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Datasheet for the decision of 30 January 2009

Case Number: T 1521/05 - 3.5.05

Application Number: 99304653.1

Publication Number: 0965906

IPC: G06F 1/28

Language of the proceedings: EN

Title of invention:
Calibrating rechargeable battery

Applicant:
SAMSUNG ELECTRONICS CO., LTD.

Opponent:
-

Headword:
Calibrating rechargeable battery/SAMSUNG

Relevant legal provisions:
EPC Art. 52(1)

Relevant legal provisions (EPC 1973):
EPC Art. 56
EPC Rule 67

Keyword:
"inventive step (no) - main and auxiliary request"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1521/05 - 3.5.05

D E C I S I O N
of the Technical Board of Appeal 3.5.05
of 30 January 2009

Appellant: SAMSUNG ELECTRONICS CO., LTD.
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Representative: Boakes, Jason Carrington
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 27 July 2005 refusing European application No. 99304653.1 pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman: D. H. Rees
Members: P. Corcoran
P. Schmitz

Summary of Facts and Submissions

I. This is an appeal against the decision of the examining division to refuse the European patent application No. 99 304 653.1 published as No. 0 965 906. The decision was announced in oral proceedings held on 10 February 2005 and written reasons were dispatched on 27 July 2005.

II. The following documents were cited in the decision under appeal:

D1: DULEY R.: "Designing a Notebook Power Supply", ELECTRONIC DESIGN, PENTON PUBLISHING, Cleveland, OH, US, vol.42 no.15, 25 July 1994, pp.109-110, 112, 114, 116, 118-119, ISSN: 0013-4872;

D2: DULEY R.: "Architectural Aspects of Power Management and Battery Management in Portable Systems", WESCON CONFERENCE, US, 27 September 1994, IEEE, pp.292-298, ISSN: 1044-6036;

III. The decision under appeal was based on a main request and two auxiliary requests filed with the letter dated 10 January 2005. The examining division found that the claimed subject-matter, in particular that of independent claim 1 of all requests, lacked inventive step over the background art acknowledged in the application combined with the teaching of D1.

IV. Notice of appeal and a statement setting out the grounds of appeal including a main request and an auxiliary request were duly filed. The notice of appeal included a precautionary request for oral proceedings.

V. In a communication accompanying a summons to oral proceedings to be held on 30 January 2009 the board gave its preliminary opinion that none of the appellant's requests were allowable.

VI. On 7 January 2009, the authorised representative informed the registrar of the board by telephone that, following instructions from the appellant, nobody would be attending the scheduled oral proceedings.

VII. The appellant's requests are that the decision under appeal be set aside and that a patent be granted on the basis of one of the following sets of claims:

Claims 1-12 of the main request as specified in the statement setting out the grounds of appeal;

Claims 1-12 of the auxiliary request as specified in the statement setting out the grounds of appeal;

The main request and the auxiliary request specified in the statement setting out the grounds of appeal correspond to the first and second auxiliary requests on which the decision under appeal was based.

The further documents on which the appeal is based, i.e. the text of the description and the drawings, are as follows:

Description, pages:

2, 4, 6-9 as originally filed;

1,5 as filed with the letter of 16 April 2003;

3, 3a as filed with the letter of 10 September 2003.

Drawings, sheets:

1/4-4/4 as originally filed.

In addition, the appellant requested reimbursement of the appeal fee.

VIII. Claim 1 of the main request reads as follows:

"A method of calibrating a capacity of a rechargeable battery (110) for providing power for an electronic system, such as a portable electronic system, the method comprising the steps of:

setting the system to a high power consumption mode;

discharging the rechargeable battery; and

determining the capacity of the rechargeable battery;

characterised in that the electronic system includes a power management function, the method further comprising the step of disabling the power management function before said discharging step and fully charging said battery prior to said setting step."

Claim 1 of the first auxiliary request reads as follows:

"A method of calibrating a capacity of a rechargeable battery (110) for providing power for an electronic system, such as a portable electronic system, the method comprising the steps of:

fully charging said battery;

discharging the rechargeable battery; and

determining the capacity of the rechargeable battery;

characterised in that the electronic system includes a power management function, the method further comprising the step of disabling the power management function before said discharging step and setting the

system to a high power consumption mode prior to said discharging step."

IX. At the end of the oral proceedings the chairman announced the board's decision.

Reasons for the Decision

1. *Main Request*

1.1 The application discloses that it was known to perform a battery calibration procedure according to which a battery is first of all fully charged and then fully discharged in order to determine the exact capacity, (cf. [0008], col.1 l.57 - col.2 l.4 of the published application).

1.2 Claim 1 of the main request is considered to differ from this known procedure in that it specifies that the power management function of the electronic system is disabled and the system is set to a high power consumption mode prior to discharging.

1.3 The technical effect of these distinguishing features is to facilitate a rapid discharge of the battery and thereby overcome a disadvantage of the known procedure, i.e. a lengthy discharging time, (cf. [0008], col.2 l.4-9).

1.4 In the board's judgement the distinguishing features represent obvious modifications to the known procedure

referred to in [0008] of the published application as detailed below.

1.5 The skilled person can be expected to recognise the alleged disadvantage of the known procedure, i.e. a lengthy discharging time, without the exercise of inventive skill and, having recognised the problem, would be motivated to look for a solution.

1.6 It is a matter of general knowledge that the discharge time of a battery is dependent on the electrical load. No inventive merit can be seen in setting the system to a high power consumption mode in order to increase the load on the battery and thereby achieve a more rapid discharge.

1.7 As to the further feature of claim 1 pertaining to the disabling of the power management function, the board notes that D1 and D2 provide evidence that the provision of a power management function was generally known at the claimed priority date, particularly in the context of portable electronic devices such as laptop computers, (cf. D1: "power management controller", Table 1, p.110; D2: section entitled "Introduction", first paragraph, p.292 and section entitled "Power Management Control Unit", bridging pages 292-293).

The relative differences in load between the maximum ("full speed state") and minimum ("suspended state") power-management states as set forth in the paragraph bridging p.109-110 of D1 must likewise be regarded as a matter of general knowledge for the skilled person.

1.8 In view of the fact that the main purpose of a conventional power management function is to reduce power consumption, i.e. the load on the battery, the skilled person can be expected to recognise on the basis of his general knowledge that, if left to operate unhindered during the discharge cycle, such a function would be liable to interfere with the overall aim of providing a rapid discharge of the battery. In particular, if the power management function were to cause the device to enter the "suspended state" referred to in the aforementioned paragraph bridging p.109-110 of D1 the load on the battery would be reduced to a level far below that required to effect a rapid discharge.

The board therefore judges that, in the given context, disabling the power management function in order to ensure an uninterrupted rapid discharge of the battery represents an obvious technical measure which does not require the exercise of inventive skill.

1.9 The appellant has submitted, *inter alia*, that neither the provision of a power management function nor disabling it prior to discharging the battery were disclosed in the background art of the application nor in D1, (cf. statement of grounds § 7.).

As noted in 1.7 *supra*, D1 makes reference to a power management function as does D2. The board is therefore satisfied that the provision of such a function was a conventional and generally known technical measure at the claimed priority date, particularly in the context of battery-powered portable electronic devices.

Moreover, when due account is taken of the skilled person's general knowledge, disabling the power management function prior to battery discharge represents an obvious solution to the partial technical problem of preventing an unwanted reduction in the battery load during the discharge cycle, (cf. 1.8 *supra*).

In view of the foregoing, the appellant's submissions have failed to convince the board that the claimed subject-matter involves non-obvious technical considerations.

1.10 The subject matter of claim 1 of the main request is thus found to lack inventive step over the background art referred to in [0008] of the published application in combination with the general technical knowledge of the skilled person. In consequence thereof, the request fails to comply with the requirements of Articles 52(1) EPC and 56 EPC 1973 and is not allowable.

2. *Auxiliary request*

2.1 The subject matter of claim 1 of the auxiliary request is essentially the same as that of claim 1 of the main request. The only identifiable differences are that the step of fully charging the battery is now recited in the pre-characterising part of the claim and the step of setting the system to a high power consumption mode is recited in the characterising part.

2.2 The appellant did not argue that the aforementioned differences affect the substance of the claimed subject matter. Accordingly, the objections pertaining to lack of

inventive step detailed in 1. *supra* are also found to apply to claim 1 of the auxiliary request.

2.3 In view of the foregoing, the auxiliary request is not allowable.

3. Neither the main nor the auxiliary request is allowable. In the absence of an allowable request the appeal must be dismissed.

4. *Request for reimbursement of the appeal fee*

4.1 The appellant has additionally requested reimbursement of the appeal fee, (cf. statement of grounds, § 14). Rule 67 EPC 1973 prescribes that reimbursement of the appeal fee shall be ordered where the board deems an appeal allowable if such reimbursement is equitable by reason of a substantial procedural violation. In the present case, the appeal is not allowable and, consequently, an essential precondition for the reimbursement of the appeal fee is not fulfilled.

4.2 It is further noted that even had the appeal been allowable, the appellant omitted to make any submissions which would indicate that a substantial procedural violation might have taken place during the first instance proceedings. Neither was the board able to identify any indications to that effect of its own motion.

4.3 Accordingly, the request for reimbursement of the appeal fee is refused.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

K. Götz D. H. Rees