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**Datasheet for the decision  
of 13 September 2006**

**Case Number:** T 0568/04 - 3.4.02

**Application Number:** 96935168.3

**Publication Number:** 0801724

**IPC:** G01D 5/34

**Language of the proceedings:** EN

**Title of invention:**  
Opto-electronic rotary encoder

**Patentee:**  
Renishaw plc

**Opponent:**  
DR. JOHANNES HEIDENHAIN GmbH

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 56, 83, 100(b), 111

**Keyword:**  
"Inventive step - main, first auxiliary request (no)"  
"Inventive step - second auxiliary request (yes)"  
"Sufficiency - second auxiliary request (remittal)"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 0568/04 - 3.4.02

**D E C I S I O N**  
of the Technical Board of Appeal 3.4.02  
of 13 September 2006

**Appellant:**  
(Opponent)

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**Representative:**

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**Decision under appeal:**

Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
29 January 2004 concerning maintenance of the  
European patent No. 0801724 in amended form.

**Composition of the Board:**

**Chairman:** A. Klein  
**Members:** M. Rayner  
B. Müller

## Summary of Facts and Submissions

I. The opponent appealed against the decision of the opposition division that, as amended during the opposition proceedings, European patent number 801 724 (application number 96 935 168.3) meets the requirements of the Convention. In the opposition and/or appeal proceedings, reference was made to, amongst others, the following documents

- E1 GB-A-1 504 691
- E2 US-A-4 577 101
- E6 GB-A-1 220 094
- E6' CH-A-466 593 (Swiss equivalent of E6)
- E7 "Diffractive Optics Improve product Design",  
Feldman et al., Photonics spectra, September  
1995, pages 115-120.

II. The patent in dispute is concerned with optoelectronic rotary encoders and contains a statement that a parallel or linear Vernier fringe pattern may be generated from an angularly extending fringe pattern or vice versa. In the decision under appeal, the view of the opposition division was that choosing parameters properly would be easy for the skilled person and designing an analyser grating, in the case of transforming a parallel periodic light into an angularly extending resultant fringe pattern, is a matter of common general knowledge without undue burden in the light of indications in the patent specification. Choosing parameters properly would be easy for the skilled person, since it is readily apparent that going from a parallel to an angular pattern implies  $P_i(\text{fringe pitch at inner window radius}) = P_o$  (fringe pitch at outer

window radius) and considering  $w_i$  and  $w_o$  (width of analyser grating at inner and outer window radius). The computational steps involving these parameters are identical to the detailed example given. The division therefore concluded that the invention was disclosed in a sufficiently complete and clear manner in the patent.

Document E6 was filed after expiry of the period for opposition and, after examination by the opposition division, disregarded pursuant to Article 114(2) EPC, as not relevant because, in the view of the division, it did not disclose a parallel light pattern.

The division considered that none of documents upon which the opposition was based disclosed or hinted at defining a configuration of analyser grating such that where a periodic light pattern angularly extending the resultant fringe pattern is a parallel pattern or where periodic light pattern is parallel the resultant fringe pattern is an angularly extending pattern. The division saw this subject matter as enabling the single design of a photodetector for both linear and angular encoders. The division therefore reached the conclusion that the subject matter of claim 1 can be considered to involve an inventive step.

III. In its appeal, the opponent requested that the decision under appeal be set aside and that the patent be revoked. In reply, the patent proprietor requested that the appeal be dismissed (main request) or that in the alternative, the patent be maintained on the basis of claim 1 according to one of its five auxiliary requests. Both parties requested oral proceedings as an auxiliary measure. Consequent to these auxiliary requests, oral

proceedings were appointed by the board. In the communication attached to the summons to oral proceedings, the board mentioned the words "parallel" and "configured" in the claim in relation to considering patentability. The board also indicated that if the patent proprietor were able to convince the board on patentability, the discussion at the oral proceedings could move on to sufficiency in relation to variant 2. The claims according to the auxiliary requests of the patent proprietor were filed with its letter about five weeks before the oral proceedings (auxiliary requests 1,2 and 4,5) or during the oral proceedings (auxiliary request 3).

IV. The case of the opponent can be summarised as follows.

(a) Sufficiency

Claim 1 encompasses two variants, variant 1 (angular to parallel) and variant 2 (parallel to angular). The teaching of the patent is insufficient for carrying out the particular variant 2, the reference to "or vice versa" in paragraph [0022] of the patent being inadequate. There is no example at all in relation to variant 2 and the skilled person is in the dark as to how to construct the encoder as there is no indication of how the equations mentioned are used with a linear incident fringe pattern.

(b) Patentability

Variant 1 lacks novelty over the disclosure of document E6 (E6'), which was cited in the International search report but not correctly evaluated in the examination

or opposition proceedings. In particular, a Moiré pattern with parallel fringes at the detector (51,52,53) is generated from an angular pattern emanating from hair line grid 10. What is important is what is detected at the detector, the parallel strips of the detector and references to parallel mean this is a parallel fringe pattern. What happens outside the detector is not of interest. Moreover, even were the subject matter of claim 1 to be considered novel over the disclosure of document E6, it would lack an inventive step. Moreover, no inventive step is present in the light of a combination of documents E2, E6 and E7. Document E2 teaches a transformation by refractive lenses, but it was known and obvious that these were replaceable by gratings (e.g. document E7, left column, page 115), especially as document E6 uses a grating.

V. The case of the patent proprietor can be summarised as follows.

Documents E6 and E7 were filed late and should not be considered. Moreover, the patent proprietor gave no consent to novelty, which had not been contested by the opponent in its notice of opposition, being raised as a ground of opposition in the appeal proceedings.

(a) Sufficiency

In the description of the patent, the preferred embodiment - variant 1 (angular to parallel)- is described in detail, but the corresponding equations for variant 2 (parallel to angular) can be derived easily from the equations for variant 1.

The general principle that the analyser grating may be configured to obtain any pitch and/or geometry of resultant fringes from any incident fringes is taught in the patent. Thus paragraph (0022) recites that "we have appreciated that because the geometry of the analyser grating 40 with which the interference fringes interacts determines the size of the resultant Vernier fringes, it is possible to configure the analyser grating 40 to obtain any pitch and/or geometry of resultant fringes from any given incident fringes (i.e. in the examples described herein, interference fringes) For example, a parallel, or linear resultant Vernier fringe pattern may be generated from angular radially extending fringe pattern or vice versa".

In the description, the preferred embodiment of a parallel resultant Vernier fringe pattern generated from an angular radially extending fringe pattern (i.e. variant 1) is described in detail. However, corresponding equations for variant 2 can easily be derived from the equations for variant 1 and the knowledge that the invention is envisaged to cover variant 2, given in paragraph [0022].

The vector equation  $A_g = I_F - V_F$  can be derived from Fig 4 where,  $I_F$  is the number of fringes per unit angular displacement of the incident interference pattern (column 4, lines 27-29),  $A_g$  is the number of lines per unit angular displacement of the analyser grating (column 4, lines 29-31) and  $V_F$  is the number of resultant Vernier fringes per unit angular displacement (column 4, lines 31-35). From the description  $I_F$  is replaced by  $1/P_i$  for the inner circumference (paragraphs 10024)- (0025)) or  $1/P_o$  for the outer circumference

(paragraph (0031)) where  $P_i$  is the linear pitch of the first interference fringe from the zeroth fringe at its inner radius and  $P_o$  is the pitch between the zeroth of first fringes of the outer radius.  $A_g$  is replaced by  $1/A_o$  and  $1/A_i$ , where  $A_i$  is a requisite linear pitch between the zeroth and first line of the analyser grating at the inner radius of the analyser grating window 200 required to generate a resultant Vernier fringe of width  $W/N$  (paragraph (0027), Fig 9).  $A_o$  is the corresponding linear pitch at the outer radius (paragraph (0029)).  $V_F$  is replaced by  $n/w$  where  $n$  is the number of parallel resultant Vernier fringes across the total width  $w$  of the analyser window (paragraph (0023)). Thus  $A_i = w_i P_i / (w - n P_i)$  and  $A_o = w P_o / (w - n P_o)$ .

In the case of the variant 2 embodiment, the pitch of the outer circumference  $P_o$  is equal to the pitch at the inner circumference  $P_i$ , thus  $P_o$  and  $P_i$  can be replaced by  $P$  in the equations for variant 2. The resultant Vernier fringes for variant 2 are radial rather than parallel, so the value of  $w$  will be different at the inner and outer circumferences. Thus  $w$  must be replaced by  $w_o$  and  $w_i$ , respectively and by making the substitutions outlined above, the equations for the analyser grating for variant 2 are now  $A_i = w_i P / (w_i - n P)$  and  $A_o = w_o P / (w_o - n P)$ . The above calculations illustrate that the equations for variant 2 can easily be derived from the equations for variant 1 using simple vector analysis. Illustrative figures 8A-10A for variant 2, filed in the appeal proceedings, correspond to Figures 8-10 of the patent for variant 1. The teaching is therefore sufficient.



During the oral proceedings, the patent proprietor explained that the skilled person would understand the analyser as used in variant 2 of the encoder as employing an arcuate window, which in use moved relatively laterally perpendicular to markings of a linear scale and the linear fringes. In view of this window form, the upper and lower widths of the window are different. In answer to the board, the patent proprietor explained that at the inner and outer radius, in relation to the spacing between fringes, while appropriate for the window of variant 2, the term circumferential spacing was not appropriate in the context of the rectangular window of variant 1 of the encoder. It would thus seem better simply to refer to spacing for both variant 1 and variant 2.

(b) Patentability

According to document E6, the direction of the diagonal orientated transversely of the direction of the strips should be transverse to the local direction of the Moiré strips. The word "local" is required because the resultant fringes are circular; the strips of the photodetectors are only approximately parallel to the local direction of the circular fringes. Thus parallel fringes are not produced. Particular reference can be made to column 4 lines 35 to 52 of document E6' explaining this situation. Nor is the analyser grating configured such that the resultant fringe pattern is parallel, since offset and detector size and not the form of the analyser grating is taken into account. Therefore the subject matter of claim 1 is novel over document E6. Even if document E6(E6') solves the problem of enabling a photodetector of one form to be

used with a scale of another form, it is in a different way to the patent. There is the disadvantage that, unlike the patent in dispute, the teaching cannot be used for small systems because the curvature of the local part of the fringe would be too great. Document E2 teaches a simple projection system in which scale markings are imaged onto a photodetector and has a completely different mode of operation to that taught in document E6, so that a combination of the documents is inappropriate. Document E7 is just a general document and does not suggest changing the mode of operation taught by document E2. Therefore the appeal should be dismissed and the patent maintained in the form according to the decision of the opposition division. Reference to a parallel linear pattern according to the first auxiliary request excludes even more clearly a locally parallel pattern deriving from Apollonic circles.

Support for the amendment made according to auxiliary request 2 is found in the specification as a whole. Paragraph [0020] explains that the circumferential spacings of the analyser grating are made to differ from the spacings of the scale to produce Vernier fringes. Paragraph [0022] goes on to state that because the geometry of the analyser grating determines the size of the resultant Vernier fringes, it is possible to configure it to obtain any pitch and/or geometry of resultant fringes from any given incident fringes. Paragraphs [0023] to [0032] show the vector analysis used to determine the spacings of the grating lines (i.e. pitch) at its inner and outer radii. This cannot be obvious from document E6, where there is no change in the grating per se, only in the offset.

VI. During the oral proceedings, the board observed that the focus in the second auxiliary request was on spacings of the lines being configured to produce the fringes. The board expressed its doubts about whether, even if the skilled person understood the teaching of the patent in the way postulated by the patent proprietor, an encoder falling within the claim would result. Without evidence that this was the case, the board expressed unease about the sufficiency of the teaching and mentioned to the parties a number of possible ways to proceed with the case in these circumstances. The board would prefer to deal with the case itself and offer the patent proprietor an opportunity to present evidence before taking a decision as to whether the patent as amended on the basis of the second auxiliary request meets the requirements of the Convention. Alternatively, the patent proprietor could consider dropping variant 2, leaving a patent in amended form where sufficiency has not been challenged. Another possibility would be to remit the case to the first instance for resolution.

VII. In reply, both parties requested that the case be remitted to the first instance.

VIII. Claim 1 according to the requests of the patent proprietor is worded as follows.

Main Request

1. Opto-electronic encoder apparatus for measuring relative movement having a linear or rotary scale (20) defined by a series of spaced apart lines (22), and a

readhead (14) lying in register with the scale, the scale and readhead being relatively movable in the direction of spacing of the lines; the readhead comprising:

means (30) for illuminating the scale whereby light passed on by the scale forms a parallel periodic light pattern from a linear scale or an angularly extending periodic light pattern from a rotary scale;

an analyser grating (40) for interacting with said periodic light pattern to generate a resultant fringe pattern; and

a detector (100) upon which said resultant fringe pattern is incident, for generating a plurality of phase shifted cyclically modulating signals upon said relative movement;

characterised in that the analyser grating is configured such that when the periodic light pattern is angularly extending the resultant fringe pattern is a parallel pattern, and when the periodic light pattern is a parallel pattern the resultant fringe is an angularly extending pattern.

First auxiliary request

1. Opto-electronic encoder apparatus for measuring relative movement having a linear or rotary scale (20) defined by a series of spaced apart lines (22), and a readhead (14) lying in register with the scale, the scale and readhead being relatively movable in the direction of spacing of the lines; the readhead comprising:

means (30) for illuminating the scale whereby light passed on by the scale forms a parallel periodic light

pattern from a linear scale or an angularly extending periodic light pattern from a rotary scale;  
an analyser grating (40) for interacting with said periodic light pattern to generate a resultant fringe pattern; and  
a detector (100) upon which said resultant fringe pattern is incident, for generating a plurality of phase shifted cyclically modulating signals upon said relative movement;  
characterised in that the analyser grating is configured such that where the periodic light pattern is angularly extending the resultant fringe pattern is a parallel, linear pattern, or where the periodic light pattern is parallel, the resultant fringe pattern is an angularly extending pattern.

Second auxiliary request

1. Opto-electronic encoder apparatus for measuring relative movement having a linear or rotary scale (20) defined by a series of spaced apart lines (22), and a readhead (14) lying in register with the scale, the scale and readhead being relatively movable in the direction of spacing of the lines; the readhead comprising:  
means (30) for illuminating the scale whereby light passed on by the scale forms a parallel periodic light pattern from a linear scale or an angularly extending periodic light pattern from a rotary scale;  
an analyser grating (40) for interacting with said periodic light pattern to generate a resultant fringe pattern; and  
a detector (100) upon which said resultant fringe pattern is incident, for generating a plurality of

phase shifted cyclically modulating signals upon said relative movement;  
characterised in that the configuration of the spacings of the lines of the analyser grating is such that where the periodic light pattern is angularly extending the resultant fringe pattern is a parallel pattern, or where the periodic light pattern is parallel, the resultant fringe pattern is an angularly extending pattern.

The wording of the claims according to auxiliary requests 3 to 5 is not given as it is unnecessary for the present decision (see point of the Reasons below)

IX. At the end of the oral proceedings, the board gave its decision.

### **Reasons for the Decision**

1. The appeal is admissible.
2. Document E6(E6')

The opposition division declined to take this document into account because it was of the view that parallel fringes are not disclosed therein. In the present case, the board considers this concept needs to be understood in the context of its meaning to the skilled person, and here, the board considers this to mean that the fringes are able to be detected by parallel detector strips, such as those disclosed in Figure 4. The board found the argument of the opponent persuasive, that what happens to the non-local fringes outside the

detector is not relevant. The board considers the position of the patent proprietor, that the fringes are "locally parallel" to confirm its understanding, because just that means that parallel detector strips can be used. The passages of document E6' referred to by the patent proprietor also underline that the fringes can be treated as parallel. A second teaching of curvature of the detector strips is a further distinct possibility for the skilled person, which does not rule out a device with parallel strips. The board thus does not agree with the view of the opposition division about the parallel fringes and consequently cannot concur with the decision as to lack of relevance. Accordingly, the board gave permission for the document to be introduced into the proceedings. It can also be remarked that the document was dealt with at length by the parties in the appeal proceedings, which, in itself, is an indication that the document is relevant.

3. Main and first auxiliary requests - patentability

3.1 Document E6 can be considered to represent the closest prior art document. Briefly speaking, there is disclosed a rotary scale 10, a readhead 3 with light source 31 and analyser grating 20. Accordingly, the only feature of variant 1 which has been in dispute in relation to patentability is "where a periodic light pattern is angularly extending, the resultant fringe pattern is a parallel fringe pattern", i.e. the first feature of the characterising part of the claim. The case of the patent proprietor is, in essence, that the parallel pattern known from document E6 is not perfectly parallel, but in fact circular, and cannot be parallel because it is produced essentially by offset

of identical gratings. Therefore it is only treated as parallel thanks to the dimensions used.

3.2 One can argue about whether perfectly parallel fringes are produced according to the patent in dispute, but this is not the main issue, which is really that there is no structural feature of the analyser grating recited in the claim responsible for producing the fringes. There are no dimensions specified in the claim, so neither small nor large dimensions are excluded. Moreover, the wording "configured" does not exclude offsetting. Lack of definition of the grating and dimensions is really what leaves the claim open to attack depending on interpretation of the word parallel. Here, the board considers a pragmatic approach of the type mentioned in section 2 above appropriate, involving considering the underlying detector function presented to the skilled person. Since, according to the teaching of document E6(E6'), the fringe pattern is detected by a parallel strip pattern consequent to configuring the grating by offset, it is obviously considered to be a parallel pattern for the purposes of the detector, as is reinforced by the reference to local direction in the document. So far as the first auxiliary request is concerned, the board considers that by the same token, the detector strips are linear, so it is obvious that linear fringes are understood by the skilled person to be produced at the detector.

3.3 Accordingly, neither the subject matter of claim 1 of the main request nor claim 1 of the first auxiliary request can be considered to involve an inventive step within the meaning of Article 56 EPC. Therefore, the



main and first auxiliary requests of the patent proprietor fail.

4. Second auxiliary request
5. Amendment

The patent proprietor could not point to a specific recitation in the original patent application of "configuration of the spacings of the lines of the analyser". Nevertheless, the board considers the disclosure referred to by the patent proprietor in columns 6 and 7 (paragraphs [0020] and [0022-0032]) of the patent and the corresponding passages of the patent application as originally filed to offer adequate support. For example, lines 41-42 of column 6 of the patent in dispute refer to "circumferential spacings of the interference fringes and analyser grating".

#### 5.1 Patentability

- 5.1.1 The encoder according to claim 1 of this request is of the type having a "distorted" analyser grating as referred to in column 8, line 8 of the patent because the spacings of the lines are configured to produce the resultant fringe pattern. This is not the case in the teaching of document E6, where it is recited that discs 1 and 2 should be the same (see page 2, lines 3-5) and displacement between the discs produces the fringe pattern. The problem solved by the novel subject matter of the claim is that of providing another, and as the patent proprietor submits, more accurate encoder permitting, say a linear detector array to be used with a rotary scale.

5.1.2 The offset approach is in a different direction according to document E6(E6') and the solution of the patent is not therefore suggested thereby and the document's teaching cannot therefore render the claimed subject matter obvious. The opposition division and parties are in agreement that the teaching of document E2 uses elements other than a grating and the board sees no reason why the skilled person would have changed the refractive components disclosed around. A general teaching of the type given in document E7, even when pertaining to replacing ordinary lenses with diffractive elements is not specific enough to suggest changing the optics of the document E2 disclosure, nor is there any reason to modify document E6(E6'). Consequently, the question of whether or not document E7 should be admitted into the procedure does not affect the inventive step of the subject matter of the claim according to auxiliary request 2. Therefore, the board reached the view that the subject matter of the claim could only be reached from the prior art cited using hindsight, which is not permissible in assessment of inventive step.

5.1.3 The board is therefore satisfied as to inventive step of the subject matter of claim 1 according to the second auxiliary request.

6. Auxiliary requests 3 to 5

In view of the positive conclusion reached in the preceding paragraph, it is not necessary to consider these requests further in the present decision.

7. Auxiliary Request 2 - Sufficiency

7.1 The opponent is correct in its view that the explicit teaching relating to variant 2 is given by the wording "or vice versa". Explanations and calculations presented by the patent proprietor essentially explained its understanding of how the teaching of the patent in relation to variant 1 is to be understood by the skilled person and applied without undue burden to variant 2 according to the "vice versa" term. The board can concur with the opposition division that these explanations and calculations can be easily understood.

7.2 The difficulty is, however, whether, following the approach of the patent proprietor, the result produced really leads to variant 2 as defined in the independent claim of the second auxiliary request, or whether, even then, something is "missing" in the teaching. For example, according to the patent, having derived  $A_i$  and  $A_0$  corresponding to the linear analyser pitch between the zeroth and first line - and what are the zeroth and first line in the case of parallel lines? -, the description of variant 1 goes on to say that the calculations are then reiterated in respect of all further lines of the analyser grating, and the entire grating generated by mirroring the resulting configuration about an axis of symmetry defined by the 0th line. As this has not been dealt with in the analysis of the patent proprietor, it should presumably be the same for variant 2. The board was short of evidence in this respect concerning variant 2.

7.3 In the discussion of vector analysis in Figure 4, paragraph [0012] of the description of the patent in

dispute refers to angular displacement in connection with  $A_g$ ,  $I_F$  and  $V_F$ . In considering whether the teaching as understood by the patent proprietor really falls within the claim, it has to be borne in mind that in variant 1, "linear" pitch is taught as it is the linear pitch  $A$  of the grating lines which depends on the linear pitch  $P$  of the fringes at the inner/outer radii of the window (i.e. the lower and upper edge). As the window is rectangular the length of the "radii" are different for the different fringes. If the linear pitch increases with pitch number away from the 0th fringe, the pitch between the fringes is not only different between the inner and outer radii but also the variable on the right hand side of the expression  $A_i = wP_i/(w-nP_i)$  (or the  $A_0$  expression) as the number of fringes,  $n$ , across the window and its width,  $w$ , are fixed. In the case of variant 2 and parallel lines, the patent proprietor argues that pitch  $P$  is the same for the inner and outer radii, which may be true for linear pitch, but for circumferential pitch, different circles at different radii and any differing circumferential separation from line to line could be relevant. At all events the approach could be taken to mean that, as the total width at the inner/outer radii of the window, being a piece of equipment does not change either, be it measured linearly or circumferentially, then either of the expressions  $A_i=$ ,  $A_0=$  involve values which are unchanging. In such a case, it would therefore no longer be spacing between adjacent interference fringes, but fixed width of the analyser grating which is the main design criterion in reiteration of the lines and generation of the grating. The doubts of the board as to whether the approach taken by the patent proprietor really leads to an encoder falling within the claim

were not therefore resolved during the oral proceedings by the patent proprietor stating that rather than linear or circumferential spacing, simply spacing should be referred to.

7.4 It is up to the opponent to make its case in opposition proceedings and, as a rule, the burden of proof lies with the opposing party. Nevertheless, this does not mean that the patent proprietor is always completely free from any burden of proof. In circumstances such as the present, where the specific teaching about variant 2 derives from the wording "vice-versa" and the patent proprietor therefore relies on a sufficiency approach involving an extensive rearrangement of an analysis presented in the patent for a different configuration, the opponent has not even had a chance to challenge sufficiency of an *expressis verbis* teaching in the patent itself. The patent proprietor therefore has a duty to show that its approach to the applying the "vice versa" really leads to meeting the claim and, in the view of the board, is now bound to this approach.

## 8. Further Procedure

8.1 In view of the fact that the board considers that, up to now, not enough proof of sufficiency has been presented and both parties preferred to have the case remitted to the first instance for further consideration, the board considers it appropriate to take this action. The following factors also speak in favour of remittal. The second auxiliary request was only submitted ahead of the oral proceedings so that sufficiency of variant 2 in relation to "configuration

of the spacings" was not addressed by the board in the communication accompanying the summons to oral proceedings. For the second auxiliary request, the submissions made during the oral proceedings did not seem adequate to the board, but it would have been a little hard to expect the patent proprietor to have furnished further evidence on the spot without access to technical resources or, for that matter, to expect the opponent to focus on sufficiency of the term "configuration of the spacings", which had come in rather late in the procedure. Having said that, the board regrets for reasons of procedural efficiency that the parties were not prepared for the case to be finally resolved in writing before the board.

- 8.2 In the situation now, the board does not wish to bind the opposition division in an inappropriate way in its assessment of the case in its present form. Nevertheless, it should be said that in the proceedings before the first instance, patentability of the subject matter of claim 1 according to the second auxiliary request is no longer up for discussion or challenge by the opponent as it has been through two instances and the board has already decided this issue. The task for the opposition division is thus to evaluate any evidence relating to sufficiency, for example in the form of expert declarations, submitted by the patent proprietor or opponent as to whether following the teaching of the patent in relation to variant 2 as interpreted by the patent proprietor following its approach to date, an encoder meeting the wording of claim 1 of the second auxiliary request would be produced. The board sees, in this context, no scope for the patent proprietor now to modify its analysis or

view of what the patent teaches as the analysis already presented was, in itself, accepted by both the opposition division and board of appeal in the proceedings to date. If, now, no evidence or unsatisfactory evidence that variant 2 is really produced is submitted, either variant 2 will have to be dropped and the patent papers amended correspondingly to permit maintenance in amended form, or the patent revoked for insufficiency. If on the other hand, satisfactory evidence is submitted, the patent can be maintained on the basis of auxiliary request 2, with any consequent amendments to the remainder of the patent specification.

## **Order**

### **For these reasons it is decided that:**

- The decision under appeal is set aside.
- The case is remitted to the first instance for further prosecution on the basis of the second auxiliary request.

The Registrar

The Chairman

M Kiehl

A. G. Klein