

PATENT COOPERATION TREATY

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REC'D 29 AUG 2006

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From the
INTERNATIONAL SEARCHING AUTHORITY:

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2006/302422

International filing date (day/month/year)
07.02.2006

Priority date (day/month/year)
08.02.2005

International Patent Classification (IPC) or both national classification and IPC
INV. G06F9/45 G06F9/46

Applicant
SONY COMPUTER ENTERTAINMENT INC.

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application


2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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|--|---|--|
| <p>Name and mailing address of the ISA:</p> <div style="text-align: center; margin-top: 10px;">  </div> <p>European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465</p> | <p>Date of completion of this opinion</p> <p>see form PCT/ISA/210</p> | <p>Authorized Officer</p> <p style="text-align: center; margin-top: 10px;">Müller, T</p> <p>Telephone No. +49 89 2399-7937</p> |
|--|---|--|



Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed
 - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - on paper
 - in electronic form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in electronic form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-27 |
| Industrial applicability (IA) | Yes: Claims | |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Used documents

1. Reference is made to the following documents:

- D1: GROSS THOMAS ; ZOBEL ANGELIKA ; ZOLG MARKUS: "Parallel compilation for a parallel machine" PROCEEDINGS OF THE SIGPLAN '89 CONFERENCE ON PROGRAMMING LANGUAGE DESIGN AND IMPLEMENTATION, [Online] 21 June 1989 (1989-06-21), - 23 June 1989 (1989-06-23) pages 91-100, Portland, OR, USA ISSN: 0362-1340 Retrieved from the Internet:
URL:<http://delivery.acm.org/10.1145/80000/74826/p91-gross.pdf?key1=74826&key2=2803215511&coll=ACM&dl=ACM&CFID=15151515&CFTOKEN=6184618>> [retrieved on 2006-08-08].
- D2: CAIN H W ET AL: "A dynamic binary translation approach to architectural simulation" COMPUTER ARCHITECTURE NEWS, ACM, NEW YORK, NY, US, vol. 29, no. 1, March 2001 (2001-03), pages 27-36, ISSN: 0163-5964.
- D3: COGSWELL B H ET AL: "Timing insensitive binary-to-binary migration across multiprocessor architectures" PARALLEL AND DISTRIBUTED REAL-TIME SYSTEMS, 1995. PROCEEDINGS OF THE THIRD WORKSHOP ON SANTA BARBARA, CA, USA 25 APRIL 1995, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, 1995, pages 193-194, ISBN: 0-8186-7099-1.

2. The person skilled in the art is aware of documents D1 to D3 because they share the same technical field with the present application, namely *software translation*.

Objections regarding inventive step

3. Document D1 is regarded as closest prior art. It discloses in the original wording of **independent claim 9** (reference to the closest prior art is made in square brackets; the original wording

of the claim is set in *italic font*; features not explicitly disclosed in the prior art are set ~~strikeout~~) a method, comprising:

translating a software program page by page from a first instruction set architecture (ISA) into a second ISA using one or more of a set of processors of a multi-processor system [D1, page 93, Fig. 1 and 2, the source program in the programming language WARP is the first instruction set architecture and the target language of the compilation is the second instruction set architecture, the translations is performed section by section which is equivalent page by page]; and

executing the translated software program using ~~a dedicated other~~ processor of the multi-processor system [it is the very purpose of a translated program to be executed eventually; therefore this feature is implicitly disclosed].

4. The **difference** between the closest prior art and claim 9 of the present application is that in claim 1 the **technical feature** of *using a dedicated other processor of the multi-processor system* is additionally disclosed.

5. Hence, claim 9 solves the **objective technical problem** of *balancing the computational load of translating and executing programs*.

6. In the light of D1, the person skilled in art **would solve the objective technical problem** as part the person's customary practice by *using another dedicated processor of the multiprocessor system for balancing the computational load*.

7. Therefore, the subject-matter of **claim 9 does not involve an inventive step** in the sense of Article 33(3) PCT.

8. The objections raised against independent method claim 9 apply, *mutatis mutandis*, to independent method claim 1. This is because the subject-matter of claim 1 is more general than the subject-matter of claim 9 but the difference to the prior art in D1 is the same.

9. The objections raised against independent claim 9 apply, *mutatis mutandis*, to independent claims 13, 23 and 24.

10. Therefore, the subject-matter of **claims 1, 13, 23 and 24 does not involve an inventive step** in the sense of Article 33(3) PCT.

11. The subject matter of the **dependent claims** does not seem to involve an inventive step in the sense of Article 33(3)PCT because

it appears that above-mentioned dependent claims add only features which are merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances and in particular in the light of the passages of documents D1 to D3 cited in the search report, without the exercise of inventive skill, in order to solve the problems posed.

Re Item VIII

Certain observations on the international application

12. Taking the subject-matter of independent claim 13 in conjunction with the subject-matter of independent claim 23, the set of claims as a whole is not clear und not concise. This is because the category of claim 13 is an apparatus and the category of claim 23 is an apparatus too since a system is equivalent to an apparatus. Therefore, the subject-matter of claim 13 is claimed twice rendering the subject-matter for which protection is sought unclear and inconcise and thus violating Article 6 PCT.

Concluding remarks

13. In case the applicant considers to file a new set of claims, the applicant is requested to point out and discuss in his letter of reply any **difference** that would distinguish the subject-matter of the present application from what is disclosed in the available prior art. In particular, the applicant is requested to identify the **technical problem** that exists in the closest prior art, describe how the applicant's invention **solves this problem**, and provide some argument for why this **solution would not be obvious** to a person skilled in the art.

14. Care should be taken that the new set of claims is supported by the description to comply with Article 34(2)(b) PCT, i.e. the amendments do not go beyond the disclosure in the international application as filed. Therefore, the applicant **is requested** to provide references to corresponding and originally disclosed passages in the description for each amended or new technical

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/JP2006/302422

feature of every amended claim. Failure to do so may result in undiscovered supporting passages and consequently, the corresponding amendments have to be regarded violating Article 34(2)(b) PCT.