

**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 SH-31819-PCT	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/KR2008/002845	International filing date ( <i>day/month/year</i> ) 22 May 2008 (22.05.2008)	Priority date ( <i>day/month/year</i> ) 12 December 2007 (12.12.2007)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant SAMSUNG ELECTRONICS CO., LTD.			

<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 5 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 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 type="checkbox"/>	Box No. VIII	Certain observations on the international application
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	Date of issuance of this report 15 June 2010 (15.06.2010)
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## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: Y.P.LEE, MOCK & PARTNERS  Koryo Building 1575-1 Seocho-dong, Seocho-gu Seoul 137-875 Republic of Korea
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Date of mailing (day/month/year) <b>02 DECEMBER 2008 (02.12.2008)</b>
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Applicant's or agent's file reference SH-31819-PCT	<b>FOR FURTHER ACTION</b> See paragraph 2 below
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International application No. <b>PCT/KR2008/002845</b>	International filing date (day/month/year) <b>22 MAY 2008 (22.05.2008)</b>	Priority date(day/month/year) 12 DECEMBER 2007 (12.12.2007)
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International Patent Classification (IPC) or both national classification and IPC  <i>G11B 7/242(2006.01)i</i>
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Applicant <b>SAMSUNG ELECTRONICS CO.,LTD.</b>
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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 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.

 Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302 -701, Republic of Korea Facsimile No. 82-42-472-7140	Date of completion of this opinion 02 DECEMBER 2008 (02.12.2008)	Authorized officer Lee Byoung Soo Telephone No.82-42-481-5697
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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/KR2008/002845

Box No. I Basis of this 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.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, 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.
4.  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.
5. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/KR2008/002845**

**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)	Claims	<u>2-29</u>	YES
	Claims	<u>1</u>	NO
Inventive step (IS)	Claims	<u>None</u>	YES
	Claims	<u>1-29</u>	NO
Industrial applicability (IA)	Claims	<u>1-29</u>	YES
	Claims	<u>None</u>	NO

2. Citations and explanations :

Reference is made in the present opinion to the following documents cited in the search report:

D1: WO 2004/051634 A2 (GENERAL ELECTRIC COMPANY) 17 June 2004

D2: KR 10-2007-0104357 A (UNIVERSITE PARIS SUD, et al.) 25 October 2007

D3: KR 10-0578200 B1 (DAEWOO ELECTRONICS CORP.) 11 May 2006

1. Novelty and Inventive step

1. Claims 1-16

1-1. Independent Claim 1

D1, which is considered to represent the most relevant state of the art, discloses the holographic memory device that comprises a substrate, plurality of holographic recoding media, which is depicted in Fig. 1.

As all the features of claim 1 are disclosed in D1, this claim is anticipated by D1. Therefore claim 1 lacks novelty under PCT Article 33(2).

1-2. Dependent Claims 3, 5, 9-13, 16

Claims 3, 5, 9-13, 16, dependent on claim 1, further define the characteristics of layer discrimination region of the holographic recording layer, which appear to come within the customary practice followed by the person skilled in the art. Therefore, claims 3, 5, 9-13, 16 lack an inventive step over D1 under PCT Article 33(3).

1-3. Dependent Claims 2, 4, 6, 7

Claims 2, 4, 6, 7, dependent on claim 1, further contain reflection layers which are not disclosed in D1. However, D2 reveals a use of reflection layers in the layer discrimination region. Accordingly, claims 2, 4, 6, 7 would have been obvious over D1 in view of D2. Therefore, claims 2-4, 6, 7 lack an inventive step under PCT Article 33(3).

1-4 Dependent Claims 8, 14, 15

Claims 8, 14, 15, dependent on claim 1, further contain a transmissive-type medium or a medium comprising a servo layer, which are not disclosed in D1. However, D3 reveals those mediums. Accordingly, claims 8, 14, 15 would have been obvious over D1 in view of D3. Therefore, claims 8, 14, 15 lack an inventive step under PCT Article 33(3).

(Continued on the Supplemental Box)

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of :

Box No. V

2. Claims 17-25

The apparatus in claims 17-25 are obvious over D1 in view of D3, since D1 reveals holographic memory device comprising substrates, holographic recording media, memory address access media, protective layer and D3 describes a holographic recording/reproducing apparatus comprising optical pickup, light source, servo controller. Accordingly, claims 17-25 lack an inventive step under PCT Article 33(3).

3. Claims 26-29

The method of claims 26-29 are obvious over D1 in view of D3, since D1 reveals holographic memory device comprising substrates, holographic recording media, memory address access media, protective layer and D3 describes a holographic recording/reproducing method comprising a irradiating light to storage medium. Accordingly, claims 26-29 lack an inventive step under PCT Article 33(3).

II. Industrial applicability

Claims 1-29 are industrially applicable under PCT Article 33(4).