

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 PIB203033HMI	FOR FURTHER ACTION		See item 4 below
International application No. PCT/KR2013/000627	International filing date (<i>day/month/year</i>) 25 January 2013 (25.01.2013)	Priority date (<i>day/month/year</i>) 26 January 2012 (26.01.2012)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant HANMI IT 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 13 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 29 July 2014 (29.07.2014)
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PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	22.05.2013
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Applicant's or agent's file reference PIB203033HMI	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/KR2013/000627	International filing date (day/month/year) 25.01.2013	Priority date (day/month/year) 26.01.2012
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International Patent Classification (IPC) or both national classification and IPC
G06K17/00 (2006.01) i, G06K19/07 (2006.01) i, H01Q7/00 (2006.01) i

Applicant
HANMI IT CO., LTD.

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.

Name and mailing address of the ISA/KR	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

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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 sequence listing filed or furnished:
 - a. (means)
 - on paper
 - in electronic form
 - b. (time)
 - in the international application as filed
 - together with the international application in electronic form
 - 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 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:

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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)	Claims	1-100	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-100	NO
Industrial applicability (IA)	Claims	1-100	YES
	Claims	None	NO

2. Citations and explanations:	
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Reference is made to the following documents:

D1: JP 2009-242058 A (TAISEI CORP.) 22 October 2009

1. Novelty and Inventive Step

1.1. Claims 1-41

The scanner in claim 1 is the same as the interpreting device (3) in document D1, the horizontal driving unit in claim 1 is the same as the moving device (2) in document D1, and the control unit in claim 1 is substantially the same as the driving control unit in document D1. However, claim 1 differs from document D1 in that the former comprises a plurality of antennas, but said difference is merely the matter which could be conceived and readily derived by a person skilled in the art from the feature of document D1 of an antenna and additional antennas (see paragraph [0019]; claim 4; and figure 6). Therefore, the invention as set forth in claim 1 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional feature of claim 2 of a distance detection sensor could be conceived and readily derived by a person

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skilled in the art from the features of document D1 of a light transmitter and a light receiver (241 and 242), and thus the invention as set forth in claim 2 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional features of claims 3-6 of the plurality of antennas and an arm antenna could be conceived and readily derived by a person skilled in the art from the feature of document D1 of the antenna and the additional antennas, and thus the invention as set forth in claims 3-6 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional features of claims 7-15 could be conceived and readily derived by a person skilled in the art from the features of document D1 of the interpreting device and the moving device, and thus the invention as set forth in claims 7-15 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional features of claims 16-19 could be conceived and readily derived by a person skilled in the art from the feature of document D1 of the antenna and the additional antennas, and thus the invention as set forth in claims 16-19 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional features of claims 20-30 could be conceived and readily derived by a person skilled in the art from the features of document D1 of horizontal loading, the moving device, the driving control unit, a stepping motor, a roller and a belt, and thus the

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invention as set forth in claims 20-30 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional features of claims 31-34 could be conceived and readily derived by a person skilled in the art from the feature of document D1 of the driving control unit, and thus the invention as set forth in claims 31-34 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional features of claims 35 and 36 could be conceived and readily derived by a person skilled in the art from the features of document D1 of the light transmitter and the light receiver, and thus the invention as set forth in claims 35 and 36 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional features of claims 37-41 could be derived by a person skilled in the art without special technical difficulty from the step in document D1 of preparing the moving device, the interpreting device and the driving control unit, and thus the invention as set forth in claims 37-41 lacks an inventive step from document D1 (PCT Article 33(3)).

1.2. Claims 42-53

The scanner and the control unit in claim 42 are substantially the same as the interpreting device and the driving control unit in document D1. However, claim 42 differs from document D1 with respect to a vertical driving unit, but said difference is the matter which could be conceived and readily derived by a person

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skilled in the art from the feature of document D1 of the moving device. Therefore, the invention as set forth in claim 42 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional features of claims 43-53 could be conceived and readily derived by a person skilled in the art from the features of document D1 of the light transmitter, the light receiver, the driving control unit, the interpreting device, the horizontal loading and the moving device, and thus the invention as set forth in claims 43-53 lacks an inventive step from document D1 (PCT Article 33(3)).

1.3. Claims 54-60

Claim 54 differs from document D1 in that claim 54 comprises a balancing arm. However, said difference could be conceived and readily derived by a person skilled in the art from the features of document D1 of the horizontal loading, the moving device, the driving control unit, the stepping motor, the roller and the belt, and thus the invention as set forth in claim 54 lacks an inventive step from document D1 (PCT Article 33(3)).

The additional features of claims 55-60 could be conceived and readily derived by a person skilled in the art from the features of document D1 of the light transmitter, the light receiver, the driving control unit, the interpreting device, the horizontal loading and the moving device, and thus the invention as set forth in claims 55-60 lacks an inventive step from document D1

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(PCT Article 33(3)).

1.4. Claims 61-62

Claims 61 and 62 differ from document D1 in that claims 61 and 62 comprise a trigger and a trigger sensor. However, said difference could be conceived and readily derived by a person skilled in the art from the features of document D1 of the moving device, the driving control unit, the light transmitter, the light receiver and the roller, and thus the invention as set forth in claims 61 and 62 lacks an inventive step from document D1 (PCT Article 33(3)).

1.5. Claims 63-65

Claims 63-65 differ from document D1 in that claims 63-65 comprise a driving motor and a driving roller. However, said difference could be conceived and readily derived by a person skilled in the art from the features of document D1 of the stepping motor, the roller and the belt, and thus the invention as set forth in claims 63-65 lacks an inventive step from document D1 (PCT Article 33(3)).

1.6. Claims 66-69

Claims 66-69 differ from document D1 in that claims 66-69 comprise a cable and a driving unit. However, said difference could be conceived and readily derived by a person skilled in the art from the features of document D1 of the horizontal loading, the roller and the belt, and thus the invention as set forth in claims 66-69 lacks an inventive step from document D1 (PCT Article 33(3)).

1.7. Claims 70-72

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Claims 70-72 differ from document D1 in that claims 70-72 comprise an article detection sensor and an elevating means. However, said difference could be conceived and readily derived by a person skilled in the art from the features of document D1 of the light transmitter, the light receiver, the moving device, the stepping motor, the roller and the belt, and thus the invention as set forth in claims 70-72 lacks an inventive step from document D1 (PCT Article 33(3)).

1.8. Claims 73-75

Claims 73-75 differ from document D1 in that claims 73-75 comprise a scanner arm. However, said difference could be derived by a person skilled in the art without special technical difficulty from the step in document D1 of preparing the interpreting device, and thus the invention as set forth in claims 73-75 lacks an inventive step from document D1 (PCT Article 33(3)).

1.9. Claims 76-78

Claims 76-78 differ from document D1 in that claims 76-78 comprise vertical and horizontal antennas. However, said difference could be derived by a person skilled in the art without special technical difficulty from the step in document D1 of preparing the antenna and the additional antennas, and thus the invention as set forth in claims 76-78 lacks an inventive step from document D1 (PCT Article 33(3)).

1.10. Claims 79-82

Claim 79 differs from claim 1 only in the expression due to the difference in the category of the invention,

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having substantially the same technical features as claim 1. Therefore, the invention as set forth in claim 79 lacks an inventive step from document D1 for the same reasons as discussed with respect to claim 1 (PCT Article 33(3)).

The additional features of claims 80-82 could be conceived and readily derived by a person skilled in the art from the features of document D1 of the interpreting device, the moving device and the driving control device, and thus the invention as set forth in claims 80-82 lacks an inventive step from document D1 (PCT Article 33(3)).

1.11. Claims 83-89

Claim 83 differs from claim 42 only in the expression due to the difference in the category of the invention, having substantially the same technical features as claim 42. Therefore, the invention as set forth in claim 83 lacks an inventive step from document D1 for the same reasons as discussed with respect to claim 42 (PCT Article 33(3)).

The additional features of claims 84-89 could be conceived and readily derived by a person skilled in the art from the features of document D1 of the interpreting device, the moving device and the driving control device, and thus the invention as set forth in claims 84-89 lacks an inventive step from document D1 (PCT Article 33(3)).

1.12. Claims 90-92

Claims 90-92 differ from document D1 in that a scanner is elevated by setting an elevating pattern. However, said

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difference could be derived by a person skilled in the art without special technical difficulty from the step in document D1 of preparing the moving device, and thus the invention as set forth in claims 90-92 lacks an inventive step from document D1 (PCT Article 33(3)).

1.13. Claims 93-96

Claims 93-96 differ from document D1 in that a moving path of a scanner is set by reading a serial number from an identification factor. However, said difference could be derived by a person skilled in the art without special technical difficulty from the step in document D1 of preparing the moving device for receiving tag information and for moving the interpreting device so as to move along a shelf and of preparing an inventory management system for controlling the moving device so that a reader detects a tag attached to an article on the shelf by moving horizontally and vertically, and thus the invention as set forth in claims 93-96 lacks an inventive step from document D1 (PCT Article 33(3)).

1.14. Claims 97-100

Claims 97-100 differ from document D1 with respect to a shelf comprising a scanner cell. However, said difference could be derived by a person skilled in the art without special technical difficulty from the step in document D1 of preparing a shelf (4), and thus the invention as set forth in claims 97-100 lacks an inventive step from document D1 (PCT Article 33(3)).

2. Industrial Applicability

The invention as set forth in claims 1-100 is

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industrially applicable (PCT Article 33(4)).

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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:

It is not clear which features are specifically indicated by the term "the mounting bracket" used in claims 13 and 14, the term "the controller" used in claim 29, the term "distance detection sensor" used in claim 35, the term "the position moving means" used in claim 59 and the term "the guide bar" used in claim 63, respectively.