

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>Vadim Khmelnitsky</td><td>08/15/2008</td></tr><tr><td>Nir Jacob Wakrat</td><td>08/15/2008</td></tr></tbody></table>		Name	Execution Date	Vadim Khmelnitsky	08/15/2008	Nir Jacob Wakrat	08/15/2008				
Name	Execution Date										
Vadim Khmelnitsky	08/15/2008										
Nir Jacob Wakrat	08/15/2008										
RECEIVING PARTY DATA											
<table border="1"><tr><td>Name:</td><td>Apple Inc.</td></tr><tr><td>Street Address:</td><td>1 Infinite Loop</td></tr><tr><td>City:</td><td>Cupertino</td></tr><tr><td>State/Country:</td><td>CALIFORNIA</td></tr><tr><td>Postal Code:</td><td>95014-2094</td></tr></table>		Name:	Apple Inc.	Street Address:	1 Infinite Loop	City:	Cupertino	State/Country:	CALIFORNIA	Postal Code:	95014-2094
Name:	Apple Inc.										
Street Address:	1 Infinite Loop										
City:	Cupertino										
State/Country:	CALIFORNIA										
Postal Code:	95014-2094										
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>12193613</td></tr></tbody></table>		Property Type	Number	Application Number:	12193613						
Property Type	Number										
Application Number:	12193613										
CORRESPONDENCE DATA											
Fax Number: (877)769-7945 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone: 650-839-5070											
Email: kmj@fr.com											
Correspondent Name: Kirk A. Gottlieb											
Address Line 1: FISH & RICHARDSON P.C.											
Address Line 2: P.O.BOX 1022											
Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022											
ATTORNEY DOCKET NUMBER:	22748-0013001										
NAME OF SUBMITTER:	Kathy Jordan										
Total Attachments: 2 source=assignment#page1.tif source=assignment#page2.tif											

CH \$40.00 12193613

PATENT

500651120

REEL: 021550 FRAME: 0362

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS, Vadim Khmel'nitsky, Nir Jacob Wakrat, hereby sell, assign, and transfer to Apple Inc. (CALIFORNIA corporation), having offices located at 1 Infinite Loop, Cupertino, California 95014-2094, and its successors, assigns and legal representatives (collectively, "ASSIGNEE") all of the right, title and interest of ASSIGNORS throughout the world in and to any and all inventions and improvements which are the subject of a patent document entitled

Memory Mapping Restore and Garbage Collection Operations

and which is found in

- (a) ☐ U.S. patent application executed on , entitled as above, listing the above named persons as Inventors.
- (b) ☒ U.S. patent application filed on August 18, 2008
☒ under Application No. 12/193,613
☐ with Express Mail No. (Application Number not yet known).
- (c) ☐ U.S. Patent No.: issued

An attorney of record, or the attorney filing the application, is authorized and requested by the execution of this assignment to insert into this assignment the execution date of the application and/or the filing date and serial number of the application when officially known.

This assignment includes the foregoing patent application or patent; all legal equivalents thereof in any foreign country and all patents issuing therefrom; all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements; and the right to claim priority based on the filing date of the foregoing patent application or patent under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes. ASSIGNORS authorize ASSIGNEE to apply in all countries in the name of ASSIGNORS or in the name of ASSIGNEE for patents, utility models, and design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with this assignment.

ASSIGNORS further covenant for themselves and their respective heirs, legal representatives and assigns to provide to ASSIGNEE promptly upon the request of ASSIGNEE all pertinent facts and documents relating to said invention and said patents and legal equivalents as may be known and accessible to ASSIGNORS and to testify as to the same in any interference, litigation, or proceeding relating thereto and promptly to execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue or enforce said application, said inventions and improvements and said patents and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

ASSIGNORS request the Commissioner of Patents and Trademarks to issue said patents of the United States and any reissue or extension thereof to the ASSIGNEE.


Executed this

Signature of Inventor

15 day of August, 2008 
Vadim Khmelnsky

Executed this

Signature of Inventor

15 day of Aug, 2008 
Nir Jacob Wakrat

50603519.doc

PATENT

RECORDED: 09/18/2008

REEL: 021550 FRAME: 0364