502057800 09/12/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| Hiroshi TOYAO | 08/30/2012 |
| Manabu KUSUMOTO | 08/30/2012 |
| Naoki KOBAYASHI | 08/30/2012 |
| Noriaki ANDO | 08/30/2012 |

RECEIVING PARTY DATA

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| State/Country: | JAPAN | | |
| Postal Code: | 108-8001 | | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13583884 |

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 029437-0130

NAME OF SUBMITTER: Effie Hale for George C. Beck

Total Attachments: 2

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PATENT REEL: 028945 FRAME: 0117 OP \$40.00 13583884

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ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

name and address of

NEC Corporation

7-1, Shiba 5-chome, Minato-ku, Tokyo 108-8001 Japan

(hereinafter ASSIGNEE) its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions in and to this invention relating to

as set forth in this United States Patent Application

| Check | executed co | concurrently herewith | | | |
|-------|-------------|-----------------------|---------|-----------|--|
| one | executed or | | | 9/10/2012 | |
| | | 13/583,884 | _ Filed | 9/10/2012 | |
| | and | | | | |

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States.

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ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of Foley & Lardner LLP the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Foley & Lardner LLP do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

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|---------------------------------|--------------------------------|--|-----------------------------------|
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| NAME: | Manabu KUSUMOTO | SIGNATURE: Manalu Jensuma | DATE: <u>August 30,20</u> 12 |
| NAME: | Naoki KOBAYASHI | SIGNATURE: NGOR KORYASHE | DATE: August 30, 2012 |
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| NAME: | | _SIGNATURE: | DATE: |
| NAME AND SIGNATURE OF WITNESSES | | | |
| NAME: | MASATO KIMURA | SIGNATURE: Masale Kina | DATE: August 30, 2012 |
| NAME: | AKIRA MUTO | SIGNATURE: January | *DATE: August 30 , 2012 |
| | | | |
| Note: Pri | ma facie evidence of execution | n may optionally be obtained by execution of the | his document before a U.S. Consul |

Page 2 of 2

or before a local officer authorized to administer oaths whose authority is proved by certificate from a U.S. Consul,

NAME AND SIGNATURE OF INVENTOR(S)