501788885 01/17/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| Owen Joseph Strain | 01/16/2012 |
| Wenguang Wang | 01/16/2012 |

RECEIVING PARTY DATA

| Name: | Apple Inc. |
|-----------------|-----------------|
| Street Address: | 1 Infinite Loop |
| City: | Cupertino |
| State/Country: | CALIFORNIA |
| Postal Code: | 95014 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13352256 |

CORRESPONDENCE DATA

Fax Number: (415)814-6165 Phone: 415-814-6161

Email: amy.drury@novakdruce.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US

Mail.

Correspondent Name: Novak Druce + Quigg LLP
Address Line 1: 555 Mission Street

Address Line 2: 34th Floor

Address Line 4: San Francisco, CALIFORNIA 94105

| ATTORNEY DOCKET NUMBER: | 8802.138.NPUS00_P10425US1 | |
|-------------------------|---------------------------|--|
| NAME OF SUBMITTER: | Brian K. McKnight | |

Total Attachments: 4

source=8802_138_NPUS00_Assignment#page1.tif source=8802_138_NPUS00_Assignment#page2.tif source=8802_138_NPUS00_Assignment#page3.tif source=8802_138_NPUS00_Assignment#page4.tif

PATENT REEL: 027547 FRAME: 0332 OF \$40.00 1555225

501788885

ASSIGNMENT (JOINT)

THIS ASSIGNMENT, by Owen Joseph Strain; and Wenguang Wang: (hereinafter referred to collectively as the "Assignors"), witnesseth:

WHEREAS, said Assignors have invented certain new and useful improvements in: OPTIMIZED B-TREE, set forth in an application for Letters Patent of the United States filed herewith.

WHEREAS, APPLE INC., a corporation duly organized under and pursuant to the laws of the State of California, and having a principal place of business at 1 Infinite Loop, Cupertino, California 95014 (hereinafter referred to as the "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions and applications for Letters Patent of the United States, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, said Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, umo said Assignee, its successors, legal representatives and assigns, Assignors' interest in the entire right, title and interest in and to the above-mentioned inventions, application for Letters Patent, and any and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted therefor and thereon, and in and to any and all divisions, continuations, and continuations-in-part of said application, or reissues or extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by said Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignors, had this sale and assignment not been made; and

FOR THE SAME CONSIDERATION, said Assignors hereby covenant and agree to and with said Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, said Assignors are the lawful owners of the entire right, title and interest in and to said invention and the application for Letters Patent above mentioned, and that the same is unencumbered and that said Assignors have good and full right and lawful authority to sell and convey the same in the manner berein set forth; and

FOR THE SAME CONSIDERATION, said Assignors hereby covenant and agree to and with said Assignee, its successors, legal representatives and assigns, that said Assignors will, whenever counsel of said Assignee, or the counsel of its successors, legal representatives and assigns, shall advise that any proceeding in connection with said inventions, or said application for Letters Patent, or any proceeding in connection with Letters Patent for said inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue or extension of any Letters Patent, to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent for said inventions, without charge to said Assignee, its successors, legal representatives and assigns, but at the cost and expense of said Assignee, its successors, legal representatives and assigns.

FOR THE SAME CONSIDERATION, aid Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto said Assignee, its successors, legal representatives and assigns, Assignors' interest in the entire right, title and interest in all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to Assignee, or may accrue hereafter including, but not limited to, the right to sue for, collect, and retain damages for past infringement of the said Patents and Applications before or after issuance.

Page 1 of 2

IN WITNESS WHEREOF, Assignors have thus set their bands on the dates below written.

| Date: January 16th 2012 | Signature: <u>ACM Hand</u> Owen Joseph Strain |
|-------------------------|--|
| Date:, 2012 | Signature: |

ASSIGNMENT (JOINT)

THIS ASSIGNMENT, by Owen Joseph Strain; and Wenguang Wang; (hereinafter referred to collectively as the "Assignors"), witnesseth:

WHEREAS, said Assignors have invented certain new and useful improvements in: **OPTIMIZED 8-TREE**, set forth in an application for Letters Patent of the United States filed herewith.

WHEREAS, APPLE INC., a corporation duly organized under and pursuant to the laws of the State of California, and having a principal place of business at 1 Infinite Loop, Cupertino, California 95014 (hereinafter referred to as the "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions and applications for Letters Patent of the United States, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, said Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto said Assignee, its successors, legal representatives and assigns. Assignors' interest in the entire right, title and interest in and to the above-mentioned inventions, application for Letters Patent, and any and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted therefor and thereon, and in and to any and all divisions, continuations, and continuations-in-part of said application, or reissues or extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by said Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignors, had this sale and assignment not been made; and

FOR THE SAME CONSIDERATION, said Assignors hereby covenant and agree to and with said Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, said Assignors are the lawful owners of the entire right, title and interest in and to said invention and the application for Letters Patent above mentioned, and that the same is unencumbered and that said Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth; and

FOR THE SAME CONSIDERATION, said Assignors hereby covenant and agree to and with said Assignee, its successors, legal representatives and assigns, that said Assignors will, whenever counsel of said Assignee, or the counsel of its successors, legal representatives and assigns, shall advise that any proceeding in connection with said inventions, or said application for Letters Patent, or any proceeding in connection with Letters Patent for said inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue or extension of any Letters Patent, to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent for said inventions, without charge to said Assignee, its successors, legal representatives and assigns, but at the cost and expense of said Assignee, its successors, legal representatives and assigns.

FOR THE SAME CONSIDERATION, aid Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto said Assignee, its successors, legal representatives and assigns, Assignors' interest in the entire right, title and interest in all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to Assignee, or may accrue hereafter including, but not limited to, the right to sue for, collect, and retain damages for past infringement of the said Patents and Applications before or after issuance.

Page 1 of 2

IN WITNESS WHEREOF, Assignors have thus set their hands on the dates below written.

| Date:_ | , 2012 | Signatur | e: Owen Joseph Strain |
|--------|-----------------|------------|--------------------------|
| Date:_ | 1/16/2012_,2012 | . Signatur | e: Wenguang Wang |