

Internal distribution code:

- (A) Publication in OJ
(B) To Chairmen and Members
(C) To Chairmen

D E C I S I O N
of 10 March 1998

Case Number: T 0324/96 - 3.5.1

Application Number: 88400137.1

Publication Number: 0284449

IPC: H04N 3/22

Language of the proceedings: EN

Title of invention:

Apparatus for compensation for image rotation in a CRT display

Patentee:

Digital Equipment Corporation

Opponent:

Philips Electronics N.V.

Headword:

-

Relevant legal provisions:

EPC Art. 56, 100(a), 100(c), 123(2)

Keyword:

"Admissible appeal (yes)"
"Added subject-matter (no)"
"Inventive step (no)"

Decisions cited:

T 0432/88, T 0668/92

Catchword:

-



Case Number: T 0324/96 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 10 March 1998

Appellant: Digital Equipment Corporation
(Proprietor of the patent) 146 Main Street
Maynard, MA 01754 (US)

Representative: Dubois-Chabert, Guy
Société de Protection des Inventions
25, rue de Ponthieu
75008 Paris (FR)

Respondent: Philips Electronics N.V.
(Opponent) Groenewoudseweg 1
5621 BA Eindhoven (NL)

Representative: Van Straaten, Joop
Internationaal Octrooibureau B.V.
Prof. Holstlaan 6
5656 AA Eindhoven (NL)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 13 February 1996
revoking European patent No. 0 284 449 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: A. S. Clelland
Members: R. R. K. Zimmermann
C. Holtz

Summary of Facts and Submissions

I. This appeal is against the decision of the opposition division to revoke European patent No. 0 284 449 on the ground that the subject-matter of claim 1 lacked an inventive step, Articles 56 and 100(a) EPC, having regard to a number of different combinations of the following documents:

P2: US-A-4 296 359

P3: JP-B-50 28 288 & English translation

P4: US-A-3 136 931

P6: JP-A 61 236 288 & English abstract

P7: "Electronic Engineer's Reference Book", editor
L.W. Turner, London, 1976, Chapter 7, pages 108 to
120

II. The appellant (proprietor) lodged an appeal against the decision and paid the prescribed fee. A statement of grounds of appeal was subsequently received. The appellant requests that the decision be set aside and the patent be maintained as granted. A request for oral proceedings was also filed. The respondent requests that the appeal either be rejected as inadmissible or be dismissed. Oral proceedings were also requested.

III. In their submissions the parties also referred to two further documents, present in the opposition proceedings but not used by the opposition division in the grounds of their decision:

P1: DE-A-2809725

P5: DE-A-1762569

IV. Following a communication from the Board appointing oral proceedings, the respondent, and subsequently the appellant, stated that he would not be attending. The proceedings were nevertheless held on 10 March 1998 in the absence of both parties.

V. Claim 1 of the granted patent reads as follows:

"A video display unit for displaying an image on a screen, said unit being subject to an external magnetic field, said external magnetic field causing a rotation of said image with respect to said screen, said unit comprising:

cathode ray tube means (14), said tube means including an electron gun (18) and a screen (28) said gun for emitting an electron beam along a path toward said screen;

deflection yoke means (16), said yoke means being disposed between said electron gun (18) and said screen (28), said yoke means operating to deflect said electron beam, thereby forming said image, said yoke means having a first end juxtaposed with said screen (28) and a second end juxtaposed with said electron gun (18),

said yoke means further comprising a conductive winding (22) having first and second ends, said winding being substantially disposed in a recess (30) of the first end of the yoke means, said winding forming part of a unitary structure with said yoke means, whereby said yoke means together with said winding is capable of unitary assembly and disassembly, said winding being oriented substantially transverse to said path,

said first and second ends of said winding being coupled to control means (26),

said control means for producing a compensation current which is conducted through said winding,

said compensation current producing a compensating magnetic field for substantially cancelling said external magnetic field."

VI. The appellant has argued as follows:

The invention solved the problem of undesirable image rotation in a CRT due to external magnetic fields. The claimed form of the yoke had advantages in terms of cost and ease of replacement which were not mentioned in either prior art document P2 or P6. The correction coils in P3 only appeared to be wound around the end 4a of the yoke. Thus the skilled person would not arrive at the structural features of the yoke without the benefit of hindsight.

VII. The respondent has argued as follows:

The appeal was inadmissible because the statement of grounds did not provide adequate reasoning. An appellant must present arguments for each of the reasons in the decision under appeal. T 432/88 further shows that an appellant must set out the specific reasons on which he is relying, otherwise the respondent cannot prepare his case and the board cannot direct the appeal proceedings efficiently. In the present case the opposition division gave three separate reasons for revoking the patent which were in effect three separate decisions, all of which needed to be treated in the appeal. The appellant's response to the reason at paragraph 7 of the decision was deficient because it incorrectly referred to P7 instead of P6, made no reference to specific parts of P6 and gave no adequate supporting argument. Additionally, the appellant's response to the opponent's argument based on P2 and P5 contained no factual reasoning.

There was no basis for the feature in granted claim 1 which defined that the winding is substantially disposed in a recess, the application disclosing only that the recessed area is adapted to receive the winding so that its forward edge may be substantially flush with a front collar.

The features that the winding forms part of a unitary structure with the yoke, and is capable of unitary assembly and disassembly with the yoke, also added subject-matter.

Reasons for the Decision

1. *Admissibility*

- 1.1 The Board notes that in T 432/88 the appeal was held to be inadmissible because the notice of appeal merely contained the statement that "the grounds of appeal are as set out in the opposition as well as set out during the oral proceedings held on 09.03.1988". No further statement was filed within the time limit prescribed by Article 108, last sentence, EPC. The present case is not comparable. There is a separate statement of grounds which at page 4 addresses document P6; reference is made to the absence from P6 of any mention of cost of manufacturing and ease of assembly/disassembly. The appellant thus provides at least one argument based on P6. Although at one point reference is made to the title of document P7 instead of to P6, the Board takes the view that this is an error which is readily apparent to the reader. Finally, the Board notes that in the decision the opposition division does not comment on the opponent's argument based on P2 and P5; there is accordingly no need for the appellant to do so.

1.2 The Board thus arrives at the conclusion that the appellant's statement of grounds are adequately reasoned and sufficiently complete to meet the requirements of Article 108 (last sentence) EPC. Since the appeal also complies with the remainder of Article 108 EPC as well as Articles 106 and 107 and Rule 64 EPC, it is admissible.

2. *Added subject-matter (Article 123(2) EPC)*

2.1 The Board is of the opinion that the original disclosure of Figure 3 and the passage which states that the "edge of the winding 22 may be substantially flush with a front collar 34", provide support for the amended wording "said winding being substantially disposed in a recess of the first end of the yoke means". It is apparent from Figures 2 and 3 and the text at page 7, lines 16 to 18 of the original description that the first end is at the front of the yoke.

2.2 Similarly the Board considers that since the yoke assembly 16 in Figure 3 is one unit and is according to the originally filed description separate from the CRT, there is support for the yoke and the winding forming a unitary structure capable of unitary assembly and disassembly, as claimed.

2.3 The Board is accordingly satisfied that the amended claims do not contravene Article 123(2) EPC.

3. *Inventive Step (Article 56 EPC)*

3.1 In the Board's view P3 is the single most relevant prior art document. P3 discloses the following features of claim 1:

A video display unit for displaying an image on a screen (the existence of the rasters in Figures 2, 3 and 5 imply a video display unit and a screen), said unit being subject to a rotation of said image with respect to said screen (page 2, line 22), said unit comprising (Figure 4):

cathode ray tube means (2,3), said tube means including an electron gun (page 3, line 1) and a screen, said gun for emitting an electron beam along a path toward said screen (screen and electron beam implicit from the rasters, as above);

deflection yoke means (4), said yoke means being disposed between said electron gun and said screen, said yoke means operating to deflect said electron beam, thereby forming said image (implicit from the operation of a CRT), said yoke means having a first end (4a) juxtaposed with said screen (the end is on the funnel section 2 of the CRT which is connected to the screen) and a second end (4b) juxtaposed with said electron gun (the end is on the neck section of the CRT which is where the electron gun is situated);

said yoke means further comprising a conductive winding (5) having first and second ends (page 2, lines 32 to 34),

said winding being oriented substantially transverse to said path (page 2, lines 35 to 38),

said first and second ends of said winding being coupled to control means (implicit from page 3, lines 19 to 21),

said control means for producing a compensation current which is conducted through said winding (direct current at page 2, line 35),

said compensation current producing a compensating magnetic field (page 2, lines 36 to 38).

3.2 Claim 1 therefore differs from the prior art arrangement of P3 in explicitly providing the following features:

- (i) the compensation circuit is used to cancel an external magnetic field;
- (ii) the winding is substantially disposed in a recess of the first end of the yoke means; and
- (iii) the winding forms a unitary structure with the yoke means which is capable of unitary assembly and disassembly.

3.3 The Board notes that feature (i) relates to the use of the apparatus rather than the apparatus itself and solves the problem of compensating for the effects of the horizontal component of an external magnetic field. Feature (ii) is concerned with the separate problem of mounting the compensation coil. The Board considers that these problems are independent, the presence of the coil serving to rotate the image whether caused by misaligned geometry or an external magnetic field; the details of the construction of the coil are unrelated to the reason for rotation.

3.4 Regarding the first problem, the Board notes that the use of a compensation coil to generate a field component along the so-called z-axis of a CRT in order to cancel the effect of an external magnetic field is well-known in the field of video display devices, see P1 at page 4, lines 1 to 17, P5 at page 2, lines 22 to 27 in combination with page 4, lines 9 to 17, and the abstract of P6. The skilled person could accordingly be expected to appreciate, without the exercise of inventive skill, that the compensation coil in P3 can also compensate for the effects of the earth's magnetic

field. Although not binding on the present case it is noted that in the pre-grant appeal, see paragraph 5 of decision T 668/92, the then Board reached a similar conclusion on the basis of document P2.

- 3.5 From Figure 4 of P3 it can be seen that the compensation coil is at the "first end" of the yolk. The translation of P3 refers at page 2 lines 9 to 13 to a construction with a separate coil behind the yolk as being "relatively complicated" and at page 2 lines 32 to 38 states that the coil is wound on the "front end section" of the yolk. It is standard practice to wind coils on a former to hold the wire in position, which implies a corresponding "recess". Thus any practical implementation which involves winding a wire onto the yoke requires a "recess" in the sense of feature (ii).
- 3.6 Finally, the fact that the coil is wound on the "front end section" of the yoke in P3 provides a unitary structure which is capable of unitary assembly and disassembly.
- 3.7 The appellant states at page 4 of the grounds of appeal that "correction coils in P3 seem to be wound around the end 4a of the yoke". The Board however repeats that Figure 4 and the translation of P3 at page 2, lines 32 to 34 (which is assumed to be correct) disclose that the correction coil is wound on the yoke itself.
- 3.8 The subject-matter of Claim 1 accordingly does not involve an inventive step.
4. There being no other requests, it follows that the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

M.Kiehl

The Chairman:

A. Clelland

