

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | | | | | | | | | | | |
|--|------------------------------------|---------------|------------------------------------|---------------------|-------------------------|-------------------|----------------------|-----------------|------------|---------------------|------------|-------------------|------------|---------------|------------|-------------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | | | | | | | | | | | |
| CONVEYING PARTY DATA | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Takashi Hikihara</td> <td>01/20/2012</td> </tr> <tr> <td>Tsuguhiro Takuno</td> <td>01/20/2012</td> </tr> <tr> <td>Kenichi Hirotsu</td> <td>01/06/2012</td> </tr> <tr> <td>Takefumi Shimoguchi</td> <td>01/06/2012</td> </tr> <tr> <td>Toshikazu Shibata</td> <td>01/06/2012</td> </tr> <tr> <td>Takashi Tsuno</td> <td>01/06/2012</td> </tr> <tr> <td>Satoshi Hatsukawa</td> <td>01/06/2012</td> </tr> </tbody> </table> | | Name | Execution Date | Takashi Hikihara | 01/20/2012 | Tsuguhiro Takuno | 01/20/2012 | Kenichi Hirotsu | 01/06/2012 | Takefumi Shimoguchi | 01/06/2012 | Toshikazu Shibata | 01/06/2012 | Takashi Tsuno | 01/06/2012 | Satoshi Hatsukawa | 01/06/2012 |
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| Takashi Hikihara | 01/20/2012 | | | | | | | | | | | | | | | | |
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| Satoshi Hatsukawa | 01/06/2012 | | | | | | | | | | | | | | | | |
| RECEIVING PARTY DATA | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Name:</td> <td>SUMITOMO ELECTRIC INDUSTRIES, LTD.</td> </tr> <tr> <td>Street Address:</td> <td>5-33, Kitahama 4-chome,</td> </tr> <tr> <td>Internal Address:</td> <td>Chuo-ku, Osaka-shi,</td> </tr> <tr> <td>City:</td> <td>Osaka</td> </tr> <tr> <td>State/Country:</td> <td>JAPAN</td> </tr> <tr> <td>Postal Code:</td> <td>5410041</td> </tr> </table> | | Name: | SUMITOMO ELECTRIC INDUSTRIES, LTD. | Street Address: | 5-33, Kitahama 4-chome, | Internal Address: | Chuo-ku, Osaka-shi, | City: | Osaka | State/Country: | JAPAN | Postal Code: | 5410041 | | | | |
| Name: | SUMITOMO ELECTRIC INDUSTRIES, LTD. | | | | | | | | | | | | | | | | |
| Street Address: | 5-33, Kitahama 4-chome, | | | | | | | | | | | | | | | | |
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| Postal Code: | 5410041 | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Name:</td> <td>KYOTO UNIVERSITY</td> </tr> <tr> <td>Street Address:</td> <td>36-1, Yoshida-honmachi,</td> </tr> <tr> <td>Internal Address:</td> <td>Sakyo-ku, Kyoto-shi.</td> </tr> <tr> <td>City:</td> <td>Kyoto</td> </tr> <tr> <td>State/Country:</td> <td>JAPAN</td> </tr> <tr> <td>Postal Code:</td> <td>6068501</td> </tr> </table> | | Name: | KYOTO UNIVERSITY | Street Address: | 36-1, Yoshida-honmachi, | Internal Address: | Sakyo-ku, Kyoto-shi. | City: | Kyoto | State/Country: | JAPAN | Postal Code: | 6068501 | | | | |
| Name: | KYOTO UNIVERSITY | | | | | | | | | | | | | | | | |
| Street Address: | 36-1, Yoshida-honmachi, | | | | | | | | | | | | | | | | |
| Internal Address: | Sakyo-ku, Kyoto-shi. | | | | | | | | | | | | | | | | |
| City: | Kyoto | | | | | | | | | | | | | | | | |
| State/Country: | JAPAN | | | | | | | | | | | | | | | | |
| Postal Code: | 6068501 | | | | | | | | | | | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13388878</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 13388878 | | | | | | | | | | | | |
| Property Type | Number | | | | | | | | | | | | | | | | |
| Application Number: | 13388878 | | | | | | | | | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | | | | | | | | | |

CH \$40.00 13388878

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Address Line 1: 600 13TH STREET, N.W.
Address Line 4: WASHINGTON, DISTRICT OF COLUMBIA 20005-3096

| | |
|-------------------------|------------------------------|
| ATTORNEY DOCKET NUMBER: | 087612-0020 |
| NAME OF SUBMITTER: | Stephen A. Becker 26,527 jcm |


Total Attachments: 2
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RECORDATION FORM COVER SHEET

Docket No.: 087612-0020

PATENTS ONLY

To the Director of the U. S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

| | |
|---|---|
| <p>1. Name of Conveying Party(ies) Takashi HIKIHARA; Tsuguhiro TAKUNO; Kenichi HIROTSU; Takefumi SHIMOBUCHI; Toshikazu SHIBATA; Takashi TSUNO; Satoshi HATSUKAWA</p> <p>Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> | <p>2. Name and address of receiving party(ies) Address: SUMITOMO ELECTRIC INDUSTRIES, LTD. 5-33, Kitahama 4-chome, Chuo-ku, Osaka-shi, Osaka, JAPAN 5410041</p> <p>&</p> <p>Name: Kyoto University Address: 36-1, Yoshida-honmachi, Sakyo-ku, Kyoto-shi, Kyoto, JAPAN 6068501</p> <p>Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> |
| <p>3. Nature of Conveyance/Execution Date(s) Execution Date(s): January 20, 2012; January 20, 2012; January 6, 2012; January 6, 2012; January 6, 2012; January 6, 2012; January 6, 2012;</p> <p><input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input type="checkbox"/> Executive Order 9424, Confirmatory License <input type="checkbox"/> Other</p> | <p>4. Application or patent number(s): A. Patent Application No(s). B. Patent No(s).</p> <p style="text-align: center;">Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> This document is being filed together with a new application.</p> |
| <p>5. Name and address to whom correspondence concerning document should be mailed: Name: MCDERMOTT WILL & EMERY LLP Internal Address: Street Address: 600 13th Street, N.W. City: Washington, State: DC Zip: 20005-3096 D.C. Phone Number: 202.756.8000 Fax Number: 202.756.8087 Email Address: mweipdocket@mwe.com</p> | <p>6. Total number of applications and patents involved: 1</p> <p>7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00</p> <p><input type="checkbox"/> Authorized to be charged by credit card <input checked="" type="checkbox"/> Authorized to be charged to deposit account <input type="checkbox"/> Enclosed <input type="checkbox"/> None required (government interest not affecting title)</p> <p>8. Payment Information:</p> <p>a. Credit Card Last 4 Numbers _____ Expiration Date _____</p> <p>b. Deposit Account Number <u>500417</u> Authorized User Name _____</p> |
| <p>9. Signature. Stephen A. Becker 26,527  February 3, 2012</p> | |
| <p>Name and Registration No. of Person Signing _____ Signature _____ Date _____</p> <p style="text-align: right;">Total number of pages including cover sheet, attachments and documents: 2</p> | |

(SAB)

Docket No.: _____

ASSIGNMENT

In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned,

- | | |
|---------------------------------|-------------------------------|
| (1) <u>HIKIHARA, Takashi</u> | (5) <u>SHIBATA, Toshikazu</u> |
| (2) <u>TAKUNO, Tsuguhiro</u> | (6) <u>TSUNO, Takashi</u> |
| (3) <u>HIROTSU, Kenichi</u> | (7) <u>HATSUKAWA, Satoshi</u> |
| (4) <u>SHIMOGUCHI, Takefumi</u> | |

who have made a certain new and useful invention, hereby sell, assign and transfer unto

SUMITOMO ELECTRIC INDUSTRIES, LTD.

5-33, Kitahama 4-chome, Chuo-ku, Osaka-shi, Osaka 5410041 Japan

Kyoto University

36-1, Yoshida-honmachi, Sakyo-ku, Kyoto-shi, Kyoto 6068501 Japan

its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

POWER LINE COMMUNICATION DEVICE, POWER SUPPLY CIRCUIT WITH COMMUNICATION FUNCTION, ELECTRIC APPLIANCE, AND CONTROL AND MONITORING SYSTEM

(a) for which an application for United States Letters Patent was filed on _____ and identified by United States Serial No. _____; or

(b) for which an application for United States Letters Patent was executed on _____

and the undersigned hereby authorize and request the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefor and any and all extensions, divisions, reissues, substitutes, renewals, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agree that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

AND the undersigned hereby agree to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the dates indicated aside our signatures:

| INVENTORS | DATE SIGNED |
|---|-----------------------|
| 1) <u>Takashi HIKIHARA</u> Name: HIKIHARA, Takashi | <u>Jan. 20, 2012</u> |
| 2) <u>Tsuguhiro TAKUNO</u> Name: TAKUNO, Tsuguhiro | <u>Jan. 20, 2012</u> |
| 3) <u>Kenichi HIROTSU</u> Name: HIROTSU, Kenichi | <u>Jan. 6, 2012</u> |
| 4) <u>Takefumi SHIMOGUCHI</u> Name: SHIMOGUCHI, Takefumi | <u>Jan. 6, 2012</u> |
| 5) <u>Toshikazu SHIBATA</u> Name: SHIBATA, Toshikazu | <u>Jan. 6, 2012</u> |
| 6) <u>Takashi TSUNO</u> Name: TSUNO, Takashi <small>T.S. 2012-1-6</small> | <u>Jan. 6, 2012</u> |
| 7) <u>Satoshi HATSUKAWA</u> Name: HATSUKAWA, Satoshi | <u>Jan. 6th, 2012</u> |

PATENT