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**Datasheet for the decision
of 14 December 2012**

Case Number: T 2155/08 - 3.5.06

Application Number: 01978980.9

Publication Number: 1331568

IPC: G06F 12/14, G06F 9/06,
G06F 1/00, G06F 11/00,
G06F 17/60

Language of the proceedings: EN

Title of invention:
Terminal capable of preventing false use of content
distributed over network

Applicant:
Sony Computer Entertainment Inc.

Headword:
Content distribution/SONY

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

Keyword:
"Inventive step - after amendment (yes)"



Case Number: T 2155/08 - 3.5.06

DECISION
of the Technical Board of Appeal 3.5.06
of 14 December 2012

Appellant: Sony Computer Entertainment Inc.
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Minato-ku
Tokyo 107-0052 (JP)

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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted 8 July 2008
refusing European patent application
No. 01978980.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: D. H. Rees
Members: M. Müller
C. Heath

Summary of Facts and Submissions

I. The appeal lies against the decision of the examining division, with written reasons dispatched on 8 July 2008, to refuse European patent application 01978980.9 for lack of an inventive step over the document

D1: US 6 029 046 A.

II. Notice of appeal was filed on 1 September 2008, the appeal fee being paid on 5 September 2008. A statement of grounds was filed on 3 November 2008 in which it was requested that the decision under appeal be set aside and a patent be granted based on one of the main or 1st-5th auxiliary requests as subject to the decision under appeal.

III. With summons to oral proceedings, the board addressed terminological issues of claim construction, raised an objection under Article 84 EPC 1973 against all requests and an objection as to lack of inventive step against the main request and the 2nd, 4th and 5th auxiliary requests.

IV. In response to the summons, the appellant replaced the claims according to the main request with new claims based on those of the previous 1st auxiliary request, amended in view of the board's clarity objections, and made the claims of the previous main request those of the new 1st auxiliary request. Consequently, the board decided to cancel the oral proceedings.

V. The appellant thus requests that the decision under appeal be set aside and that a patent be granted based on the following application documents:

claims, no.

1-19 according to the main request, filed with letter of 19 October 2012; or

1-19 according to the 1st auxiliary request, filed as main request by telefax on 29 April 2008; or

1-19 according to one of the 2nd-5th auxiliary requests, filed by telefax on 29 April 2008

description, pages

1, 2, 4-43 filed on entry into the regional phase before the EPO

3, 3a received by telefax on 2 May 2007

drawings, sheets

1/10-10/10 filed on entry into the regional phase

VI. Independent claims 1 and 10 of the main request read as follows:

"1. A terminal device (2) comprising:

a communication means (17, 20) for accessing via a network (NW) to [sic] a predetermined server machine (4) and for downloading content from the server machine;

a storage means (6) for storing the content downloaded by the communication means from the server machine, the storage means having a first region which only system programs of the terminal device are allowed to access and a second region into which only system

programs can write and which allows read-only access for user application programs, and wherein neither the first region nor the second region is erased when the terminal device is reactivated; and

a storage control means (5) for controlling data in the storage means, including writing the downloaded content into the first region with a system program and moving with a system program the content written into the first region of the storage means into the second region.

10. A method for managing content at a terminal device including a storage means comprising:

downloading content from a server over a network to the terminal device;

writing the downloaded content into a first region of a storage means which only system programs of the terminal device are allowed to access; and

moving the content written into the first region into a second region of the storage means into which only system programs can write and which allows read-only access for user application programs, and wherein neither the first region nor the second region is erased when the terminal device is reactivated."

VII. In view of the board's conclusion set out below the claims of the other requests are of no importance.

Reasons for the Decision

The invention

1. The application relates to the download of paid digital content such as video games or music over a network from a server to a client computer and addresses two problems: Download should be possible in a flexible manner (e.g. according to a schedule set by either the server or the user; see application as filed on entry into the regional phase before the EPO, p. 9, lines 5-11 and p. 10, lines 6-15) and at the user's convenience (see e.g. p. 38, line 20 - p. 39, line 5), while unauthorized (typically unpaid) use of the content should be prevented (p. 3, line 26 - p. 4, line 4).
 - 1.1 The invention proposes to provide, in the client computer, two separate storage "regions" with different access regimes, the "first region" allowing access only by system programs and the "second region" allowing read-only access by user application programs, and to use these regions to regulate user access to content. Content is downloaded into the "first region" and later, in a separate step, moved into the "second region".
 - 1.2 This setup decouples the downloading from the step of making the content available to the user so that downloading may occur at any convenient point in time (e.g. depending on available bandwidth) and the user may be prevented from accessing the downloaded data before paying.

The prior art

2. The reasons of the decision under appeal rely exclusively on document D1, which also relates to the download of content, e.g. video games, over a network from a server to a client (col. 1, lines 42-57; col. 5, lines 10-32; fig. 1).
- 2.1 D1 discloses that a client downloading content will check the received data packets for transmission errors and correct them if necessary (see col. 9, lines 44-61). More specifically, D1 discloses that received data packets are stored in one of two portions of SRAM buffer memory, called respectively "fixit" and "checked" (*loc. cit.* and fig. 2B, nos. 260, 260a and 260b), depending on whether errors were detected. After due correction the packets are moved into Flash memory 255 from where they are retrieved for play by the user (*loc. cit.* and col. 2, lines 51-60).
- 2.2 D1 also discloses that during play some of the game data is stored in SRAM, specifically game related parameters such as scores or the current state of the game (col. 8, line 51-61; see fig. 2a, no. 216). This data may be stored in non-volatile back-up memory, possibly Flash, so that users may suspend and later resume playing a particular game at the same point (col. 8, line 62 - col. 9, line 8).

Claim construction

3. Before turning to novelty and inventive step the board deems it appropriate to set out how, in its judgment, the skilled person would construe the independent

claims. The following considerations were put to the appellant in the annex to the summons to oral proceedings and were not challenged by the appellant in its response.

4. The claims refer to two categories of programs, called, respectively, "system programs" and "user application programs". Although these terms are commonly used in the art, the board considers that they are not, by themselves, clearly distinguished from each other: The term "system programs" can refer to programs which control computer hardware and which, in order to do that, may have special privileges, but it can also, and more broadly, refer to programs which are generally thought to be part of the "system", such as the operating system, a graphical user interface, or a compiler. Many programs in the latter group cannot, in the board's understanding, be clearly and in technical terms distinguished from other programs, including "user application programs". However, the claims clearly define two distinct categories of programs by specifying that "system programs" have different, more permissive, access rights to the claimed storage regions than "user application programs". In view of this, the board accepts the claimed use of these terms as clear.

5. The decision under appeal interprets the claimed term "storage" so broadly as to subsume any kind of memory, including the SRAM and the Flash memory according to D1 (see reasons 1.6.2 and 7.3).

- 5.1 The appellant challenges this interpretation with the argument that the terms "memory" and "storage" cannot

be equated but denote "entirely different things", memory being the "fast information-holding place (made up of RAM and ROM)" storage being the "long information-holding place" (grounds of appeal, point 3.2). In support of this argument, a PC tutorial (Norton 1997) is cited.

5.2 The board agrees that the distinction between internal memory and peripheral storage is an important one and that the skilled person would preferably use the terms "storage" and "memory" as suggested by the appellant - if the distinction must be made. Therefore, it is not necessary to introduce the cited tutorial formally into the procedure.

5.3 However, the board disagrees that the term "storage" is used in the art only in this limited sense. Rather, the term "storage" is also used with a broader meaning, in particular when it is not explicitly contrasted with "memory". For example, in common parlance in the art, "memory" is referred to as "primary storage" and data is said to be "stored in memory". The appellant itself concedes a "confusion in terminology" due to the fact that technology originally used for memory has come to be used as a storage device, and states that certain "memory" can "function as memory or storage" (point 3.3).

5.4 The board thus agrees with the examining division that the "storage means for storing" as claimed must be interpreted broadly as subsuming memory such as SRAM or Flash.

6. All independent claims make reference to a "storage means" having "first ... and second region[s]". Both the examining division and the appellant apparently read this as defining a sole storage entity or device divided into regions as opposed to two separate entities or devices (see refusal, reasons 1.6.3 and grounds of appeal, 4). The board, in contrast, takes the position that the skilled person would interpret the term "storage means" more broadly as the totality of means suitable for storing content and its "regions" as any portions of the totality of storage, even if implemented with different hardware components.

Articles 84 EPC 1973 and 123 (2) EPC

7. The present main request is, up to minor clarifications, substantially identical to the 1st auxiliary request as subject to the decision under appeal. According to the decision, the claims of this request are clear and based on the application as originally filed and thus conform with Articles 84 EPC 1973 and 123(2) EPC (see reasons 2.3 and 2.4). The board agrees with this conclusion.

Article 54 (1,2) and 56 EPC 1973

8. The decision under appeal (reasons 1.6.1) identifies as the only difference between claims 1 and 10 of the main request and D1 the fact that "the storage means is divided into regions". As just argued (point 6), the board considers that the claims do not establish this difference. Therefore, it can be left open whether, as the decision under appeal argues (reasons 1.6.3-1.6.4) replacing the distinct SRAM and Flash memories of D1 by

"one storage entity divided into two separate regions" is an obvious design option, for instance in view of the fact that some of the storage means disclosed in D1 are so divided.

9. On the other hand, the decision under appeal argues (reasons 1.6, 7.5 and 7.6) that the access regimes claimed for the first and second regions are disclosed in D1 for the SRAM and the Flash memory, respectively.
 - 9.1 Specifically, the decision argues that the "SRAM is accessible only by system programs in order to ensure the integrity of data" and the Flash memory "allows only read-only access for a user application program".
 - 9.2 In the board's view, D1 does not talk about "data integrity" as commonly understood, *i.e.* the trustworthiness of data and thus the guarantee that only trusted and authorized parties may change the data, but rather about the correction of transmission errors. The board therefore agrees with the appellant that D1 does not specifically teach the SRAM to be inaccessible to user application programs.
 - 9.3 Likewise, although D1 discloses that the "ASIC 200 is intended as a secure state machine to which access and output is derived through secure data ports" (see col. 10, lines 54-56) this does not, in the board's view, imply, directly and unambiguously, anything about the access regime applying to the Flash memory external to the ASIC (cf. figs. 2B and 3B, nos. 200 and 255), and specifically not that user application programs have only read-only access to it.

10. Claims 1 and 10 of the main request specify that "neither the first nor the second region is erased when the terminal device is reactivated", *i.e.* that both "regions" are non-volatile (or persistent) storage. While flash memory is persistent, SRAM is not.

11. In summary, when the storage means and its regions are interpreted broadly as argued above (point 6), claims 1 and 10 of the main request are novel over D1 by virtue of
 - (a) the explicitly claimed access regimes that apply to the first and second regions, and
 - (b) the fact that in particular the first region is persistent storage.

12. As to (1), the board agrees with the decision under appeal that it would be obviously undesirable if correct or corrected data packets could be tampered with. Also, D1 mentions the risk of piracy several times (*e.g.*, col. 10, lines 15-19 and 25-28). Further increasing the protection of data would thus appear to be a realistic problem the skilled person would want to address in the context of D1.
 - 12.1 Re. the "first region": The board considers it obvious that the risk for tampering or piracy could be reduced by limiting access to the buffer memory used for error correction (*esp.* SRAM, fig. 2B and 3B, nos. 260, 260a, 260b) to the error correction process, *i.e.* to system programs. The board agrees with the appellant that this effect could also be achieved by limiting access to the SRAM only during the error correction process, while it would be "entirely feasible for a user application to

access [it] after the download operations had finished" (grounds of appeal, point 3.6). However, the board points out that the existence of one obvious solution to a given problem does not preclude the possibility that alternative solutions may also be obvious to the person skilled in the art. The board considers this to be the case here and concludes that it would be obvious for the skilled person to limit access to the SRAM 260 in D1 to system programs in order to increase data integrity. For the sake of completeness, the board adds that this reasoning does not apply to SRAM 216 which, in order to store game data during game play, must remain accessible for user application programs.

- 12.2 Re. the "second region": In the board's judgment it would be an obvious security desirable to avoid any tampering with the game software. Indeed it would normally not be necessary for users to change the game software, so that without any loss of relevant functionality user manipulation could be limited to "game related parameters such as scores to date and the current state of the game" (D1, col. 8, lines 53-55). The board thus finds obvious that the skilled person would consider an access regime as claimed for the Flash memory insofar as it stores the game software due to its positive effect on data integrity. To implement this the skilled person would, e.g., consider splitting the Flash memory into a read-only portion for storing the game data and a portion into which the user application is allowed to write "game related parameters", said read-only portion constituting a "second region" as defined in claims 1 and 10.

- 12.3 The board therefore concludes that it would be obvious for the skilled person to apply the claimed access regimes to the "storage regions" SRAM and Flash memory according to D1 and that, hence, difference (1) on its own does not establish an inventive step over D1.
13. As to (2), the decision under appeal determines that this difference solves the problem of "how to prevent data being erased when a terminal is powered off".
- 13.1 While replacing SRAM 260 with non-volatile storage would indeed have this immediate effect, the board does not consider this an appropriate choice of the problem solved by the claimed invention, for the following two reasons.
- 13.2 First, the board agrees with the appellant (grounds of appeal, point 6.2) that, since the SRAM 260 is used only as a temporary, short-term storage for buffering data packets during the download process, the benefit of using non-volatile memory instead of SRAM to buffer the data packets would *a priori* not be significant. Second, D1 discloses that data packets which have been checked for errors and have possibly been corrected are moved into non-volatile Flash memory (col. 2, lines 57-60). The board therefore considers that the problem proposed by the examining division is not one which the skilled person starting from D1 would want to solve.
- 13.3 In the board's judgment, the persistency feature according to (2) in combination with the memory access regimes according to (1) provides a solution for the problem summarized in point 1 above. D1, while mentioning issues of payment and access permissions in

broad terms (col. 1, lines 58-67), does not address this specific problem, nor does it disclose or suggest a solution to this problem.

14. The board concludes that the subject matter of claims 1 and 10 of the main request shows the required inventive step over D1, Article 56 EPC 1973.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent based on the following documents:

claims, no.

1-19 according to the main request, filed with
letter of 19 October 2012

description, pages

1, 2, 4-43 filed on entry into the regional phase
before the EPO

3, 3a received by telefax on 2 May 2007

drawings, sheets

1/10-10/10 filed on entry into the regional phase

The Registrar:

The Chairman:

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