

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PW050116-PCT	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/JP2006/302422	International filing date ( <i>day/month/year</i> ) 07 February 2006 (07.02.2006)	Priority date ( <i>day/month/year</i> ) 08 February 2005 (08.02.2005)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant SONY COMPUTER ENTERTAINMENT INC.			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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	Date of issuance of this report 14 August 2007 (14.08.2007)
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**Box No. I Basis of the opinion**

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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:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

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**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**

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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**

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**Box No. VIII Certain observations on the international application**

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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

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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.