| Atty Docket No.: 229075US2CRI | | |
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| FORM PTO-1595 1-31-92 12-31-2002 | U.S. DEPARTMENT OF COMMERC Patent and Trademark Offic | |
| To the Honorable Commissioner | e attached original documents or copy thereof. | |
| 1. Name of conveying party(ies): 102325544 Andrew James SHIELDS, Richard Mark STEVENSON, Beata Ewa KARDYNAL and Zhiliang YUAN Additional name(s) of conveying party(ies) attached? Yes No Noture of Conveyance: Assignment Merger Security Agreement Change of Name Other Execution Date: November 8, 11, 12, 11, 2002 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the example of the part of the pa | Name: KABUSHIKI KAISHA TOSHIBA Address: 1-1 Shibaura 1-chome, Minato-ku, Tokyo 105-8001 Japan Additional name(s) and address(es) attached? PYes No | |
| A. Patent Application No.(s) 10/262,082 Additional numbers attache | B. Patent No.(s) | |
| 5. Name and address of party to whom correspondence | Γ | |
| concerning document should be mailed: 22850 | 6. Total applications and patents involved: 1 7. Total fee (37 CFR 3.41): \$40.00 Enclosed Authorized to be charged to deposit account 8. Deposit account number: 15-0030 (Attach duplicate copy of this page if paying by deposit account) | |
| DO NOT USE TH | IS SPACE | |
| 9. Statement and signature To the best of my knowledge and belief, the foregoing information copy of the original document. Marvin J. Spivak Name of Person Signing Registration Number: 24,913 Total number of pages including | afetta Jr. <u>Alc. 93, 2002</u> pate pateta, Jr. No. 26,803 | |
| Do not detach thi Mail documents to be recorded with required cover sheet information Commissioner of Patents Box Assignm Washington, D. C 10262082 10262082 | to: and Trademarks nents | |

PATENT REEL: 013604 FRAME: 0907

Assignment of Application

Page 1 of 2

| | WHEREAS, I (WE | E) Andrew James SHIEL | DS, Richard N | Mark STEVENSON, Beata E | Ewa KARDYNAL, and | |
|---|-------------------------------------|---------------------------------|----------------|-----------------------------|-------------------|--|
| ISERT NAMES ND RESIDENCE | | Zhiliang YUAN, all o | f: | | | |
| DDRESS OF HE INVENTORS: | c/o Toshiba Research Europe Limited | | | | | |
| | Cambridge Research Laboratory | | | | | |
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| | | United Kingdom | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | . respectively. | |
| ISERT TITLE F INVENTION: | have invented certa | nin new and useful improvement | | | | |
| | | RCE AND METHOD OF IT | | | | |
| SERT DATE IN- ENTORS SIGNED | | | | | | |
| ECI ARATION. | | cation for Letters Patent was e | | | | |
| ISERT NAME ND ADDRESS OF OMPANY OR THER ASSIGNEE | (Application No. | 10/262,082 | , filed | October 2, 2002 |), and | |
| | WHEREAS, Kabushiki Kaisha Toshiba | | | | | |
| | (hereinafter referre | d to as "ASSIGNEE") having | a place of bus | iness at: 1-1 Shibaura 1-ch | nome, Minato-ku, | |
| | Tokyo 105-8001 J | apan | | | | |

is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I (WE), by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof.

I (WE) hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my (our) entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me (us) had this Assignment and sale not been made.

10/01

PATENT REEL: 013604 FRAME: 0908 Further, I (WE) agree that I (WE) will communicate to said ASSIGNEE or its (his) representatives any facts known to me (us) respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letter Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.

The undersigned hereby grant(s) the firm of Oblon, Spivak, McClelland, Maier & Neustadt, P.C. of Fourth Floor, 1755 Jefferson Davis Highway, Arlington, Virginia 22202 the power to insert on this assignment any further identification, including the application number and filing date, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

| Date: 8 Nov 2002 | andrew Phields |
|-------------------|---|
| , | (Signature of Inventor) Andrew James SHIELDS |
| Date: 11 Mov 2002 | (Signature of Inventor) Richard Mark STEVENSON |
| Date: 12 Nov 2002 | Kkandynert |
| | (Signature of Inventor) Beata Ewa KARDYNAL |
| Date: //-//-2002 | (Signature of Inventor) Zhiliang YLIAN |
| Date: | (Signature of Inventor) Zhiliang YUAN (Signature of Inventor) |
| | (signature of diversor) |
| Date: | (Signature of Inventor) |
| Date: | |
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OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

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RECORDED: 12/24/2002

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