverse vertical and horizontal deviation of the position of the measuring point (C) from the position of the hypothetical point (D) based upon the direction of the survey line (11) and the longitudinal position of the measuring point (C) continuously and automatically;

means for changing the direction of the survey line (11) by following the position of the measuring point (C); and

means for displacing the track (1) both vertically and horizontally to the desired position using the determined deviations."

III. Against this decision the appellant (opponent) lodged a Notice of Appeal on 30 May 1997 having paid the prescribed fee on 27 May 1997. The statement of grounds of appeal was filed on 1 August 1997.

IV. In the appeal proceedings the following additional documents were submitted by the appellant:

D8: Declaration of the Vice President of Geotronics including correspondence that the instrument Geodimeter 140T was on the market and in use in October 1987;

D9: A pamphlet "Hydrographic Positioning" printed in Sweden July 1987 for the purposes of supporting the disclosures of D4 and D7, both separately and in combination;

D10: A pamphlet "New dimensions to tracking" regarding "Autotracker", printed in Sweden December 1983, also aiming at supporting the disclosures of both D4 and D7;

D11: A manual "Geodimeter Hydro Positioning System" printed in Sweden August 1986 in support of the disclosure of D4;

D12: US-A-4 712 915;

D13: HPS Hydro Positioning System. System description

printed in Sweden August 1986 again in support of the disclosure of D4;

Appendix 1: Comparison between contested claims and cited prior art;

Figure 1: Comparison between the patent in suit and D4/D7, D8 and D10;

D14: "Flight Inspection System" FFV, published in Sweden on 22 November 1983 introduced into the proceedings for proving the publication date of D10.

V. Oral proceedings before the Board were held on 10 November 1999 in which the parties formulated their requests as follows:

the appellant requested that the decision under appeal be set aside and the patent be revoked,

the respondent (patentee) requested that

- the appeal be dismissed (main request) auxiliarily with the proviso that the patent be maintained in amended form
- according to the first auxiliary request on the basis of claims 1 to 9 filed in the oral proceedings, columns 1 and 2 of the patent specification, columns 3 to 9 filed in the oral proceedings and Figures 1 and 2 of the patent specification, or

- according to the second auxiliary request on the basis of claims 1 to 6 filed in the oral proceedings, an adapted description also filed in oral proceedings and Figures 1 and 2 of the patent specification.

The independent claims 1, 5, 8 and 9 according to the first auxiliary request read as follows:

Claim 1: corresponds to claim 1 as maintained by the first instance but reference number 11' in the preamble has been deleted,

Claims 8 and 9: correspond to claims 8 and 9 on which the maintenance of the patent in amended form was based,

Claim 5: has been amended to read as follows:

"5. Track survey apparatus for carrying out the method according to any of claims 1 to 4, comprising means for determining a survey line (11), and a measuring device (6) and calculating means (20) for measuring and calculating differences between the positions of a measuring point (C) and a hypothetical point (D), characterised in that

- the survey apparatus comprises means for determining the longitudinal position of the measuring point (C) along the track (1);
- said means for determining the survey line comprises a follower device (15) associated with

the measuring device (6), the follower device being arranged to be positioned automatically in alignment with the survey line (11) which is between a point of reference (A) and the measuring point (C); and

- the measuring device (6) and the follower device (15) are connected to the calculating means (20) whereby the calculating means (20) is connected to measure and calculate deviations between the positions of the measuring point (C) and the hypothetical point (D) on the basis of the direction of the survey line (11) and longitudinal position along the track (1) continuously and automatically."

The independent claims 1, 5 and 6 of the second auxiliary request correspond to the independent claims 1, 8 and 9 according to the first auxiliary request.

VI. In support of his request the appellant's arguments against the respondent's main, first and second auxiliary requests can be summarised as follows:

VI.1 **Main request**

Article 84 EPC

Claim 1 as maintained by the first instance has been amended to read in column 9, line 56 to column 10, line 3 as follows:

"the survey line is a straight line between the point

of reference (A) and the measuring point (C), said survey line turning about the point of reference (A) following the position of the measuring point (C)".

Claims 8 and 9 have been amended in a corresponding manner.

In the description of the second embodiment of the invention in column 8, line 24 to column 9, line 10 and Figures 3A, 3B and 4 of the patent specification, the survey line is a straight line between the point of reference (A) and the hypothetical point (D) - cf. in particular column 8, lines 30 to 34 and the survey line 11' in Figure 1.

Accordingly, at least claims 1, 8 and 9 are contradictory to the described second embodiment and conflict with the requirements of Article 84 EPC.

VI.2 **First and second auxiliary requests**

2.1 Article 100(b) EPC

It is emphasised throughout the patent specification that the continuous and automatic measurement is a key feature of the invention. This feature is also disclosed in the independent claims according to the first and second auxiliary requests. Such a feature should be explained in detail in the description in order to allow the skilled person to perform the invention. This has not been done regarding the "key feature". It is not, for example, made clear what causes the follower 15 to follow point (C), nor how the rotation is performed.

It is believed that the answer to these questions can be found in column 3, line 48 to column 6, line 47 of document D12, but this document is not referred to in the patent.

For the above reasons, the contested patent does not meet the requirements of Article 100(b) EPC.

2.2 Article 100(a) EPC

2.2.1 Prior art according to documents D7-1 to D14

Referring to the Declaration of the Vice President of Geotronics according to document D8 and the consequences following therefrom it is submitted that document D7 in its first edition D7-1 forms prior art and that additional documents D9 to D14 support the relevance of documents D1 to D6 filed in time.

2.2.2 Novelty

It is submitted that each one of documents D7-1, D10, D12 and D14, discloses all the features of the track survey apparatus according to claim 5 of the first auxiliary request, the subject-matter thereof thus not being novel.

Attention is drawn in particular to column 9, lines 29 to 31 of the patent specification which implies that the scope of claim 5 covers the survey equipment disclosed by D7-1, D10, D12 and D14, respectively.

The subject-matter of claim 5 according to the first auxiliary request does not meet the requirements of

Article 54 EPC.

2.2.3 Inventive step

Document D6 is the closest prior art with respect to the subject-matter of the independent claims 1, 8, 9 and 1, 5, 6 according to the first and second auxiliary request, respectively.

It is stressed that the subject-matter of the aforementioned independent claims differs from D6 by the technical features that the measurement is performed with features equivalent to those known from the GEODIMETER and AUTOTRACKER devices described in documents D1, D4, D7-1 and D9 to D14. The technical effect of these devices is that they provide measurements which enable the position of an object to be determined easily, simply and rapidly and automatically along a path or track which may be straight or curved so that the object can be displaced to a desired position on the basis of the results so obtained. Such devices have extremely high precision and are eminently suitable for all kind of surveying work including railroad surveying.

Starting from the teaching of document D6 and in awareness of the technical problem connected therewith the skilled person armed with the knowledge of the use of GEODIMETER and AUTOTRACKER devices according to the cited prior art would not need to exercise an inventive skill in order to recognise that the technical problem could be solved by the use of said devices.

The subject-matter of the independent claims according

to the first and second auxiliary request relates to the use of a known device in a known manner to solve the known problem of how to make continuously and automatically measurements of a point, to determine the position of the point in relation to a predetermined line and to return the point to the predetermined line.

The subject-matter of these claims is thus not inventive in the sense of Article 56 EPC.

VII. The counterarguments presented by the respondent can be summarised as follows:

1. Article 84 EPC

As to the second embodiment of the invention, reference is made to column 5, lines 9 to 15 and column 4, lines 16 to 35 showing that the measuring device can reversely be positioned at the measuring point.

There is thus no inconsistency between the description and the amended claims.

2. Article 100(b) EPC

There are three key points of the invention, namely (1) measuring, (2) calculating and (3) correcting of the position of the object being tracked. Reference is made in this respect particularly to column 7, line 56 to column 8, line 24. A more detailed description is not considered necessary as an electronic engineer would easily provide a package for points 1, 2 and

3. As to the fact that the operation according to 1, 2 and 3 is claimed to be continuous and automatic, reference is made to column 5, lines 28 to 32. As to the advantages of the invention reference is made to column 5, line 44 ff. of the patent specification.

It is believed that the patent specification taken as whole discloses the invention in a sufficient manner for it to be carried out by a person skilled in the art.

3. Article 100(a) EPC

3.1 Novelty

The subject-matter of the independent apparatus claim 5 has been amended to relate to "Track" survey apparatus. The basic idea claimed in claim 5 is that one can automatically and continuously measure, calculate and determine vertical and horizontal deviations of the position of the measuring point. None of the cited documents discloses this combination of features. Therefore, the subject-matter of claim 5 satisfies the requirements of Article 54 EPC. In particular D7 does not anticipate the subject-matter of claim 5, let alone because its public availability has not been proven "up to the hilt" (see decision T 472/92, OJ EPO 1998, 161).

3.2 Inventive step

Document D6 forms the closest prior art.

The appellant has failed to file any additional evidence as to what might be the knowledge of one skilled in the field of railroads; in the absence of any teaching in the prior art presented by the appellant which would lead a specialist for railroads towards the invention according to the claims on file the reasons for appeal are arguments and speculations based on an *ex post facto* analysis with hindsight knowledge of the claimed invention.

Reasons for the Decision

1. The appeal is admissible.
2. Maintenance of the patent with amendments performed during the opposition proceedings - the respondent's **main request**.

2.1 Article 84 EPC

The Board follows the appellant in his assertion that the amendment performed in claims 1, 8 and 9, respectively, namely, that the survey line turns about the point of reference (A) "following the position of the measuring point (C)", renders the claims unclear and not clearly supported by the description as they are contradictory to the second embodiments of the method and apparatus as described with reference to figures 3 and 4 of the patent specification, according to which the survey line 11' extends between the point of reference (A) and the hypothetical point (D).

Therefore, the subject-matter of claims 1, 8 and 9 of the respondent's main request does not fulfil the requirements of Article 84 EPC and this request thus cannot be allowed.

3. *Maintenance of the patent according to the respondent's first request*

3.1 Article 100(b) EPC

It is noted that this ground was not maintained in front of the first instance but was re-introduced in the submissions dated 3 September 1999.

It follows from the patent specification that the basic idea of the invention lies in the combination of measuring, calculating and correcting the position of railroad tracks as described particularly in column 7, line 56 to column 8, line 24. The Board accepts the patentee's argument that a more detailed description in the above respect is not necessary because the railroad specialist can be expected to consult for details an electronic engineer who would easily provide a useful package of off the shelf technology for performing the aforementioned operations taking into account the requirement of the inventor that these operations should occur continuously and automatically as claimed and described in column 5, lines 28 to 32. For more details of the method and the equipment of the invention reference is made to column 5, line 44 to column 6, line 21 and to the part of the description relating to the drawings in column 6, line 31 ff.

In the Board's judgement, therefore, the patent

specification taken as a whole discloses the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art as required in Article 83 (Article 100(b) EPC).

3.2 Article 100(a) EPC

3.2.1 Status of document D7 as state of the art

Document D7 is a commercial pamphlet wherein the advantages of GEODIMETER 140T produced by the appellant's company are presented. It is self-evident that it was in the appellant's own interest to ensure widespread distribution of the brochure in order to inform as many potential customers as possible of this latest development in a highly competitive field. Even if it cannot be specified now, i.e. 12 years later, how much time elapsed after 11 November 1987 - the date of delivery of D7-1 from the printing company to the appellant's company - before the actual distribution occurred, it can reasonably be assumed that it took place within 3 months and had thus been completed well before the priority date of the patent in suit. The respondent's assumption, that the brochure had been kept confidential until at least March 1988 (the printing date of the pamphlet's second edition D7-2) is based on the fact that the pamphlet in its actual first edition D7-1 expressed the distance units on page 2 in meters only, while in its second edition D7-2, printed after the priority date of the patent, the distance units were specified in both meters and miles - a fact considered in the respondent's view to support the assumption that D7-1 suffered from an error hindering its distribution. Moreover, the respondent referred to

T 472/92 (OJ EPO 1998, 161) - stressing that the appellant has not proved his case "up to the hilt".

However, an examination of D7 reveals that the numerical values in meters are identical in both editions and that the distance values in miles disclosed in the second edition D7-2 are simply a result of a conversion from meters into miles and thus do not constitute any correction of an error. The Board takes the view that the respondent's argument cannot cast any real doubt as to the public availability of document D7-1 before the relevant date. Decision T 472/92, relating to alleged prior use arising from delivery of labels from a US company to a joint venture company, concerns another case. The EPC does not contain any provisions about how the means of proof should be assessed. The principle of free evaluation of evidence applies. The decision is taken on the basis of the whole of the evidence presented in the course of the proceedings and in the light of the conviction of the board arrived at freely without being bound by any general rules on the evaluation of evidence - whether an alleged fact has occurred or not. The decisive factor is that the facts on which a decision is based must have been established to the satisfaction of the deciding body. Consequently, each case has to be decided on its own facts. For the reasons explained above, the Board concludes in this case that document D7-1 was available to the public before the priority date of the patent in suit and is, consequently, comprised in the state of the art.

3.2.2 Novelty in respect of apparatus claim 5

Claim 5 relates to a track survey apparatus comprising the following technical features:

- (a) means for determining a survey line:
- (b) measuring device,
- (c) calculating means,
- (d) means for determining the longitudinal position of the measuring point along a track, and
- (e) a follower device associated with the measuring device.

The measuring device (b) and the follower device (e) are connected to the calculating means to measure and calculate deviations between the positions of the measuring point and the hypothetical point along the track continuously and automatically.

The patent specification mentions in column 4, lines 35 and 36 an automatic theodolite or the like as such survey apparatus.

Brochure D7-1 presents an Autotracking Total Station (Geodimeter 140T) comprising an automatic theodolite provided with a measuring device for determining the longitudinal position of the measuring point along the track and with a follower device in the form of an emitter and receiver being arranged on the top of the theodolite to be positioned automatically in alignment with the survey line which is between the known point of reference, i.e. the position of the Autotracking

Station, and the measuring point. The follower device and the measuring device are connected to an automatic calculator for calculating derivations between the positions of the measuring point and the point of desired position on the basis of the direction of the survey line and the longitudinal position along the track continuously and automatically. Summing up, D7-1 discloses a survey apparatus having all the structural features of the apparatus defined in claim 5.

Hence the only difference between the subject-matter of claim 5 and the disclosure of D7-1 is the fact that the preamble of claim 5 according to the respondent's first auxiliary request has been limited to "Track" survey apparatus, with the emphasis of the term "Track" meaning in the sense of column 1, lines 16 to 19 of the patent specification a railroad track. D7-1 nowhere indicates that the survey device disclosed therein is intended to be used for a railroad track.

The question of anticipation of a claim to a device for a particular use is dealt with in the unpublished decisions T 523/89 and T 15/91 from which it is clear that the indication of intended use is only to be seen as limiting to the extent that the device has to be suitable for this use. In other words, the disclosure of an equivalent device without an indication of the particular use claimed but which is nevertheless suitable therefore will destroy the novelty of a claim to the device for that particular use. The Board sees no reason to disagree with this general principle followed in the practice of the Boards of Appeal. Indeed, the respondent himself has not put forward any grounds as to why this principle of interpretation

should be called into question. He seems much more to be operating under the misapprehension that a statement of corresponding intended use in the prior art is a prerequisite for anticipation.

Having regard to the totality of the disclosure of the patent specification, the technical features of the apparatus are linked so that claim 5 is interpreted as being directed to a railroad track survey apparatus. This circumstance, however, cannot support novelty of the subject-matter of this claim, since the survey device of D7-1 is also suitable for use in this way, as can be seen from the above explanations of its structure.

Having regard to the above, the Board comes to the conclusion that the subject-matter of claim 5 of respondent's first auxiliary request does not meet the requirements of Articles 52(1) and 54 EPC. Consequently this request cannot be allowed.

4. *Maintenance of the patent according to the respondent's second auxiliary request*

4.1 Article 100(a) EPC

4.1.1 Novelty of the subject-matter of method claims 1 and 5 and apparatus claim 6

After examination of citations referred to above, the Board has come to the conclusion that the subject-matter of claims 1, 5 and 6 is novel with respect to the prior art of these citations. As novelty is undisputed in this respect, there is no need for

further explanations.

4.1.2 Inventive step of the subject-matter of claims 1, 5 and 6

Claims 1 and 5 relate to a method of determining the position of a track for moving the track to a desired position and a method of displacing a track from an actual position to a desired position, respectively.

Claim 6 relates to an apparatus for displacing a track in a system of coordinates from an actual position to a desired position.

From column 1, lines 16 to 19 of the patent specification it follows that the term "**track**" as used in the patent specification refers to the whole formed by rails, switches and crossing of rails attached to an underlying structure such as railway sleepers.

The closest state of the art is document D6 (agreed by the parties) which relates to improvements in a method and apparatus for lining a track in a track curve in respect of a reference beam forming an accurate chord in the arc of the track curve. D6 describes a mobile track liner in which a laser beam gun and a laser beam receiver are transversely adjustable in relation to fixed points which define a planned track position and are respectively associated with the gun and the receiver. A control means converts lining error signals which are a function of the receiver position in dependence on the length of the path of movement of the receiver along the track into lining control signals. D6 shows a stepwise operation carried out at uniform

intervals. The system of D6 is in practice suited for use only in connection with the sideward displacement of a track and is not suitable for measuring the vertical position of curves.

The technical problem of the invention was therefore to provide a method and an apparatus which avoids the drawbacks of the prior art and to provide means by which the position of a track can be determined easily, simply and rapidly and as automatically as possible both in vertical and horizontal direction within a track section which may be straight or curved so that the track can be displaced to a desired position on the basis of the result obtained.

This problem is solved by the combination of technical features according to the independent claims of the respondent's second auxiliary request specifying that the survey line is turning about the point of reference following the position of the measuring point. The direction of the survey line and the determination of the longitudinal position of the measuring point is carried out continuously and automatically and the deviations of the position of the measuring point both in the vertical and the horizontal direction of the track from the calculated position of its desired position are calculated on the basis of the direction of the survey line and the longitudinal position of the measuring point along the track and the track is displaced to the desired position utilising the deviation values so determined. This allows determination of the vertical and horizontal deviations of actual track position from the desired track position continuously along the track, not just at

spaced intervals.

Document D6 does not give the skilled person any hint at the solution of this technical problem as outlined above. From D6 it is clear that the survey line (laser beam) between the point of reference and measuring point does not turn about the point of reference following automatically the position of the measuring point, but is turned about the reference point according to calculated angle. It follows from the above description of the means and operation of the mobil track liner of D6 that by this liner the railroad track is not displaced to the desired position utilising the deviation values determined in the way and by means as described in claims 1, 5 and 6 of the patent specification according to the discussed request.

The prior art documents presented by the appellant relate to systems for hydrographic measurements (documents D1, D4 and D7 to D13), tachymetry (documents D2, D3 and D5) and flight inspection systems (document D14). Therefore, these documents lie in technical fields which are different from that of the patent in suit.

Nevertheless, the appellant argues that the skilled person would have considered these documents, in particular document D1 referring at page 10 to tracking of pipelines, document D7 referring at page 1 to a land topographic use of the Geodimeter 140T and document D10 which mentions at page 2 the use of the tracking system thereof for measuring and controlling excavator buckets in opencast mining, for controlling the machines used

in roadwork etc, when looking for an improvement of the method and equipment used in document D6.

However, the Board, taking into account the requirements for measurements and displacing of railroad tracks from an actual position to a desired position described in the introductory part of the patent specification in suit and considering the respondent's submissions presented in writing and orally as far as the requirements for precision in operations involved in keeping the direction of tracks free of deviations in the field of the railroad technology are concerned, cannot accept the appellant's arguments, because the combination of the teaching of document D6 and the aforementioned prior art documents would require a fundamental modification of the principle of the method of measuring, calculating and correcting of D6. This finding is further confirmed by considering the fact that the appellant could not produce either convincing arguments as to what could have induced the skilled person to undertake such modification or incitements in the prior art documents which would point to the railroad technology and solution of the specific problems involved in it.

Therefore, in the Board's judgement, the subject-matter of claims 1, 5 and 6 of the respondent's second auxiliary request involves an inventive step in the sense of Article 56 EPC and the patent may be maintained on the basis of these claims.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to maintain the patent in amended form on the basis of claims 1 to 6 filed as the second auxiliary request in oral proceedings, the adapted description also filed in oral proceedings, and Figures 1 and 2 of the patent specification.

The Registrar:

The Chairman:

N. Maslin

C. T. Wilson