| FORM PTO 4505 | | 10-17-2000 | |
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| FORM PTO-1595 31-92 | | HEADER HAND ELECTIONER ENGEL HEIRE TOUR ENGEL HARE MOLITERE | DEPARTMENT OF COMMERCE |
| | RECORDATI | | Patent and Trademark Office |
| | PA ' | 101489412 | Docket No. <u>10002513-1</u> |
| 1. Name of conveying party(ies): | | 2. Name and address of re- | ceiving party(ies): |
| Curtis R. McAllister Robert C. Douglas | 8-12-50 | HEWLETT-PACKARD Co Intellectual Property Adi P.O. Box 272400 Fort Collins, Colorado 8 | ministration |
| | | | f |
| | | | |
| | | | English State (Section 2015) |
| Additional name(s) of conveying party(ies) a | ttachedYes _X No | Additional name(s) & address(es) | attached? Yes X No |
| 3. Nature of Conveyance: | | | |
| X Assignment | Merger | Chang | ge of Name |
| Security Agreement | Other | | |
| Execution Date(s): July 25, 2000; | July 20, 2000 | | |
| 4. Application number(s) or patent | number(s): | | |
| If this document is being filed toge | ther with a new appli | cation, execution date of the | application is: |
| A. Patent Application No.(s) | | B. Patent No.(s) | |
| Serial No.: 09/560,927 Date Filed | : April 30, 2000 | | |
| | Additional numb | ers attached? NO | |
| | | 6. Total number of application | ons and patents involved: 1 |
| concerning document should be mailed: | | 7. Total Fee (37 CFR 3.41): \$40.00 | |
| Records Manager HEWLETT-PACKARD COMPANY | | , in the second of the second | |
| 19111 Pruneridge Avenue, | | Enclosed | |
| M/S 44L18 Cupertino, CA 95014-0795 | | X Authorization to be charged to deposit account. | |
| | | 8. Deposit Account Numbe | r: 08-2025 |
| | DO NOT USE | THIS SPACE | |
| Statement and signature. | | | |
| To the best of my knowledge and true copy of the original document. | belief, the foregoing i | nformation is true and correc | t and any attached copy is a |
| | | | |
| Lucia Wang | | | Aug 16, 2000 |
| Name of Person Signing | Signature | | Date |
| Total | number of pages include | ling cover sheet, attachments, a | nd document: 3 |
| OMB No. 0651-0011 (exp. 4/94) | | | |
| | | ch this portion | |
| Mail document to be recorded with | | | |
| 0/16/2000 DBYRNE 00000139 082025 095 | 1 | Patents and Trademarks Assignment | |
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PATENT REEL: 011153 FRAME: 0429

PATENT APPLICATION

HEWLETT-PACKARD COMPANY reflectual Property Administration P. O. Box 272400

Fort Collins, Colorado 80528-9599

ATTORNEY DOCKET NO. 10002513-1

ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each) have agreed and hereby agree to assign to HEWLETT-PACKARD COMPANY, a Delaware corporation having its principal place of business in Palo Alto, California,

| (hereinafter HP), in furtherance of my/our oblig- successors and assigns, the entire right, title at an application for Letters Patent of the United S | ations to HP, and do hereby assign and transfer to HP, its nd interest, including the right of priority, in, to and under States entitled: | | |
|--|--|--|--|
| A Memory Controller Having Separate Agents That Process Memory Transactions In Parallel | | | |
| Filing date: April 30, 2000 | Serial No.: 09/560,927 | | |
| Letters Patent, and any and all Letters Patent of | set forth therein, and any and all continuations, renewals of and substitutes for said application for said f the United States and of countries foreign thereto which eissues, or reexaminations, or extensions of said Letters | | |
| the term or terms for which said Letters Paten | tions in my/our name for Letters Patent in any country, to igns, nominees or legal representatives, to the full end of it respectively may be granted, reissued or extended, as an held and enjoyed by me/us had this assignment, and | | |
| covenant and agree that I/we will, each time a deliver all such papers as may be necessary improvement(s), said application and said Lette legal representatives, and I/we agree to comprespecting said invention(s) or improvement(s), legal proceedings, to sign all lawful papers, to C-I-P's, reissue and foreign applications, to make everything possible to aid HP, its successors, a penforce, for its or their own benefit, proper pate | ull right to convey the entire interest herein assigned, and ute any agreement in conflict herewith, and I/we further request is made, and without undue delay, execute and or desirable to perfect the title to said invention(s) or ers Patent, to HP, its successors, assigns, nominees or naminicate to HP, or to its nominee, all known facts said application and said Letters Patent, to testify in any of execute all disclaimers and divisionals, continuations, are all rightful oaths and declarations, and generally to do ssigns, nominees and legal representatives to obtain and tent protection for said invention(s) or improvement(s) in the swhich may be incurred by me/us in lending such | | |
| States and any official of any country or countr patents on applications as aforesaid, to issue to and all Letters Patent for said invention(s) or im | e Commissioner of Patents and Trademarks of the United ies foreign to the United States whose duty it is to issue HP, as assignee of the entire right, title and interest, any provement(s), including any and all Letters Patent of the ated on or as a result of the application aforesaid, in | | |
| I/we further authorize and direct HP attor application now identified by the attorney dockers shall have been made known to them by the Uni | neys to insert the serial number and filing date of said et number and title set forth above as soon as the same ited States Patent and Trademark Office. | | |
| IN WITNESS WHEREOF, I/we hereunto set n | my/our hand(s) and seal(s): Date Assignment Signed: 7-25-00 | | |
| nventor's Typed Name: Curtis R. McAllister | Date Application Signed: 7-25-00 | | |
| itate of California) | | | |
| County of Santa Clara | | | |
| Before me this 20 day of 2050, per ersonally known or proved to me on the basis of satisf natrument of assignment to be his/her free act and deed. | sonally appeared Curtis R. McAllister who is actory evidence to be the person who acknowledged the foregoing | | |
| JEROME DECK Commission # 12 | Notary Fiblic My grammission expires: | | |

gnature(s))

PATENT^{of 2}

REEL: 011153 FRAME: 0430

Rev 12/99 (Assign)

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Intellectual Property Administration

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Fort Collins, Colorado 80528-9599

PATENT APPLICATION

ATTORNEY DOCKET NO. 10002513-1

ASSIGNMENT OF PATENT APPLICATION (cont.)

| IN WITNESS WHEREOF, I we hereunto | set my/our hand(s) and seal(s): |
|--|---|
| Flut C. Davylys Inventor's Signature (Seal) | Date Assignment Signed: 7/20/00 Date Application Signed: 7/20/00 |
| Inventor's Typed Name: Robert C. Douglas | Date Application Signed: 7/20/00 |
| State of California) | 58.: |
| County of Santa Clara) | |
| Before me this 20 day of July 2.50 of personally known or proved to me on the basinstrument of assignment to be his/her free act a | , personally appeared Robert C. Douglas who is sis of satisfactory evidence to be the person who acknowledged the foregoing and deed. |
| Commissi Notary Pub | Notary public Notary public My commission expires: 1-21-04 Icro County pres Jon 21, 280 |
| Inventor's Signature (Seal) | Date Assignment Signed: |
| | Date Application Signed: |
| , | |
| State of) County of) | ss.: |
| Before me this day of personally known or proved to me on the ba instrument of assignment to be his/her free act a | , personally appeared who is sis of satisfactory evidence to be the person who acknowledged the foregoing and deed. Notary Public My commission expires: |
| Inventor's Signature (Seal) | Date Assignment Signed: |
| Inventor's Typed Name: | Date Application Signed: |
| State of | ss.: |
| County of | |
| Before me this day of | , personally appeared who is assist of satisfactory evidence to be the person who acknowledged the foregoing and deed. |
| | Notary Public My commission expires: |
| (Use Page Thre | e For Additional Inventor(s) Signature(s)) Page 2 of 2 |

Rev 11/99 (Assign)

RECORDED: 08/22/2000

PATENT REEL: 011153 FRAME: 0431