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**Datasheet for the decision  
of 25 January 2018**

**Case Number:** T 1652/12 - 3.5.06

**Application Number:** 09252330.7

**Publication Number:** 2169514

**IPC:** G06F1/32

**Language of the proceedings:** EN

**Title of invention:**

Methods and systems to perform a computer task in a reduced power consumption state

**Applicant:**

Intel Corporation

**Headword:**

Reduced power consumption state/INTEL

**Relevant legal provisions:**

EPC Art. 84, 123(2)  
EPC R. 63

**Keyword:**

Claims - clarity (yes)  
Amendments - added subject-matter (no)  
Additional search - remittal (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
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Case Number: T 1652/12 - 3.5.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.06**  
**of 25 January 2018**

**Appellant:** Intel Corporation  
(Applicant) 2200 Mission College Boulevard  
Santa Clara, CA 95054 (US)

**Representative:** Maiwald Patentanwalts GmbH  
Elisenhof  
Elisenstrasse 3  
80335 München (DE)

**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted on 15 February  
2012 refusing European patent application No.  
09252330.7 pursuant to Article 97(2) EPC.

**Composition of the Board:**

**Chairman** W. Sekretaruk  
**Members:** S. Krischer  
A. Teale

## **Summary of Facts and Submissions**

- I. The appeal is directed against the decision of the examining division, dated 15 February 2012, to refuse application No. 09252330.7 under Article 78(1)(c) EPC for lacking claims, since the claims filed during oral proceedings were not admitted under Rule 137(3) EPC (section 16) for lacking clarity (Article 84 EPC) and adding subject-matter (Article 123(2) EPC; see section 14).
- II. A notice of appeal was received on 25 April 2012. The appeal fee was paid on the same day. A statement of grounds of appeal was received on 25 June 2012. A slightly amended claim set was filed therewith (the only difference between these claims and those of the appealed decision is that in claim 11 the erroneous reference to itself has been corrected).
- III. According to the grounds of appeal, the appellant requested that the decision be set aside, the application be remitted to the examining division, a search be carried out, oral proceedings be held if the board did not accede to the requests and the appeal fee be reimbursed.
- IV. In a communication dated 14 November 2017, the rapporteur raised objections concerning added subject-matter.
- V. In a letter dated 17 January 2018, the appellant filed an amended claim set as its sole request and withdrew its request for reimbursement of the appeal fee. The other requests were maintained.

VI. Claim 1 reads as follows:

"1. A method of performing a task in a computer system (400) at a reduced power consumption state, said computer system (400) comprising

- (i) a service environment logic (428) which comprises:
  - a service operating system logic (430); and
  - a service task logic (432) to cause a processor (402) to perform one or more service tasks, and
- (ii) an operating environment logic (434) which comprises:
  - an operating system logic (436);
  - an application logic (438), and
  - a service task management console logic (440) to cause the processor (402) to initiate and/or schedule a service task to be performed by the service environment logic (428); and
- (iii) a power management logic (442);

said method including:

- virtualizing physical resources of the computer system (400) by initiating virtual machine management logic on the computer system (400) to host the operating environment logic (434) and the service environment logic (428);
- exiting the operating environment logic (434) and executing the service environment logic (428);
- switching a first set of at least one of the physical resources from an active state to a reduced power consumption state by means of the power management logic (442) upon exiting the operating environment logic (434);
- maintaining a processor (402) and a second set of at least one of the physical resources in an active state while executing the service environment logic (428);

performing a service task under control of the service environment logic (428), including utilizing the processor (402) and the second set of at least one physical resource while the first set of at least one physical resource is in the reduced power consumption state; and exiting the service environment logic (428) upon completion of the service task."

## **Reasons for the Decision**

### 1. *Summary of the invention*

The application relates to placing a computer in a power-save state by virtualizing its physical resources with the help of a virtual machine manager (VMM) and switching between a "normal" operating system (OS) image and a service OS image requiring less physical resources than the normal OS image (see figure 6). Upon exiting the normal OS, the physical resources of the normal OS are placed in an inactive state (with low power consumption) with the exception of the processor and a (possibly reduced) set of physical resources which are maintained in an active state during execution of the service OS.

### 2. *Overview of the board's decision*

2.1 The objections raised in the appealed decision concerning lack of clarity (Article 84 EPC) are unjustified.

2.2 The objections raised in the appealed decision concerning added subject-matter (Article 123(2) EPC) do not apply to the present claims.

2.3 The case is remitted to the first instance for further prosecution on the basis of the present claims. Inventive step would have to be examined next, which requires that an "additional" search (i.e. a search carried out at the examination stage) be performed.

### 3. *Clarity*

3.1 All objections in the appealed decision concerning lack of clarity (sections 14.1, 14.5, 14.8 and 15.1) relate to the word "logic". It is argued in section 14.1 that it is unclear whether the term "logic" refers to hardware or software and that the description does not give a clear definition of "logic".

3.2 However, the board finds that the description and the drawings make it clear that "logic" means software in the present application. For example, in figure 4 all entities referred to as "Logic" (406-444) are contained in the box "Computer Program Logic/Instructions 406" which itself is contained in the box "Memory/Storage 404". It is well known that memory only contains software and data, but no further hardware. Also the expressions "computer program logic" and "instructions" clearly indicate that "logic" relates to software and not to hardware.

3.3 Therefore, the word "logic", used in the application as relating to "software" or "program", is clear.

4. *Added subject-matter*

4.1 As to the objection concerning Article 123(2) EPC raised in section 14.2, the envisaged amendment ("by initiating ... to host the operating environment logic and the *service environment logic*"; emphasis added by the board) has neither been introduced in the refused claims 1 and 11 (see section 13), nor in the claims filed with the grounds of appeal. However, it has been introduced in the present claims.

4.2 The description contains two passages about the virtual machine manager hosting something (see page 8, lines 11-14 and page 9, lines 8-9):

"... a VMM layer ..., to *host an operating environment* ... corresponding to operating system logic 436 in FIG. 4 , and a *service environment* ... corresponding to SOS logic 430 in FIG. 4." (emphasis added by the board.)

4.3 In the decision (section 14.2, paragraph 5), it is argued that the above cited passage merely discloses an "operating environment" and a "service environment", but neither an "operating environment logic" nor a "service environment logic".

4.4 As stated above, the board interprets the term "logic" as referring to programs, so that the addition of the word "logic" to the programs designated as "operating environment" and "service environment" does not give rise to any objection. Furthermore, in figure 4, the terms "operating environment logic 434" and a "service environment logic 428" are disclosed which refer to the same programs.



4.5 Therefore, this amendment does not add subject-matter.

4.6 The objections under Article 123(2) EPC, raised in sections 14.3, 14.6 and 14.7, do not apply anymore, since the terms "operating system logic" and "service operating system logic" have been replaced by "operating environment logic" and "service environment logic", respectively, in the present claims. The board considers original claim 1 as a valid basis for these amendments.

4.7 As to claim 11, the examining division raised an additional objection under Article 123(2) EPC (section 15.2) which does not apply anymore, since present claim 1 now refers back to a method as claimed in any of claims 1-10.

4.8 As to the remaining amendments, the board considers that the passages indicated in the letter dated 17 January 2018 (page 4, second paragraph to page 5, last paragraph) sufficiently demonstrate that the claims satisfy the requirements of Article 123(2) EPC.

4.9 Therefore, the amendments of the present claims do not add subject-matter.

5. *Remittal for further prosecution*

5.1 Since the objections concerning lack of clarity and added subject-matter are overcome by the present claims, the case is remitted to the first instance for further prosecution. This mainly includes examination of inventive step and an additional search, neither of which happened so far. Instead a "no search" declaration under Rule 63 EPC was issued during the

search phase (on 11 February 2010) objecting to a lack of clarity (Article 84 EPC) and insufficient disclosure (Article 83 EPC). Therein, the expressions considered unclear and insufficiently disclosed were either no longer objected to in the appealed decision (e.g. "virtualizing physical resources"), or objected to with a different reasoning. For example, "exiting the operating environment" was considered unclear, since the "skilled person was unable to determine their implications in technical features" (see declaration, section 1.3). In the decision (section 14.5), the term "upon exiting the operating system logic" was said to be unclear because of the word "logic" (now it reads "upon exiting the operating environment logic"; see the step of switching in present claim 1).

5.2 Neither objection convinces the board, which regards these expressions as clear in the context of changing an operating system (or "environment") on top of a virtual machine manager (VMM), see for example figures 5-8. Furthermore, the term "logic" is considered clear, as stated above.

5.3 Thus, the board regards the claims as searchable.

## Order

### For these reasons it is decided that:

- 1) The decision under appeal is set aside.
- 2) The application is remitted to the department of first instance for further prosecution on the basis of the claims filed on 17 January 2018.

The Registrar:

The Chairman:



B. Atienza Vivancos

W. Sekretaruk

Decision electronically authenticated