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**Datasheet for the decision
of 21 December 2006**

Case Number: T 1225/04 - 3.4.03

Application Number: 99952050.5

Publication Number: 1120018

IPC: H05B 37/00

Language of the proceedings: EN

Title of invention:
Intelligent electrical devices

Patentee:
Azoteq (Proprietary) Limited

Opponent:
Walz GmbH & Co.

Headword:
Intelligent Electrical Devices/AZOTEQ

Relevant legal provisions:
EPC Art. 56, 83
EPC R. 57a

Keyword:
"Amendments occasioned by grounds of opposition - no (main request)"
"Sufficiency - yes (auxiliary request)"
"Inventive step - yes (auxiliary request)"

Decisions cited:
G 0001/99, G 0010/91

Catchword:
-



Case Number: T 1225/04 - 3.4.03

D E C I S I O N
of the Technical Board of Appeal 3.4.03
of 21 December 2006

Respondent:
(Opponent)

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Appellant:
(Patent proprietor)

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Decision under appeal:

Interlocutory decision of the Opposition
Division of the European Patent Office posted
4 August 2004 concerning maintenance of
European patent No. 1120018 in amended form.

Composition of the Board:

Chairman: R. G. O'Connell

Members: E. Wolff

T. Bokor

Summary of Facts and Submissions

- I. This is an appeal by the proprietor as sole appellant against the maintenance of EP 1 120 018 in amended form with claims 1 to 9 in accordance with his first auxiliary request.

The main request refused in the decision under appeal included a further independent claim 10 which was found to lack inventive step having regard to the combination of

D6: EP 0 818 944 A1 and D13: DE 296 00 938 U1.

- II. The refused main request has in effect been refiled on appeal as a main request the said claim 10 being worded as follows:

"10. An electrical device for use with an exhaustible power source (101) and a load (105) which is powered by the said power source, said device including at least one signal switch (~~102,106,1111~~) and a microchip (103,~~1113~~, **803**) which is in communication with the signal switch and the power source and which is characterized in that the signal switch (~~102,106,1111~~) is an MMI signal switch which is not a serial part of an energy transfer circuit from the power source to the load, and which is further characterized in that it includes an energy storage device (205, **207**), and a power switch (**202**) for controlling energy flow from the power source to the load, and wherein when the power switch (**202**) is closed, energy from the storage device (**205**) is used to power the microchip (**103**) and, when

the power switch **(202)** is open, energy from the power source is used to power the microchip **(103)**."

This claim is identical to claim 17 as granted by the examining division apart from the bolded insertions and struckthrough deletions marked by the board.

III. The appellant proprietor requests that the decision under appeal be set aside and the patent maintained on the basis of:

claims 1 to 9 as maintained by the opposition division, claims 10 to 15 as filed with the then main request annexed to a letter dated 14 December 2004 (*main request*),

or,

claims 1 to 9 as maintained by the opposition division, claim 10 as filed during oral proceedings before the board and claims 11 to 15 as filed with the then main request annexed to the letter dated 14 December 2004 (*auxiliary request I*).

Claim 10 of the main request reproduces claim 17 as granted but, as noted above, includes amended reference signs for the signal switch (~~102~~, **106**, **1111**), the microchip (103, **1113**, **803**) and the energy storage device (205, **207**) [insertions bold, deletions struckthrough].

Claim 10 of the first auxiliary request reproduces claim 17 as granted but without the amended reference signs mentioned immediately above albeit repeating some

reference signs which had not been repeated in the originally granted claim 17.

Claims 11 to 15 of both requests are dependent on claim 10 and are identical to claims 18 to 22 as granted apart from consequential changes in dependency.

In view of the order below further auxiliary claim requests need not be considered.

IV. The arguments presented by the appellant proprietor can be summarised as follows.

- (a) The ground of opposition of Article 100(c) EPC had not been raised before the first-instance department and the appellant proprietor did not consent to it being examined in the appeal procedure in respect of unamended claims (G 10/91).
- (b) On the issue of insufficiency there was neither undue burden nor a contradiction in the teaching of paragraph 0036 of the description. There was a simple instruction that a microchip as shown in Figures 8A and 8B would be suitable for use in the configuration of Figure 3.
- (c) At point 2 of the reasons in the decision under appeal the opposition division incorrectly identified the difference between the subject-matter of claim 10 and the undisputed closest prior art D6 as consisting solely in the feature that the signal switch is an MMI (man machine interface) signal switch which is not a serial part of an energy transfer circuit from the power

source to the load. It misinterpreted the claim in reading the last feature "wherein when the power switch is closed, energy from the storage device is used to power the microchip and, when the power switch is open, energy from the power source is used to power the microchip" onto D6. It followed that its formulation of the objective technical problem and assessment of inventive step was flawed. A more reasonable formulation of the objective technical problem was: to modify the D6 device so as to enable it to control functions - such as a flashing, dimming, or find-in-the-dark - while the load is switched off.

It followed that even a mosaic of features from D6 and D13 inspired by hindsight would still fail to arrive at the subject matter of claim 10.

V. The respondent opponent requested dismissal of the appeal. The arguments presented by the respondent opponent can be summarised as follows:

- (a) In claim 10 of the main request the substitution of new reference signs for those contained in claim 17 as granted shifted the scope of protection thereby contravening Article 123(2) and (3) EPC. The amendments were in any case not occasioned by grounds for opposition and hence not permissible under Rule 57a EPC. Even claim 17 as granted was added subject matter so that Claim 10 of the first auxiliary request also contravened Article 123(2) EPC.

- (b) The invention as claimed in claim 10 of both claim requests was not described in the patent, and hence failed to comply with Article 83 EPC.

In particular, the claim related to an undisclosed embodiment obtained by combining features taken from the embodiment shown in Figures 1 and 3, with features of the embodiment illustrated in Figures 8A and 8B. The circuits 803 in Figures 8A and 8B had only two terminals and were connected in series with the load. The corresponding microchip 103 of Figures 1 and 3 had four terminals, two of which provided a series connection to the load, the other two serving as terminals for the switch 102 which unlike the switch in Figures 8A and 8B was not a serial switch. On the other hand, the claim required the presence of a storage device 205, which was found only in Figures 8A and 8B but not in Figures 1 and 3. Hence, there was not merely a complete lack of any basis for combining the two embodiments but their respective configurations were such that either one or both needed to be modified in order to arrive at the claimed configuration. The claimed embodiment could not, therefore, be derived clearly and unambiguously from the description.

- (c) On inventive step the decision under appeal was correct in identifying the problem derivable from the closest prior art D6 as that of reducing the current load in the switch. The appellant proprietor's attempt to portray this as unrealistic was given the lie by paragraph 0016 of

the patent where the advantages of low current signal switches were highlighted. D13 disclosed an example of such a switch which it would be straightforward for the skilled person to adopt. By thus modifying the D6 device he would arrive at the device of claim 10 without the exercise of inventive skill.

Reasons for the decision

1. The appeal is admissible.
2. *Scope of the examination of the appeal*
 - 2.1 Claims 1 to 9 of all claim requests are protected by the prohibition of *reformatio in peius* (G 1/99).
 - 2.2 The ground of opposition of Article 100(c) EPC was not mentioned in the notice of opposition nor was it introduced or admitted into the procedure by the opposition division. Neither does the appellant proprietor consent to its introduction into the appeal procedure. Following G 10/91 it cannot therefore be entertained in respect of the present first auxiliary claim request in which the claims are effectively in their granted form.
3. *Main request - amendments*
 - 3.1 The respondent opponent submitted *inter alia* that these amendments did not comply with the requirement that amendments be occasioned by grounds for opposition (Rule 57a EPC). The appellant proprietor did not

contest that the purpose of the amendments was clarification.

- 3.2 Clarity not being a ground of opposition, the board judges the amendments impermissible under Rule 57a EPC. The main request falls to be refused.

4. *First auxiliary request- Amendments*

The amendments are consequential on reinstating former claims 17 to 22 as granted as renumbered claims 10 to 15. For the purposes of point 19 of G 10/91 the claims are in substance unamended.

5. *First auxiliary request - Sufficiency (Article 83 EPC)*

- 5.1 The respondent opponent submitted that the invention as claimed in claim 10 did not comply with Article 83 EPC.

- 5.2 The board is not persuaded by the respondent opponent's contention that the incompatibility between the configurations of Figure 3 and Figures 8A, 8B amounted to a contradictory teaching representing an insurmountable obstacle for the skilled person seeking to perform the invention. The description of the circuit of Figure 3 in paragraph 0036 of the patent refers to removing the grounding means 104 from the circuit 100 in Figure 1. The reader is expressly referred to the examples of Figures 8A and 8B as showing a microchip suitable for this configuration.

- 5.3 The skilled reader is therefore taught how to modify the circuit of Figure 1 in the light of the teaching of Figure 8 and its associated description. In particular,

the skilled person is taught how to provide a second power source.

5.4 Under Article 83 EPC the test is not whether the claimed embodiment could be directly and unambiguously derived from the description. Instead, Article 83 EPC merely requires that the disclosure be sufficiently clear and complete for the skilled person to carry out the invention. In the board's judgement, the instructions given by the description satisfy this requirement.

6. *First auxiliary request - Novelty (Article 54 EPC)*

6.1 Novelty is not in dispute.

7. *First auxiliary request - Technical background and closest prior art*

7.1 This case is about smart torches. The claim is, of course, cast in more general terms but this synecdochical instance simplifies the discussion without loss of generality. Smart torches have modes of operation which go beyond simple on and off. They can turn off after a predetermined time to prolong battery life, blink to provide a find-in-the-dark function, flash for signalling or dim etc. This intelligence is provided by a microchip which interfaces with the battery and the on-off switch, here called an MMI (man machine interface) signal switch.

7.2 D6 is the undisputed closest prior art. It discloses a kit which, when added to an electric torch, provides a dimming function. The kit is placed in series with the

power circuit from the battery to the lamp, and comprises an electronic switch 11, controlled by a microprocessor 12 which receives an input from an interrupt-detector 15. Power to the microprocessor is supplied at all times by the voltage control and buffer circuit (13, 14). The microprocessor controls the ratio between on and off periods of the switch 11. A 97% on/off ratio provides the maximum light output with the ratio being lowered to dim the light output.

The on/off ratio is altered by closing the load switch and then briefly opening it within a pre-determined time interval to provide a control pulse that is detected by the interrupt detector 15. In response, the microprocessor alters the on/off ratio for the switch 11. If the interval is longer than the preset interval, the on/off ratio is restored to its maximum 97%. The off-interval is used to recharge the buffer 13 which, via the voltage controller 14, is connected to and provides power to the circuit at all times (column 6, lines 1 to 22).

8. *Objective technical problem*

8.1 At point 3 of the decision under appeal the opposition division set out in exemplary fashion how it read claim 10 onto D6 finding that the non-serial switch constituted the sole difference. The board is persuaded by the appellant proprietor's argument that the opposition division erred in its interpretation of the claim in reading the last feature of the claim onto D6. In fact document D6 expressly states at column 6, lines 14 to 16 that the buffer and voltage controller

(13, 14) supplies its power continuously ("... während der gesamten Zeit.").

8.2 Hence the device of claim 10 differs from the closest prior art D6 in that:

(a) that the signal switch is an MMI signal switch which is not a serial part of an energy transfer circuit from the power source to the load,

and

(b) when the power switch is closed, energy from the storage device is used to power the microchip and, when the power switch is open, energy from the power source is used to power the microchip

8.2.2 Given these differences between the claimed invention and the device disclosed in document D6, the board judges that appellant proprietor's formulation of the objective technical problem solved by the invention viz to modify the D6 device so as to enable it to control functions - such as a flashing, dimming, or find-in-the-dark - while the load is switched off, is appropriate.

8.2.3 Document D13 discloses a circuit in which the light output of a light source is determined by a programmable electronic element controlled by a push-button. There is no mention of a storage device much less of a storage device which serves to provide power when the power switch is closed. In D13 the microchip is permanently powered from the power source and thus provides the possibility, albeit not disclosed or

suggested, of eg find-in-the-dark functions when the lamp is powered down. The last feature of claim 10 involving alternation of the power source for the microchip is not to be found in D13 and accordingly the skilled person cannot derive this modification of D6 from D13 in any plausible way. Conversely, there is also no incentive to modify the circuit of document D13 with the aid of the circuit of document D6.

- 8.3 The board therefore concludes that the invention as claimed in claim 10 involves an inventive step as required by Article 56 EPC.
9. For the reasons given, the board judges that the patent as amended in accordance with the first auxiliary request meets those requirements of the EPC which were in issue in this appeal.

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 department with the order to maintain the patent in the following version:
 - Claims 1 to 9 as maintained by the opposition division in its interlocutory decision of 4 August 2004

- Claim 10 as filed during oral proceedings before the board
- Claims 11 to 15 as filed with letter of 14 December 2004, then designated "main request"
- Description columns 1, 2, 4 to 16 as maintained by the opposition division in its interlocutory decision of 4 August 2004
- Description column 3 as filed during oral proceedings before the board
- Figures 1 to 17 of the patent specification.

Registrar

Chair

S. Sánchez Chiquero

R. G. O'Connell