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PATENT ASSIGNMENT

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| Young-Gyu JUNG | 12/03/2008 |
| Sang-Cheon KIM | 12/03/2008 |
| Tae-Woong NAH | 12/03/2008 |
| Woo-Jin CHOI | 12/03/2008 |

RECEIVING PARTY DATA

| Name: | LG Electronics Inc. | |
|-----------------|-----------------------------------|--|
| Street Address: | 20, Yeouido-Dong, Yeongdeungpo-Gu | |
| City: | Seoul | |
| State/Country: | REPUBLIC OF KOREA | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12331837 |

CORRESPONDENCE DATA

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| ATTORNEY DOCKET NUMBER: | 0630-3598PUS1 |
|-------------------------|---------------|
| | |

NAME OF SUBMITTER: James T. Eller, Jr.

Total Attachments: 2

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PATENT

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BIRCH, STEWART, KOLASCH & BIRCH, LLP

United States patent rights, or United States plus all foreign patent rights

ASSIGNMENT

| Application No. | 12/331,837 | Filed | 12/10/08 |
|--|--|--|--|
| Insert Name(s) of Inventor(s) | ***(Given Nume FAMILY NAME (ALL CAPS))*** | | |
| V1 31174-150 (3) | WHEREAS, Young-Gyu JUNG; Sang-Cheon designated as the undersigned) has (have) investigated as the undersigned of the control o | KIM; Tae-Wo nted certain new | ong Nah; and Woc-Jin Choi (hereinafter |
| Insert Title of Invention | DETECTING APPARATUS AND METHOD | of robot ci | EANER |
| | for which an application for Letters Patent of undersigned (except in the case of a provisional | | es of America has been executed by the |
| Insert Date of Signing of Application | on <u>December 3</u> | 3, 2008 | ; and |
| Insert Name of Assignee | WHEREAS, LG Electronics Inc. | | |
| Insert Address of Assignee | of 20, Yeouido-Dong, Yeongdeungpo-Gu, Seou | i, republic | OF KOREA |
| CHECK BOX IF APPROPRIATE | its heirs, successors, legal representatives an desirous of acquiring the entire right, ritle and i Patent(s) that may be granted therefor in the Un in any foreign countries. | nterest in and to | said invention and in and to any Letters |
| I Za rice i i za | NOW, THEREFORE, in consideration of the spaid, the receipt of which is hereby acknowl undersigned has (have) sold, assigned and transfer unto said Assignee the full and exclu America, its territories, dependencies and posse and all Letters Patent(s) which may be granted | edged, and oth ansferred, and sive right to the ssions and the control therefor in the | er good and valuable consideration, the by these presents does sell, assign and e said invention in the United States of entire right, title and interest in and to any United States of America, its territories. |
| | dependencies and possessions, and if the box at and to any and all divisions, reissues, continuate or terms for which the same may be greated | • | |

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Birch, Stewart, Kolasch & Birch, LLP

JTE/CJM/cdr

Attorney Docket No. 0630-3598PUS1

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignce may deem necessary or expedient.

The undersigned agree (s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letter Patent(s) or reissue patent issued thereon and to cooperate with the Assignce in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or a grant of a valid United States of America and any foreign patent(s) to the Assignce and to vest all rights therein hereby conveyed to said Assignce as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignce of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith,

The undersigned hereby grant(s) the law firm of Birch, Stewart, Kolasch & Birch, ILP the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document,

The undersigned hereby covenant(s) that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

| Date >0.8. 12.3 | Name of Inventor (signature) Young-G | yu JUNG BM. |
|------------------|--|-------------|
| Date 2008, (2,3 | Name of Inventor | CHE |
| Date 2006, 12. 3 | (signature) Sang-Che | Ofte. |
| Date 2008. /2 .3 | (signature) Tae-Woo Name of Inventor (signature) Woo-Jin | 10 J |

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