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PATENT ASSIGNMENT

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| Shigeru SATO | 12/12/2011 |
| Hitoshi MIZUGUCHI | 12/12/2011 |
| Kazunori ITO | 12/12/2011 |
| Yasuo OKITA | 12/12/2011 |

RECEIVING PARTY DATA

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| State/Country: | JAPAN | |
| Postal Code: | 020-8550 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13378892 |

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Total Attachments: 2

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PATENT REEL: 027410 FRAME: 0873 13378892

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BIRCH, STEWART, KOLASCH & BIRCH, LLP

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

ASSIGNMENT

| | Application No. <u>13/378,892</u> | | Filed December 16, 2011 |
|---|--|--|---|
| Insert Name(s) of Inventor(s) | ***(Given Nai WHEREAS, | me FAMILY NAME (ALL Shigeru SATO | · CAPS))*** Hitoshi MIZUGUCHI |
| | Kazunori ITO | | |
| | | | |
| Insert Title of Invention | (hereinafter designated as the unders | | · |
| | | s Patent of the United States | of America has been executed by the undersigned |
| Insert Date of Signing of Application | onDecember 12, 2011 | | ; and |
| Insert Name of Assignee | WHEREAS, <u>INCORPORATED N</u> | IATIONAL UNIVERSITY IV | VATE UNIVERSITY |
| Insert Address of Assignee | of <u>3-18-8, Ueda, Morioka-shi, Iwa</u> | te 020-8550 Japan | |
| CHECK BOX F APPROPRIATE | its heirs, successors, legal representa the entire right, title and interest in therefor in the United States of Amer in any foreign countries. | and to said invention and in | designated as the Assignee) is desirous of acquiring and to any Letters Patent(s) that may be granted |
| | of which is hereby acknowledged. assigned and transferred, and by thes right to the said invention in the Uni right, title and interest in and to any | and other good and valuable se presents does sell, assign an- ited States of America, its terri and all Letters Patent(s) whice | \$10.00) to the undersigned in hand paid, the receipt e consideration, the undersigned has (have) sold, d transfer unto said Assignee the full and exclusive tories, dependencies and possessions and the entire ch may be granted therefor in the United States of a box above is designated, in any and all foreign |
| | and to any and all divisions, reissues which the same may be granted. | s, continuations, conversions a | nd extensions thereof for the full term or terms for |

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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 Assignee 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 Assignee 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 Assignee and to vest all rights therein hereby conveyed to said Assignee 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 Assignee 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, LLP 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 _ | December 12, 2011 | Name of Inventor | Shigeru Sato (signature) Shigeru SATO |
|--------|---------------------|------------------|--|
| Date_ | December 12, 2011 | Name of Inventor | (signature) Hitoshi MIZUGUCHI |
| Date _ | December 12, 2011 . | Name of Inventor | Kazunori Iro (signature) Kazunori Iro |
| Date _ | December 12, 2011 | Name of Inventor | Yasuo Okity (signature) Yasuo OKITA |
| Date _ | • | Name of Inventor | (signature) |
| Date _ | | Name of Inventor | (signature) |

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October 2005

PATENT REEL: 027410 FRAME: 0875