

**TRADEMARK ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

|                              |   |                       |                       |
|------------------------------|---|-----------------------|-----------------------|
| <b>SUBMISSION TYPE:</b>      | NEW ASSIGNMENT  |                       |                       |
| <b>NATURE OF CONVEYANCE:</b> | INTELLECTUAL PROPERTY SECURITY AGREEMENT (FIRST LIEN) |                       |                       |
| <b>CONVEYING PARTY DATA</b>  |   |                       |                       |
| <b>Name</b>                  | <b>Formerly</b>                                       | <b>Execution Date</b> | <b>Entity Type</b>    |
| Quantum Corporation          |   | 08/22/2006            | CORPORATION: DELAWARE |

|                             |   |
|-----------------------------|---|
| <b>RECEIVING PARTY DATA</b> |   |
| <b>Name:</b>                | KeyBank National Association, as administrative agent |
| <b>Street Address:</b>      | 601 108th Avenue N.E., 5th Floor                      |
| <b>City:</b>                | Bellevue  |
| <b>State/Country:</b>       | WASHINGTON  |
| <b>Postal Code:</b>         | 98004   |
| <b>Entity Type:</b>         | National Association:                                 |

**PROPERTY NUMBERS Total: 61**

| Property Type        | Number  | Word Mark  |
|----------------------|---------|------------|
| Registration Number: | 0926161 | QUANTUM    |
| Registration Number: | 1089619 | QUANTUM    |
| Registration Number: | 1199437 | SIDEWINDER |
| Registration Number: | 1410326 | IRWIN      |
| Registration Number: | 1414004 | FLOPPYTAPE |
| Registration Number: | 1414785 | FASTAPE    |
| Registration Number: | 1442874 | ARCHIVE    |
| Registration Number: | 1452091 | ARCHIVE    |
| Registration Number: | 1462655 | ARCHIVEXL  |
| Registration Number: | 1464451 | VIPER      |
| Registration Number: | 1478488 | DISCACHE   |
| Registration Number: | 1489175 | QIC STREAM |
| Registration Number: | 1501056 | HARDCARD   |
| Registration Number: | 1531795 | ARCHIVE VP |

**CH \$1540.00 0926161**

|                      |         |   |
|----------------------|---------|---|
| Registration Number: | 1749927 | QUANTUM   |
| Registration Number: | 1869317 | TAPESTOR  |
| Registration Number: | 1957517 | CONNER  |
| Registration Number: | 2012843 | QUANTUM SIROCCO   |
| Registration Number: | 2075239 | QUANTUM   |
| Registration Number: | 2373379 | DLT TAPE  |
| Registration Number: | 2386775 | QUANTUM   |
| Registration Number: | 2392749 | QUANTUM   |
| Registration Number: | 2411810 | QUANTUM   |
| Registration Number: | 2434568 | QUANTUM   |
| Registration Number: | 2472677 | QUANTUM   |
| Registration Number: | 2487984 | ULTRIUM   |
| Registration Number: | 2487985 | LTO   |
| Registration Number: | 2490615 | TURNING TRANSACTIONS INTO LOYAL CUSTOMERS                           |
| Registration Number: | 2496768 | LANVAULT  |
| Registration Number: | 2518368 | DLT SUPER TAPE  |
| Registration Number: | 2576453 | ULTRIUM LTO   |
| Registration Number: | 2737984 | VALUSMART TAPE  |
| Registration Number: | 2745030 | VALUSMART   |
| Registration Number: | 2765102 | RADICAL SIMPLICITY  |
| Registration Number: | 2815237 | LTO LINEAR TAPE-OPEN  |
| Registration Number: | 2820244 | THE 3 R'S OF DATA PROTECTION: RELIABILITY, REDUNDANCY, AND RECOVERY |
| Registration Number: | 2836782 | LINEAR TAPE-OPEN  |
| Registration Number: | 2864338 | DLT   |
| Registration Number: | 2864339 | DLTTAPE   |
| Registration Number: | 2924217 |   |
| Registration Number: | 2926907 | CERTANCE  |
| Registration Number: | 2935989 | VS TAPE   |
| Registration Number: | 2937229 | WHEN FAILURE IS NOT AN OPTION                                       |
| Registration Number: | 2938735 | VS TAPE VALUSMART   |
| Registration Number: | 2957502 | VALUELOADER   |
| Registration Number: | 2987717 | SUPERLOADER   |
| Registration Number: | 3018998 | STORAGECARE   |
| Registration Number: | 3078209 | SDLTTAPE  |

|                |          |                    |
|----------------|----------|--------------------|
| Serial Number: | 76329838 | COLOR PROTECT      |
| Serial Number: | 76449769 | TAPECARE           |
| Serial Number: | 76471251 | ATL VALUELOADER    |
| Serial Number: | 76471252 | ATL SUPERLOADER    |
| Serial Number: | 76539221 | EMP60              |
| Serial Number: | 76539222 | MP60               |
| Serial Number: | 76585004 | TRUVUE             |
| Serial Number: | 76603451 | DLTICE             |
| Serial Number: | 76613994 | SDLT               |
| Serial Number: | 78481629 |                    |
| Serial Number: | 78510625 | DLT                |
| Serial Number: | 78659908 | GOVAULT            |
| Serial Number: | 78918030 | STORAGECARE VISION |

**CORRESPONDENCE DATA**

Fax Number: (312)258-5600  
*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*  
Phone: 3122585500  
Email: mashton@schiffhardin.com  
Correspondent Name: Mark E. Ashton / Schiff Hardin LLP  
Address Line 1: 6600 Sears Tower  
Address Line 4: Chicago, ILLINOIS 60606

|                         |                  |
|-------------------------|------------------|
| ATTORNEY DOCKET NUMBER: | 33227-0004       |
| NAME OF SUBMITTER:      | Mark E. Ashton   |
| Signature:              | /Mark E. Ashton/ |
| Date:                   | 09/26/2006       |

**Total Attachments: 48**

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

Dated as of August 22, 2006

From

QUANTUM CORPORATION,  
as Debtor,

to

KEYBANK NATIONAL ASSOCIATION,  
as Administrative Agent

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## INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS INTELLECTUAL PROPERTY SECURITY AGREEMENT ("*IP Security Agreement*") is made as of August 22, 2006 by and between QUANTUM CORPORATION, a Delaware corporation ("*Debtor*"), and KEYBANK NATIONAL ASSOCIATION as Administrative Agent ("*KeyBank*" or "*Administrative Agent*") for the parties identified as Lenders (collectively with KeyBank in its capacity as Lender, the "*Lenders*") under that certain Credit Agreement of even date among Debtor, the Administrative Agent and Lenders (the "*Credit Agreement*").

### RECITALS

A. Concurrently herewith Debtor is entering into the Credit Agreement pursuant to which Lenders shall provide Debtor with a senior term loan facility and a senior revolving credit facility (including certain letters of credit, collectively, the "*Facility*").

B. It is a prerequisite to the Lenders' entering into the Credit Agreement that Debtor enter into this IP Security Agreement and grant to the Administrative Agent for itself and for the ratable benefit of the Lenders, the security interest hereafter provided to secure the Obligations.

C. Debtor as owner of the assets encumbered hereby, desires to enter into this IP Security Agreement to secure payment and performance of the Obligations.

### AGREEMENT

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

#### 1. DEFINITIONS.

For purposes of this IP Security Agreement, the following terms shall have the meanings specified below. In addition terms not defined below that are defined in Division 8 or Division 9 of the UCC or in the Credit Agreement shall have the meaning specified therein.

**1.1 Bankruptcy Code.** The term "*Bankruptcy Code*" shall mean the Bankruptcy Reform Act of 1978 (11 U.S.C. § 101-1330) as amended and as hereafter modified.

**1.2 Collateral.** The term "*Collateral*" shall mean:

- (a) The Intellectual Property Collateral;

- (b) All Proceeds thereof; and
- (c) All of the Debtor's Books relating thereto.

Notwithstanding the foregoing, the term "*Collateral*" shall not include any General Intangibles of the Debtor (whether owned or held as licensee or lessee or otherwise) to the extent that the granting of a security interest therein would be contrary to applicable law or create a default under any agreement governing such property, right or license (but solely to the extent that such restrictions are enforceable as a matter of law).

**1.3 Copyrights.** The term "*Copyrights*" shall have the meaning provided in the UCC and shall include, without limitation, any and all copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held, including without limitation those set forth on Exhibit A attached hereto.

**1.4 Debtor's Books.** The term "*Debtor's Books*" shall mean all of Debtor's books and records including, but not limited to: minute books; ledgers, records indicating, summarizing or evidencing Debtor's assets, liabilities, the Collateral, the Obligations, and all information relating thereto; records indicating, summarizing or evidencing Debtor's business operations or financial condition; and all computer programs, disc or tape files, printouts, runs, and other computer prepared information and the equipment containing such information.

**1.5 Intentionally Omitted.**

**1.6 Event of Default.** The term "*Event of Default*" shall have the meaning given to such term in Section 9 of this IP Security Agreement.

**1.7 Intellectual Property Collateral.** The term "*Intellectual Property Collateral*" shall mean all of the following assets now owned or hereafter acquired:

- (a) Copyrights, Trademarks, Patents, and Mask Works;
- (b) Licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works, and all license fees and royalties arising from such use to the extent permitted by such license or rights
- (c) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(d) Any and all design rights which may be available to Debtor now or hereafter existing, created, acquired or held;

(e) Any and all claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(f) All "domain names" of Debtor, including without limitation those listed on Exhibit D;

(g) All amendments, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works;

(h) All contracts and contract rights relating to any of the foregoing; and

(i) All Proceeds of the foregoing.

**1.8 IP Priority Liens.** The term "*IP Priority Liens*" shall mean and refer to (i) Liens on any imbedded software in any equipment, the purchase price and related acquisition costs of such equipment which are financed by third-party lenders or lessors as permitted by the Credit Agreement; (ii) Liens in existence on the date any asset becomes Collateral, to the extent such Lien is Permitted by the Credit Agreement, subject to such Lien; (iii) Liens (including tax Liens) in favor of any Governmental Authority, which pursuant to the statute or law and other applicable law creating such Lien, have priority over Liens granted under this IP Security Agreement; (iv) the Liens set forth on Exhibit E hereto and (v) Liens permitted under Section 7.02(i) of the Credit Agreement and clauses (c), (d), (e), (i) and (k) of the definition of "Ordinary Course Liens" in the Credit Agreement..

**1.9 IP Security Agreement.** The term "*IP Security Agreement*" shall mean this IP Security Agreement (any concurrent or subsequent rider to this IP Security Agreement) and any extensions, supplements, amendments or modifications to this IP Security Agreement and/or to any such rider.

**1.10 Lender Expenses.** The term "*Lender Expenses*" means: all costs and expenses incurred by Administrative Agent or Lenders which are subject to payment or reimbursement by Debtor pursuant to Section 10.03 of the Credit Agreement.

**1.11 Lenders.** The term "*Lenders*" shall have the meaning given to such term in the preamble to this IP Security Agreement.



**1.12 Licenses.** The term "*Licenses*" shall mean all licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works and all license fees and royalties arising from such use to the extent permitted by such license or right.

**1.13 License Disposition.** The term "*License Disposition*" shall mean in respect of any Intellectual Property Collateral which is material to Debtor (the "*Material IP*") (i) the granting of an exclusive license across all or substantially all fields, uses or regions to any person or entity other than a majority-owned subsidiary of Debtor, (ii) the granting of any license that conveys directly or indirectly to any person or entity other than a majority-owned subsidiary of Debtor, all or substantially all of the economic value of such Material IP, or (iii) the abandonment by the Debtor of such Material IP.

**1.14 Intentionally Omitted.**

**1.15 Intentionally Omitted.**

**1.16 Mask Works.** The term "*Mask Works*" shall have the meaning provided in the UCC and shall include, without limitation, all mask works or similar rights available for the protection of semiconductor chips, now owned or hereafter acquired, including, without limitation those set forth on Exhibit D attached hereto.

**1.17 Intentionally Omitted.**

**1.18 Patents.** The term "*Patents*" shall have the meaning provided in the UCC and shall include, without limitation, all patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto.

**1.19 Proceeds.** The term "*Proceeds*" shall have the meaning provided in the UCC including without limitation whatever is received upon the sale, lease, exchange, collection or other disposition of Collateral or proceeds, including, without limitation, proceeds of insurance covering the foregoing collateral, tax refunds, and any and all accounts, notes, instruments, chattel paper, equipment, money, deposit accounts, goods, or other tangible and intangible property of Debtor resulting from the sale or other disposition of the Collateral, and the proceeds thereof.

**1.20 Trademarks.** The term "*Trademarks*" shall have the meaning provided in the UCC and shall include, without limitation, any trademarks and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and

the entire goodwill of the business of Debtor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto.

**1.21 UCC.** The term "*UCC*" shall mean the California Uniform Commercial Code, as presently in force and effect and any replacements therefore as and when such replacements become effective.

## **2. GRANT OF SECURITY INTEREST.**

As security for the prompt and complete payment and performance of all the Obligations, Debtor hereby grants to Administrative Agent for itself and on behalf of and for the ratable benefit of the Lenders, a first priority security interest in all of Debtor's right, title and interest in, to and under the Collateral, subject to IP Priority Liens. Notwithstanding the foregoing, the security interest granted herein shall not extend to and the term "Collateral" shall not include any General Intangibles of the Debtor (whether owned or held as licensee or lessee or otherwise) to the extent that the granting of a security interest therein would be contrary to applicable law or create a default under any agreement governing such property, right or license (but only if such restrictions are enforceable as a matter of law).

## **3. AUTHORIZATION AND REQUEST.**

Debtor authorizes and requests that the Register of Copyrights and the Commissioner of Patents and Trademarks record this IP Security Agreement or a version thereof.

## **4. REPRESENTATIONS AND WARRANTIES.**

In addition to the representations and warranties of Debtor set forth in the Credit Agreement, which are incorporated herein by reference, Debtor represents and warrants, and represents to Administrative Agent and the Lenders that:

**4.1 Incorporation: Place of Business.** Debtor is a corporation validly existing and in good standing under the laws of the State of Delaware; Debtor's chief executive office and principal place of business is located at 1650 Technology Drive, Suite 700, San Jose, California 95110.

**4.2 Title to Collateral.** Except as specified on Schedule 4.2 hereto, Debtor has and at all times will have good, marketable and indefeasible title to the Collateral; except for any Intellectual Property Collateral which is being licensed by the Debtor or Collateral which is being leased by the Debtor, and as to such assets, Debtor has the appropriate rights to use such Collateral; the Collateral is and at all times shall remain free and clear of all Liens except for licenses granted by Debtor (subject to the limitations in Section 5.8 of this IP Security Agreement) and except for IP Priority Liens.

**4.3 Intellectual Property.** All of Debtor's U.S. patents and patent applications, registered copyrights, applications for copyright, trademarks, service marks and trade names (whether registered or unregistered), and applications for registration of such trademarks, service marks and trade names, are set forth in Exhibits A, B and C. Debtor represents that none of the copyrights owned by it constitute a material asset of Debtor's business.

**4.4 Domain Names.** All of Debtor's domain names are set forth in Exhibit D.

**4.5 No Conflict.** Performance of this IP Security Agreement does not conflict with or result in a breach of any agreement relating to the intellectual property of Debtor, except to the extent that certain intellectual property agreements prohibit the assignment of the rights thereunder to a third party without the licensor's or other party's consent and this IP Security Agreement constitutes a security interest.

**4.6 IP Enforceability.** To Debtor's knowledge, each of the Patents is valid and enforceable, and no part of the Intellectual Property Collateral has been judged invalid or unenforceable, in whole or in part, and no claim has been made that any part of the Intellectual Property Collateral violates the rights of any third party.

**4.7 Validity of Lien.** This IP Security Agreement creates, and in the case of after acquired Intellectual Property Collateral, this IP Security Agreement will create at the time Debtor first has rights in such after acquired Intellectual Property Collateral, in favor of Administrative Agent a valid and perfected first priority security interest in the Intellectual Property Collateral in the United States securing the payment and performance of the Obligations which is senior to all other interests except for IP Priority Liens.

**4.8 IP Registration.** To its knowledge, except for, and upon, the filing with the United States Patent and Trademark office with respect to the Patents and Trademarks and the filing with the Register of Copyrights with respect to the Copyrights and Mask Works necessary to perfect the security interests created hereunder and except as been already made or obtained, no authorization, approval or other action by, and no notice to or filing with, any U.S. governmental authority of U.S. regulatory body is required either (i) for the grant by Debtor of the security interest granted hereby or for the execution, delivery or performance of this IP Security Agreement by Debtor in the U.S. or (ii) for the perfection in the United States or the exercise by Administrative Agent of its rights and remedies thereunder.

**4.9 Complete.** All information heretofore, herein or hereafter supplied to Administrative Agent by or on behalf of Debtor with respect to the Intellectual Property Collateral is accurate and complete in all material respects.

**4.10 Continuing Warranties.** Debtor's warranties and representations set forth in this Section 4 and in any exhibit hereto shall be true and correct at the time of execution of this IP Security Agreement by Debtor and at the time of any request for advance and at the time of any advance under the Credit Agreement.

**4.11 Warranties and Representations Cumulative.** The warranties, representations and agreements set forth herein shall be cumulative and in addition to any and all other warranties, representations and agreements which Debtor shall give, or cause to be given, to Administrative Agent, either now or hereafter.

## **5. COVENANTS.**

So long as the Obligations, or any portion thereof, remains unsatisfied.

**5.1 Change in Identity.** Without prior notice to Administrative Agent, Debtor will not change Debtor's name, or state of incorporation; or relocate Debtor's principal place of business or chief executive office.

### **5.2 Intentionally Omitted.**

**5.3 Protection of IP.** Debtor shall (i) protect, defend and maintain the validity and enforceability of the Trademarks, Patents, Copyrights, and Mask Works, (ii) use commercially reasonable best efforts to detect infringements of the Trademarks, Patents, Copyrights, and Mask Works and promptly advise Administrative Agent in writing of material infringements detected and (iii) not allow any Trademarks, Patents, Copyrights, or Mask Works to be abandoned, forfeited or dedicated to the public without the written consent of Administrative Agent, which shall not be unreasonably withheld, unless Debtor determines that reasonable business practices suggest that abandonment is appropriate.

**5.4 Copyright Registration.** Debtor shall promptly register the most recent version of any of Debtor's Copyrights, which are material to the business of Debtor, if not already so registered.

**5.5 New IP Filings.** If and when Debtor shall obtain rights to any new patents, trademarks, service marks, trade names or material copyrights, or otherwise acquire or become entitled to the benefit of, or apply for registration of, any of the foregoing, Debtor (i) shall promptly notify Administrative Agent thereof and (ii) hereby authorizes Administrative Agent to modify, amend, or supplement the schedules attached hereto to reflect such fact and from time to time to include any of the foregoing and make all necessary or appropriate filings with respect thereto and to perfect Administrative Agent's Lien thereon.

**5.6 Notice to Administrative Agent.** Debtor shall promptly advise Administrative Agent of any material adverse change in the composition of the Collateral, including but not limited to any subsequent ownership right of the Debtor in or to any Trademark, Patent, Copyright, or Mask Work specified in this IP Security Agreement. Upon any executive officer of Debtor obtaining actual knowledge thereof, Debtor will promptly notify Administrative Agent in writing of any event that materially adversely affects the value of any material Intellectual Property Collateral, the ability of Debtor to dispose of any material Intellectual Property Collateral of the rights and remedies of Administrative Agent or Lenders in relation thereto, including the levy of any legal process against any of the Intellectual Property Collateral.

**5.7 Intentionally Omitted.**

**5.8 Intentionally Omitted.**

**5.9 Further Assurances.** Debtor shall, from time to time, execute and file such other instruments, and take such further actions as Administrative Agent may reasonably request from time to time to perfect or continue the perfection of Administrative Agent's interest in the Intellectual Property Collateral.

**6. ADMINISTRATIVE AGENT'S RIGHTS TO COMPEL ACTION.**

Administrative Agent shall have the right, but not the obligation, to take, at Debtor's sole expense, any actions that Debtor is required under this IP Security Agreement to take but which Debtor fails to take, after ten (10) days' notice to Debtor. Debtor shall reimburse and indemnify Administrative Agent for all reasonable costs and reasonable expenses incurred in the reasonable exercise of its rights under this Section 6.

**7. INSPECTION RIGHTS.**

At any time during regular business hours and as often as reasonably requested upon reasonable notice, permit Administrative Agent or any Lender, or any employee, Administrative Agent or representative thereof, to examine, audit and make copies and abstracts from Debtor's records and books of account, including quality control records, relating to the Intellectual Property Collateral and to visit and inspect its properties related thereto, and, upon request, furnish promptly to Administrative Agent or any Lender true copies of all financial information and internal management reports related to the Intellectual Property Collateral. Notwithstanding any provision of this Agreement to the contrary, so long as no Event of Default shall have occurred and be continuing, Debtor shall not be required to disclose, permit the inspection, examination, photocopying or making extracts of, or discuss, any document, information or other matter that (i) constitutes non-financial trade secrets or non-financial proprietary information, or (ii) the disclosure of which to Administrative Agent or any Lender, or their designated representative, is then prohibited by law or any agreement binding on Debtor that was not entered into by Debtor for the purpose of concealing information from the Administrative Agent or Lenders. Debtor shall, however, furnish to Administrative Agent such information concerning

Debtor's Intellectual Property Collateral as is reasonably necessary to permit Administrative Agent (on behalf of itself and the other Lenders) to perfect a security interest in such intellectual property; provided, however, nothing herein shall entitle Administrative Agent access to Debtor's trade secrets and other proprietary information.

## 8. FURTHER ASSURANCES: ATTORNEY FACT.

8.1 On a continuing basis, Debtor will, subject to any prior licenses, encumbrances and restrictions and prospective licenses, make, execute, acknowledge and deliver, and file and record in the proper filing and recording places in the United States, all such instruments, including appropriate financing and continuation statements and collateral agreements and filings with the United States Patent and Trademark Office and the Register of Copyrights, and take all such action as may reasonably be deemed necessary or advisable, or as requested by Administrative Agent, to perfect Administrative Agent's security interest in all Copyrights, Patents, Trademarks, and Mask Works and otherwise to carry out the intent and purposes of this IP Security Agreement, or for assuring and confirming to Administrative Agent the grant or perfection of a security interest in all Intellectual Property Collateral.

8.2 Debtor hereby irrevocably (until the Obligations are paid in full and the Revolving Commitments have been terminated) appoints Administrative Agent as Debtor's attorney-in-fact, with full authority in the place and stead of Debtor and in the name of Debtor, Administrative Agent or otherwise, from time to time in Administrative Agent's discretion, upon Debtor's failure or inability to do so, to take any action and to execute any instrument which Administrative Agent may deem necessary or advisable to accomplish the purposes of this IP Security Agreement, including:

(a) To modify, in its sole discretion, this IP Security Agreement without first obtaining Debtor's approval of or signature to such modification by amending Exhibit A, Exhibit B, Exhibit C, and Exhibit D hereof, as appropriate, to include reference to any right, title or interest in any Copyrights, Patents, Trademarks or Mask Works acquired by Debtor after the execution hereof or to delete any reference to any right, title or interest in any Copyrights, Patents, Trademarks, or Mask Works in which Debtor no longer has or claims any right, title or interest; and

(b) To file, in its sole discretion, one or more financing or continuation statements and amendments thereto, relative to any of the Intellectual Property Collateral without the signature of Debtor where permitted by law.

## 9. EVENTS OF DEFAULT.

The occurrence of any of the following shall constitute an Event of Default under this IP Security Agreement:

9.1 **Breach of IP Security Agreement.** (i) Any representation or warranty hereunder proves to have been incorrect in any material respect when made or deemed made, (ii) Debtor

breaches any provision of this IP Security Agreement which cannot be cured or (iii) the breach by Debtor of any other provision of this IP Security Agreement that remains uncured for a period of thirty (30) days.

**Breach of Other Agreements.** The occurrence and continuance of an Event of Default under the Credit Agreement.

**9.2 Lien Priority.** Administrative Agent shall cease to have a valid and perfected first priority security interest upon any material item of the Collateral subject only to the IP Priority Liens.

**9.3 Material Impairment.** If there is a material impairment of the value of the Collateral.

**9.4 Seizure of Assets.** If all or any material item of Collateral is attached, seized, subjected to a writ or distress warrant, or are levied upon.

## **10. REMEDIES.**

The exercise of remedies hereunder shall be made by Administrative Agent on behalf of itself and for the ratable benefit of the Lenders upon the terms and conditions contained herein. If an Event of Default shall have occurred and be continuing and not been cured or waived in accordance with the terms hereof or the Credit Agreement, Administrative Agent shall have the following rights and powers and may, at Administrative Agent's option, without notice of its election and without demand, to the extent permitted by Section 8.03 of the Credit Agreement, do any one or more of the following (in addition to the rights and remedies permitted under the Credit Agreement), all of which are authorized by Debtor:

**10.1 UCC Rights.** Administrative Agent shall have all of the rights and remedies of a secured party under the UCC and under all other applicable laws.

**10.2 Intentionally Omitted.**

**10.3 Intentionally Omitted.**

**10.4 Protection of Collateral.** Without notice to or demand upon Debtor or any guarantor, make such payments and do such acts as Administrative Agent considers necessary or reasonable to protect its security interest in the Collateral to pay, purchase, contest or compromise any encumbrance, charge or lien which in the opinion of Administrative Agent

appears to be prior or superior to Administrative Agent's security interest and to pay all expenses incurred in connection therewith.

**10.5 Assembly of Collateral.** Administrative Agent may require Debtor to assemble the Collateral and make it available to Administrative Agent at a place designated by Administrative Agent.

**10.6 Possession of Collateral.** Administrative Agent, without a breach of the peace, may enter any of the premises of Debtor and search for, take possession of, remove, keep or store any or all of the Collateral. If Administrative Agent seeks to take possession of any or all of the Collateral by court process, Debtor irrevocably and unconditionally agrees that a receiver may be appointed by a court for such purpose without regard to the adequacy of the security for the Obligations. Administrative Agent shall have the right to remain on Debtor's premises or cause a custodian to remain thereon in exclusive control of such premises without charge for as long as Administrative Agent deems necessary in order to complete the enforcement of its rights under this IP Security Agreement. If Administrative Agent seeks possession of any or all of the Collateral by court process, Debtor irrevocably waives (a) any bond and any surety or security relating thereto required by any statute, court rule or otherwise as an incident or condition to such possession; (b) any demand for possession prior to the commencement of any suit or action to recover possession; and (c) any requirement that Administrative Agent retain possession of and not dispose of such Collateral until after trial or final judgment.

**10.7 License.** Administrative Agent shall have a nonexclusive, royalty free license to use the Copyrights, Patents, Trademarks, and Mask Works to the extent reasonably necessary to permit Administrative Agent to exercise its rights and remedies upon the occurrence of an Event of Default. All of Administrative Agent's rights and remedies with respect to the Intellectual Property Collateral shall be cumulative.

## **11. INDEMNITY.**

Debtor agrees to defend, indemnify and hold harmless Administrative Agent and Lenders and their officers, employees, and Administrative Agents against: (a) all obligations, demands, claims, and liabilities claimed or asserted by any other party related to or in connection with the transactions contemplated by this IP Security Agreement or the Collateral, and (b) all losses or expenses in any way suffered, incurred, or paid by Administrative Agent and Lenders as a result of or in any way arising out of, following or consequential to the transactions between Administrative Agent and Lenders and Debtor under this IP Security Agreement or the Collateral (including without limitation, reasonable attorneys fees and reasonable expenses), except for losses arising from or out of Administrative Agent or Lender's gross negligence or willful misconduct.

## **12. GENERAL.**



**12.1 Taxes and Other Expenses Regarding the Collateral.** If Debtor fails to pay promptly when due to any person or entity, monies which Debtor is required to pay by this IP Security Agreement, Administrative Agent may, but need not, pay the same and charge Debtor's account therefor, and Debtor shall promptly reimburse Administrative Agent therefor. Any payments made by Administrative Agent shall not constitute; (a) an agreement by Administrative Agent to make similar payments in the future, or (b) a waiver by Administrative Agent of any default under this IP Security Agreement. Administrative Agent need not inquire as to, or contest the validity of, any such expense, tax, security interest, encumbrance or lien and the receipt of the usual official notice for the payment thereof shall be conclusive evidence that the same was validly due and owing.

**12.2 Notices.** All notices, demands, or requests from one party to another shall, unless otherwise specified herein, be made in the manner set forth in the Credit Agreement.

**12.3 Intentionally Omitted.**

**12.4 Release of Collateral.** Administrative Agent shall promptly file UCC termination statements and any other documents or instruments as necessary upon any Disposition by Debtor of any items or item of Collateral, to the extent such Disposition is permitted under the Credit Agreement.

**12.5 Termination.** At such time as Debtor shall completely satisfy all of the obligations secured hereunder, Administrative Agent shall execute and deliver to Debtor all instruments as may be necessary or proper to reinvest in Debtor full title to the property assigned hereunder, subject to any disposition thereof which may have been made by Administrative Agent pursuant hereto.

**12.6 Course of Dealing.** No course of dealing, nor any failure to exercise, nor any delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof.

**12.7 Intentionally Omitted.**

**12.8 Amendments.** This IP Security Agreement may be amended only by a written instrument signed by both parties hereto.

**12.9 Agreement Binding, Assignment.** This IP Security Agreement shall be binding and deemed effective when executed by Debtor and Administrative Agent. This IP Security Agreement shall bind and inure to the benefit of the respective successors and assigns of each of the parties; provided, however, that Debtor may not assign this Security Agreement or any rights hereunder without Administrative Agent's prior written consent and any prohibited assignment shall be absolutely void. No consent to an assignment by Administrative Agent shall release

Debtor from its obligations to Administrative Agent. Administrative Agent reserves the right to sell, assign, transfer, negotiate or grant participations in all or any part of, or any interest in, Administrative Agent's rights and benefits hereunder to the extent and in the manner provided for in Section 10.04 of the Credit Agreement. In connection therewith, Administrative Agent may disclose all documents and information that Administrative Agent now has or hereafter may have relating to Debtor or Debtor's business, subject to Debtor's reasonable confidentiality requirements.

**12.10 Article and Section Headings.** Article and section headings and article and section numbers have been set forth herein for convenience only. Unless the contrary is compelled by the context, everything contained in each article and section applies equally to this entire IP Security Agreement.

**12.11 Construction.** Neither this IP Security Agreement nor any uncertainty or ambiguity herein shall be construed or resolved against Administrative Agent or Debtor, whether under any rule of construction or otherwise. On the contrary, this IP Security Agreement has been reviewed by all parties and shall be construed and interpreted according to the ordinary meaning of the words used so as to fairly accomplish the purposes and intentions of all parties hereto.

**12.12 Performance of Covenants.** Debtor shall perform all of its covenants under this IP Security Agreement at its sole cost and expense.

**12.13 Term.** This IP Security Agreement shall continue in full force and effect as long as any of the Obligations are outstanding.

**12.14 Conflict or Credit Agreement Modifications.** To the extent that there is an explicit conflict between the terms of the Credit Agreement and this IP Security Agreement, the terms of the Credit Agreement shall control. Any future changes or modifications to the Credit Agreement, shall apply to and modify this IP Security Agreement, to the extent that such change or modification would reasonably be construed to apply to this IP Security Agreement.

**12.15 Severability.** Each provision of this IP Security Agreement shall be severable from every other provision of this IP Security Agreement for the purpose of determining the legal enforceability of any specific provision.

**12.16 Successors.** This IP Security Agreement shall be binding upon and inure to the benefit of Debtor and the Administrative Agent and their respective permitted successors and assigns.

**12.17 Counterparts.** This IP Security Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute the same instrument.

**13. CHOICE OF LAW AND VENUE.**

The validity of this IP Security Agreement, its construction, interpretation and enforcement, and the rights of the parties hereunder and concerning the Collateral, shall be determined under, governed by and construed in accordance with the laws of the State of California. The parties agree that all actions or proceedings arising in connection with this Security Agreement shall be tried and litigated only in the state courts or federal courts located in the city and county of San Francisco, California.

[SIGNATURE PAGES FOLLOW]


IN WITNESS WHEREOF, the parties hereto have executed this IP Security Agreement on the day and year first above written.

**Address of Debtor:**

1650 Technology Drive  
Suite 700  
San Jose, California 95110

**Debtor:**

**QUANTUM CORPORATION**

By:   
Name: Richard E. Belluzzo  
Title: Chairman and Chief Executive Officer

**Administrative Agent:**

**KEYBANK NATIONAL ASSOCIATION**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

IN WITNESS WHEREOF, the parties hereto have executed this IP Security Agreement on the day and year first above written.

**Address of Debtor:**

1650 Technology Drive  
Suite 700  
San Jose, California 95110

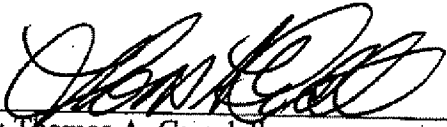
**Debtor:**

QUANTUM CORPORATION

By: \_\_\_\_\_  
Name: Richard E. Belluzzo  
Title: Chairman and Chief Executive Officer

**Administrative Agent:**

KEYBANK NATIONAL ASSOCIATION

By:  \_\_\_\_\_  
Name: Thomas A. Crandell  
Title: Senior Vice President

**EXHIBIT A**  
**COPYRIGHTS**

| <b>REG. NO.</b> | <b>TITLE</b>  | <b>OWNER</b>        |
|-----------------|---|---------------------|
| TX-979-601      | Control Program for 8049 Microprocessor   | Quantum Corporation |
| TX-1-307-338    | Control Program for Intel 8051 control Microprocessor in rotating disk data storage devices | Quantum Corporation |
| TX-2-323-157    | Prodrive control program software   | Quantum Corporation |
| TXu-446-027     | RF71V102  | Quantum Corporation |
| TXu-446-028     | RF71V103  | Quantum Corporation |
| TXu-446-030     | RF71V104  | Quantum Corporation |
| TXu-446-031     | RF71V105  | Quantum Corporation |
| TXu-446-025     | RF30V102  | Quantum Corporation |
| TXu-446-024     | RF30V103  | Quantum Corporation |
| TXu-446-026     | RF30V104  | Quantum Corporation |
| TXu-446-029     | RF30V105  | Quantum Corporation |

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**EXHIBIT B****PATENTS****PATENT APPLICATIONS**

| <b>APPL. NUMBER</b> | <b>APPL. DATE</b> | <b>TITLE</b>   | <b>OWNER</b>                     |
|---------------------|-------------------|--|----------------------------------|
| 09888093            | 06/21/2001        | Optical Recording Article  | Quantum Corporation              |
| 09911740            | 07/25/01          | Method Of Tension Control During Unthread  | Quantum Corporation              |
| 10001735            | 10/23/2001        | Using NAS Appliance To Build A Non-Conventional Distributed Video Server                                   | Quantum Corporation              |
| 10071860            | 02/08/2002        | Method And Apparatus For Attaching More Than Two Disk Devices To An IDE Bus                                | Quantum Corporation              |
| 10072437            | 02/05/2002        | Emulated Backup Tape Drive Using Data Compression  | Quantum Corporation              |
| 10075121            | 02/13/2002        | Use Of The Universal Serial Bus As An Internal Architecture Within IDE Disk Array                          | Quantum Corporation              |
| 10183329            | 06/25/5002        | Method Of Producing Flux Guides In Magnetic Recording Heads  | Quantum Corporation              |
| 10198188            | 07/17/2002        | Multi-Channel Magnetic Tape System Having Optical Tracking Servo   | Quantum Corporation              |
| 10225760            | 08/22/2002        | Tape Cartridge With Multiple Keying Features   | Quantum Corporation              |
| 10259524            | 09/30/02          | A Tape Drive Apparatus With A Head Alignment System  | Quantum Corporation              |
| 10259738            | 09/30/02          | A Motor/Encoder Assembly For Tape Drives   | Ashok B. Nayak; Robert R. Heinze |
| 10289120            | 11/05/2002        | Magnetic Read/Write Head   | Quantum Corporation              |
| 10302786            | 11/22/2002        | Configuring A Storage Medium Using A Logical Cylindrical Recording Format                                  | Quantum Corporation              |
| 10303644            | 11/22/2002        | Error Correction In A Storage Medium Configured Using A Logical Cylindrical Recording Format               | Quantum Corporation              |
| 10349498            | 01/21/2003        | Butterfly Tape Reel  | Quantum Corporation              |
| 10359365            | 02/05/2003        | Method And System For Tracking Magnetic Media With Embedded Optical Servo Tracks                           | Quantum Corporation              |
| 10383856            | 03/07/2003        | Introducing A Noise Signal Into A Read-Back Signal When Data Is Written To A Removable Data Storage Medium | Quantum Corporation              |
| 10387653            | 03/12/2003        | Adapter For A Tape Cartridge Bay   | Quantum Corporation              |
| 10390380            | 03/14/2003        | Extended Error Correction Codes  | Quantum Corporation              |
| 10391115            | 03/17/2003        | Creating A Backup Volume Using A Data Profile Of A Host Volume   | Quantum Corporation              |
| 10412043            | 04/10/2003        | Recovery Of Data On A Primary Data Volume  | Quantum Corporation              |
| 10445279            | 05/23/2003        | Optical Apparatus For Tracking A Magnetic Tape   | Quantum Corporation              |

| APPL. NUMBER | APPL. DATE | TITLE   | OWNER                                   |
|--------------|------------|---|---|
| 10454420     | 06/03/2003 | Correcting Data Using Redundancy Blocks   | Quantum Corporation                     |
| 10481157     | 12/17/2003 | Self-Centering Tape Reel For Single Reel Tape Cartridges  | Quantum Corporation                     |
| 10490807     | 07/06/2004 | Improved Performance Tape Cartridge Leader For Single Reel Tape Cartridges                                | Quantum Corporation                     |
| 10491864     | 04/07/2004 | Tape Cartridge Write Protect Mechanism  | Quantum Corporation                     |
| 10492515     | 07/12/2004 | Magnetic Tape Cartridge Having A Data Storage Medium Connected To An Integral Cleaning Tape Section       | Quantum Corporation                     |
| 10497294     | 05/28/2004 | Tape Media Identification Code  | Quantum Corporation                     |
| 10607483     | 06/27/03   | Magnetic Recording Tape Drive With Tape Guide Assembly Having Dampening Disk (As Amended)                 | Seagate Removable Storage Solutions LLC |
| 10627371     | 07/24/2003 | Single Reel Tape Cartridge Having Guide Surface   | Quantum Corporation                     |
| 10641627     | 08/15/2003 | Extendable Storage Bin Mounting For Automatic Storage Library   | Quantum Corporation                     |
| 10641969     | 08/15/2003 | Automated Storage Library Gripper Apparatus And Method  | Quantum Corporation                     |
| 10642032     | 08/15/2003 | Automated Storage Library Gripper With Finger Position Detector   | Quantum Corporation                     |
| 10642038     | 08/15/2003 | Automated Storage Library Cartridge Gripper With Cartridge Detector                                       | Quantum Corporation                     |
| 10652750     | 08/28/2003 | Correlation Receiver For Demodulating Servo Track Information   | Quantum Corporation                     |
| 10656656     | 09/04/2003 | Tape Cartridge Soft Load System   | Quantum Corporation                     |
| 10673181     | 09/30/03   | Channel Processor Using Reduced Complexity LDPC Decoder   | Certance LLC                            |
| 10675376     | 09/29/2003 | Cartridge Transport Assembly  | Quantum Corporation                     |
| 10676567     | 09/30/2003 | System And Method For Library Robotics Positional Accuracy Using Parallax Viewing                         | Quantum Corporation                     |
| 10676591     | 09/30/2003 | System And Method For Library Inventory   | Quantum Corporation                     |
| 10688027     | 10/17/2003 | Correcting Data Having More Data Blocks With Errors Than Redundancy Blocks                                | Quantum Corporation                     |
| 10697101     | 10/31/03   | A Tape Drive Head Cleaner   | Certance LLC                            |
| 10739287     | 12/19/03   | Tape Drive Apparatus Having An Arrangement For Capturing And Retaining A Leader Pin From A Tape Cartridge | Certance LLC                            |
| 10739325     | 12/19/03   | A Locking Dual Hub Tape Reel For Tape Drives  | Certance LLC                            |
| 10741636     | 12/18/2003 | Multi-Format Thinfilm Head And Associated Methods   | Quantum Corporation                     |
| 10758935     | 01/14/2004 | Auxiliary Memory In A Tape Cartridge  | Quantum Corporation                     |
| 10765184     | 01/28/04   | A Head Actuator Assembly For A Tape Drive   | Certance LLC                            |
| 10782990     | 02/19/2004 | Error Correction Decoder Using Cells With Partial Syndrome Generation                                     | Quantum Corporation                     |
| 10794661     | 03/05/2004 | Multiple Format Magnetic Storage Media Drive  | Quantum Corporation                     |



| APPL. NUMBER | APPL. DATE | TITLE  | OWNER               |
|--------------|------------|--|---------------------|
| 10794697     | 03/04/2004 | Feedback-Controlled Optical Servo Writer   | Quantum Corporation |
| 10820388     | 04/07/2004 | Methods For Controlling The Use Of A Cleaning Cartridge For Tape Drives  | Quantum Corporation |
| 10826639     | 04/15/2004 | Methods And Systems For Overwrite Protected Storage Media  | Quantum Corporation |
| 10829311     | 04/20/2004 | Tape Drive Sensor System   | Quantum Corporation |
| 10834550     | 04/28/2004 | Data Storage And Protection Apparatus And Methods Of Data Storage And Protection   | Quantum Corporation |
| 10849202     | 05/20/04   | Tape Drive With Automatic Adaptation For Different Size Tape Cassettes   | Certance LLC        |
| 10854078     | 05/24/2004 | Servo Track Having Periodic Frames Of Tone Field And Embedded Synchronization Marks  | Quantum Corporation |
| 10856970     | 05/28/2004 | Storage Drive Having Universal Format Across Media Types   | Quantum Corporation |
| 10858911     | 06/01/2004 | Emulation Of Auxiliary Memory  | Quantum Corporation |
| 10861220     | 06/04/2004 | Dual Source Tracking Servo Systems And Associated Methods  | Quantum Corporation |
| 10861750     | 06/04/2004 | Dual Source Tracking Servo Systems And Associated Methods  | Quantum Corporation |
| 10892948     | 07/16/2004 | Methods And Systems For Providing Predictive Maintenance, Preventative Maintenance, And/Or Failure Isolation In A Tape Storage Subsystem | Quantum Corporation |
| 10917782     | 08/13/2004 | Methods Of Manufacturing Magnetic Heads With Reference And Monitoring Devices  | Quantum Corporation |
| 10923347     | 08/20/2004 | Shock Indicator For A Data Storage Tape Device   | Quantum Corporation |
| 10923443     | 08/20/2004 | Bounding Defective Regions Of A Tape Storage Medium  | Quantum Corporation |
| 10927732     | 08/27/2004 | Diffraction Position Sensors And Control Systems   | Quantum Corporation |
| 10928229     | 08/27/2004 | Methods And Systems For Magnetic Recording   | Quantum Corporation |
| 10928837     | 08/26/04   | Method And Apparatus For Reinitializing A Tape Drive After A Power Loss  | Certance LLC        |
| 10929039     | 08/27/2004 | Servo Methods And Systems Using Existing Data Structures And Optical Masks   | Quantum Corporation |
| 10940111     | 09/13/04   | Cartridge Carrier  | Certance LLC        |
| 10942658     | 09/15/2004 | Servo Methods And Systems Using Existing Data Structures And Medium Edge Position  | Quantum Corporation |
| 10942678     | 09/15/2004 | Servo Methods And Systems Using Masked Medium Edge Position Sensors  | Quantum Corporation |
| 10944103     | 09/16/2004 | Magnetic Head With Mini-Outriggers And Method Of Manufacture   | Quantum Corporation |
| 10944559     | 09/16/2004 | Magnetic Head With Adaptive Data Island And Mini-Outrigger And Methods Of Manufacture  | Quantum Corporation |
| 10945717     | 09/20/2004 | System And Method For Testing Media Device Doors   | Quantum Corporation |

| APPL. NUMBER | APPL. DATE | TITLE  | OWNER  |
|--------------|------------|--|--|
| 10959644     | 10/05/2004 | Integrated Reel Locking Device For Media Cartridge And Associated Methods Of Manufacture | Quantum Corporation                                |
| 10964844     | 10/13/04   | Lockable Ejection System And Method  | Certance LLC                                       |
| 10985434     | 11/10/04   | System And Method For Tape Drive Control   | Certance LLC                                       |
| 10985443     | 11/10/04   | System And Method For Controlling The Speed Of A Tape Drive                              | Certance LLC                                       |
| 10985624     | 11/10/04   | System And Method For Tape Drive Under Run Control                                       | Certance LLC                                       |
| 10986256     | 11/10/04   | System And Method For Measuring The Position Of A Tape Drive Head                        | Certance LLC                                       |
| 10986748     | 11/12/2004 | Dynamic Skew Compensation Systems And Associated Methods                                 | Quantum Corporation                                |
| 10987263     | 11/12/2004 | Passive Data Cartridge Pass-Through  | Quantum Corporation                                |
| 11014640     | 12/15/2004 | Media cartridge having reel suspension system and method of manufacture                  | Quantum Corporation                                |
| 11024511     | 12/28/2004 | Focalizer Alignment  | Quantum Corporation                                |
| 11065705     | 02/23/05   | Current Control Loop Bias Calibration By Integration                                     | Certance LLC                                       |
| 11083651     | 03/17/05   | System And Method For Protecting Head Elements Of A Tape Drive                           | Quantum Corporation                                |
| 11085865     | 03/22/2005 | Use of the universal serial bus as an internal architecture within IDE disk array        | Quantum Corporation [sic]                          |
| 11136836     | 05/24/05   | Stationary Guide Assembly For Tape Drives  | Quantum Corporation                                |
| 11137882     | 5/25/05    | Cartridge Carrier  | Quantum Corporation                                |
| 11173780     | 06/30/05   | Measuring And Correcting Asymmetry In Magnetic Recording Devices                         | Quantum Corporation                                |
| 11198011     | 08/04/05   | Data Error Detection During Media Write  | Quantum Corporation                                |
| 11222714     | 09/08/2005 | Removable disk storage array emulating tape library having backup and archive capability | Quantum Corporation                                |
| 11224882     | 09/12/05   | Head Actuator Design For A Low Profile Tape Drive  | Quantum Corporation                                |
| 11243712     | 10/4/05    | A Low Impedance Flexible Circuit For Tape Head   | Quantum Corporation                                |
| 11243938     | 10/04/05   | A Motor/Encoder Assembly For Tape Drives   | Ashok B Nayak; Robert R Heinze;                    |
| 11253257     | 10/17/2005 | Intelligent Storage Of Device State In Response To Error Condition                       | Quantum Corporation                                |
| 11255851     | 10/21/2005 | Data Storage System For Storing Data In Different Types Of Data Storage Media            | Quantum Corporation                                |
| 11271104     | 11/10/2005 | Data Storage System And Process  | Quantum Corporation                                |
| 11316049     | 12/21/05   | Computer Peripheral Device Mounting Arrangement With Two Locking Elements                | Douglas A. Green; Scott L. Hanson; Mark R Thompson |
| 11316609     | 12/21/05   | Method And Apparatus For Interpolating Peak Detection Of Servo Stripe Pulses             | Certance LLC                                       |
| 11346772     | 02/02/2006 | Point-To Point Protocol  | Quantum Corporation                                |
| 11369427     | 03/06/2006 | Magnetic read/write head   | Quantum Corporation                                |

**PATENTS**

| <b>PAT. NUM.</b> | <b>ISSUE DATE</b> | <b>TITLE</b>   | <b>OWNER</b>                            |
|------------------|-------------------|--|---|
| D337760          | 07/27/1993        | Combined Media Cartridge Loader And Associated Magazine  | Quantum Corporation                     |
| D395879          | 07/07/1998        | Tape Drive Bezel   | Quantum Corporation                     |
| D413592          | 09/07/1999        | Tape Cartridge   | Quantum Corporation                     |
| D438870          | 03/13/2001        | Tape Cartridge   | Quantum Corporation                     |
| D439249          | 03/20/2001        | Storage Device   | Quantum Corporation                     |
| D448033          | 09/18/2001        | Memory Storage Assembly Panel  | Quantum Corporation                     |
| D465786          | 11/19/2002        | Magnetic Tape Cartridge  | Quantum Corporation                     |
| D486498          | 02/10/2004        | Tape Cartridge   | Quantum Corporation                     |
| D491564          | 06/15/2004        | Tape Cartridge   | Quantum Corporation                     |
| D496368          | 09/21/2004        | Two-Tone Magnetic Tape Cartridge   | Quantum Corporation                     |
| D523338          | 06/20/2006        | Shipping Tray For Multiple Cartridges  | Quantum Corporation                     |
| RE33949          | 06/02/1992        | Vertical Magnetic Recording Arrangement  | Quantum Corporation                     |
| RE33224          | 5/29/90           | Cartridge Tape Drive With Friction Roller To Open Cartridge Door   | Seagate Removable Storage Solutions LLC |
| RE33661          | 8/13/91           | Head Positioning Assembly  | Seagate Removable Storage Solutions LLC |
| 4772974          | 09/20/1988        | Compact Head And Disk Assembly   | Quantum Corporation                     |
| 4788465          | 11/29/1988        | Armature For Dc Motor  | Quantum Corporation                     |
| 4809110          | 02/28/1989        | Narrow Contour Head Assembly   | Quantum Corporation                     |
| 4816932          | 3/28/89           | Circuit For Providing A Symmetric Current To The Head Of A Magnetic Recording Device   | Archive Corporation                     |
| 4819107          | 4/4/89            | Magnetic Transducer Head Structure   | Archive Corporation                     |
| 4833418          | 5/23/89           | Compensation Circuit For Nullifying Differential Offset Voltage And Regulating Common Mode Voltage Of Differential Signals           | Archive Corporation                     |
| 4837643          | 6/6/89            | Circuit For Controlling Frequency And Phase Of Voltage Controlled Oscillator In A Data Smoother For A Streaming Cartridge Tape Drive | Archive Corporation                     |
| 4849841          | 4/18/89           | Transducer Head Core Structure With Recessed Magnetic Closures   | Archive Corporation                     |
| 4852825          | 8/1/89            | Extraction And Insertion Mechanism For A Leader Block Of A Tape Cartridge  | Archive Corporation                     |
| 4858039          | 8/15/89           | Streaming Tape Drive With Direct Block Addressability  | Archive Corporation                     |
| 4864198          | 09/05/1989        | Method Of And Apparatus For Driving Three-Phase D.C. Brushless Motor   | Quantum Corporation                     |
| 4872079          | 10/3/89           | Thin Film Magnetic Head With A Leveler Layer   | Seagate Removable Storage Solutions LLC |
| 4874975          | 10/17/1989        | Brushless Dc Motor   | Quantum Corporation                     |

| PAT. NUM. | ISSUE DATE | TITLE   | OWNER                                   |
|-----------|------------|---|---|
| 4899434   | 2/13/90    | Method Of Making A Thin Film Magnetic Head With A Leveler Layer And Superstrate   | Seagate Removable Storage Solutions LLC |
| 4908826   | 03/13/1990 | Stored Data Error Correction System   | Quantum Corporation                     |
| 4918548   | 04/17/1990 | Cartridge Loader  | Quantum Corporation                     |
| 4933636   | 6/12/90    | Self-Aligning Tachometer And Method Of Manufacturing Same   | Archive Corporation                     |
| 4949914   | 8/21/90    | Tape Transport With Rigid Arm Threader Mechanism For Leader Block Tape Cartridge  | Archive Corporation                     |
| 4954921   | 9/4/90     | Magnetic Transducer Head Structure  | Irwin Magnetic Systems, Inc.            |
| 4963810   | 10/16/90   | Variable Load Motor Drive Control   | Archive Corporation                     |
| 4967300   | 10/30/90   | Magnetic Head Assembly Having A Transverse Guiding Surface Formed Of A Mixture Of Aluminum Oxide And Titanium Carbide           | Seagate Removable Storage Solutions LLC |
| 4972336   | 11/20/90   | Read While Write Magnetic Head Assembly   | Seagate Removable Storage Solutions LLC |
| 4978955   | 12/18/90   | Data Randomizing/De-Randomizing Circuit For Randomizing And De-Randomizing Data   | Archive Corporation                     |
| 5001580   | 3/19/91    | Method To Compensate For Tape Slope And Head Azimuth Errors   | Archive Corporation                     |
| 5001584   | 3/19/91    | Head-Positioner Arm For Data Recorders  | Archive Corporation                     |
| 5003408   | 3/26/91    | Method And Apparatus For Removing Data Stream Variations  | Archive Corporation                     |
| 5006819   | 4/9/91     | Track And Hold Phase Locked Loop Circuit  | Archive Corporation                     |
| 5025334   | 6/18/91    | Auto-Loading Transport For Tape Cartridge With Tape Access Door And Belt Capstan Roller   | Archive Corporation                     |
| 5031061   | 07/09/1991 | Disk Drive Hub Assembly   | Quantum Corporation                     |
| 5050020   | 9/17/91    | Cartridge Loader For Loading Each Of A Plurality Of Cartridges Into A Cartridge Insertion Slot                                  | Archive Corporation                     |
| 5050025   | 9/17/91    | Lead Screw And Follower-Type Head Positioner For Data Recorders   | Archive Corporation                     |
| 5055951   | 10/8/91    | Method And Apparatus For Servo-Positioning Movable Transducer Heads   | Archive Corporation                     |
| 5055959   | 10/15/1991 | Tape Head With Low Spacing Loss Produced By Narrow And Wide Wear Regions  | Quantum Corporation                     |
| 5062023   | 10/29/1991 | Disk File Servo Loop With Improved Track Settling   | Quantum Corporation                     |
| 5079831   | 1/14/92    | Method Of Making A Dual Stripe Magnetic Head  | Seagate Removable Storage Solutions LLC |
| 5081547   | 1/14/92    | Apparatus And Method For Automatic Adjustment Of Read Amplitude Threshold In A Digital Tape Drive                               | Archive Corporation                     |
| 5084791   | 01/28/1992 | Head Position Control System For Fixed Drive Including Position Encoder, Temperature Sensor And Embedded Fine Servo Information | Quantum Corporation                     |
| 5088172   | 02/18/1992 | Non-Slip Tachometer Roller  | Quantum Corporation                     |
| 5095471   | 03/10/1992 | Velocity Estimator In A Disk Drive Positioning System   | Quantum Corporation                     |

| PAT. NUM. | ISSUE DATE | TITLE   | OWNER               |
|-----------|------------|---|---------------------|
| 5099367   | 03/24/1992 | Method Of Automatic Gain Control Basis Selection And Method Of Half-Track Servicing   | Quantum Corporation |
| 5101311   | 3/31/92    | Tape And Mechanism Protection Methods For DAT Drives  | Archive Corporation |
| 5105322   | 04/14/1992 | Transverse Positioner For Read/Write Head   | Quantum Corporation |
| 5109307   | 04/28/1992 | Continuous-Plus-Embedded Servo Data Position Control System For Magnetic Disk Device  | Quantum Corporation |
| 5109308   | 4/28/92    | Stationary Head Tape Drive With A Movable Door Opening Mechanism  | Archive Corporation |
| 5112142   | 05/12/1992 | Hydrodynamic Bearing  | Quantum Corporation |
| 5112662   | 05/12/1992 | Method For Providing A Lubricant Coating On The Surface Of A Magneto- Optical Disk And Resulting Optical Disk                                   | Quantum Corporation |
| 5115359   | 05/19/1992 | Fault Tolerant Frame, Guardband And Index Detection Methods   | Quantum Corporation |
| 5119254   | 06/02/1992 | Data Transducer Position Control System For Rotating Disk Data Storage Equipment  | Quantum Corporation |
| 5120603   | 06/09/1992 | Magneto-Optic Recording Medium With Oriented Langmuir-Blodgett Protective Layer   | Quantum Corporation |
| 5122916   | 6/16/92    | Electromagnetic Head Having Interference Compensation Circuitry   | Archive Corporation |
| 5124269   | 06/23/1992 | Method Of Producing A Semiconductor Device Using A Wire Mask Having A Specified Diameter  | Quantum Corporation |
| 5136592   | 08/04/1992 | Error Detection And Correction System For Long Burst Errors   | Quantum Corporation |
| 5148338   | 09/15/1992 | Disk Drive  | Quantum Corporation |
| 5157564   | 10/20/92   | Storage Module Changer For A Computer Data Storage Drive  | Archive Corporation |
| 5157570   | 10/20/1992 | Magnetic Pole Configuration For High Density Thin Film Recording Head   | Quantum Corporation |
| 5160865   | 11/03/1992 | Disk Assembly With Thermally Isolated In-Hub Spindle Motor  | Quantum Corporation |
| 5162955   | 11/10/1992 | Apparatus For Writing Servo Information Onto A Magnetic Disk  | Quantum Corporation |
| 5163136   | 11/10/92   | System For Assembling Playback Data Frames Using Indexed Frame Buffer Group According To Logical Frame Numbers In Valid Subcode Or Frame Header | Archive Corporation |
| 5172280   | 12/15/92   | Apparatus And Method For Automatic Write Current Calibration In A Streaming Tape Drive  | Archive Corporation |
| 5173828   | 12/22/1992 | Compact Multiple Roller Tape Guide Assembly   | Quantum Corporation |
| 5182687   | 1/26/93    | Method And Apparatus For Aligning Cartridges With A Cartridge Insertion Slot  | Archive Corporation |
| 5187619   | 02/16/1993 | High Speed Switched Automatic Gain Control  | Quantum Corporation |

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| 5191492   | 3/2/93     | Mechanisms For A Closed Loop Head Positioner For Streaming Tape Drives                                       | Seagate Removable Storage Solutions LLC  |
| 5198947   | 3/30/93    | Apparatus For Adjusting A Tape Head For A Magnetic Tape  | Archive Corporation  |
| 5199033   | 03/30/1993 | Solid State Memory Array Using Address Block Bit Substitution To Compensate For Non-Functional Storage Cells | Quantum Corporation  |
| 5199168   | 04/06/1993 | Non-Slip Tachometer Roller   | Quantum Corporation  |
| 5210829   | 05/11/1993 | Adjustable Threshold For Buffer Management   | Quantum Corporation  |
| 5214553   | 05/25/1993 | Magnetic Contact Recording Head For Operation With Tapes Of Varying Thicknesses                              | Quantum Corporation  |
| 5216556   | 06/01/1993 | Method For Optimized Tape Tension Adjustment For A Tape Drive  | Quantum Corporation  |
| 5218501   | 6/8/93     | Device For Aligning Magnetic Tape To A Read-Write Head   | Seagate Removable Storage Solutions LLC  |
| 5227935   | 07/13/1993 | Tape Drive Having A Selectively Retractable Drive Hub  | Quantum Corporation  |
| 5231552   | 07/27/1993 | Magazine And Receiver For Media Cartridge Loader   | Quantum Corporation  |
| 5237469   | 8/17/93    | Stationary Head Tape Drive With A Movable Door Opening Mechanism   | Seagate Removable Storage Solutions LLC  |
| 5247398   | 09/21/1993 | Automatic Correction Of Position Demodulator Offsets   | Quantum Corporation  |
| 5253126   | 10/12/93   | Method For Self-Cleaning DAT Drive Tape Heads  | Seagate Removable Storage Solutions LLC and Ardat, Inc.                              |
| 5255130   | 10/19/93   | Adjustable Write Equalization For Tape Drives  | Seagate Removable Storage Solutions LLC  |
| 5257091   | 10/26/93   | Optical Alignment System For Aligning A Multiple Gap Tape Head Assembly                                      | Seagate Removable Storage Solutions LLC  |
| 5263030   | 11/16/1993 | Method And Apparatus For Encoding Data For Storage On Magnetic Tape  | Quantum Corporation  |
| 5264974   | 11/23/93   | Cassette Loading System  | Seagate Removable Storage Solutions LLC and Matsushita Electric Industrial Co., Ltd. |
| 5267096   | 11/30/93   | Adjustable Write Equalization For Tape Drives  | Seagate Removable Storage Solutions LLC  |
| 5285333   | 2/8/94     | Mass Storage And Retrieval System For Magnetic Tape Cartridges   | Seagate Removable Storage Solutions LLC  |
| 5289328   | 02/22/1994 | Method And Apparatus For Variable Density Read-After-Writing On Magnetic Tape                                | Quantum Corporation  |
| 5307217   | 04/26/1994 | Magnetic Head For Very High Track Density Magnetic Recording   | Quantum Corporation  |
| 5308558   | 05/03/1994 | Process For Foaming Thermoplastic Polycarbonates   | Quantum Corporation  |
| 5311390   | 5/10/94    | Apparatus For Adjusting A Tape Head For A Magnetic Tape  | Seagate Removable Storage Solutions LLC  |
| 5327059   | 7/5/94     | Tape Drive Capstan Motor Servo System With Static Friction Compensation                                      | Seagate Removable Storage Solutions LLC  |

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| 5327305   | 7/5/94     | Tape Format Detection System   | Seagate Removable Storage Solutions LLC |
| 5343426   | 08/30/1994 | Data Formatter/Converter For Use With Solid-State Disk Memory Using Storage Devices With Defects   | Quantum Corporation                     |
| 5353179   | 10/04/1994 | Auto-Loading Of Tape Cartridges  | Quantum Corporation                     |
| 5359610   | 10/25/1994 | Error Detection Encoding System  | Quantum Corporation                     |
| 5371636   | 12/6/94    | Mechanisms For A Closed Loop Head Positioner For Streaming Tape Drives   | Seagate Removable Storage Solutions LLC |
| 5371638   | 12/06/1994 | Servo Method And Apparatus For Very High Track Density Magnetic Recording By Adjusting Head Position Based On Servo Information Read From Adjacent Track | Quantum Corporation                     |
| 5375224   | 12/20/94   | Raw Data Reader  | Seagate Removable Storage Solutions LLC |
| 5381292   | 1/10/95    | Method For Self-Cleaning DAT Drive Tape Heads  | Seagate Removable Storage Solutions LLC |
| 5386545   | 1/31/95    | Target Management Method For Data Backup To A Shared Transfer Station, Multiple Media Element Device   | Seagate Removable Storage Solutions LLC |
| 5392288   | 02/21/1995 | Addressing Technique For A Fault Tolerant Block-Structured Storage Device  | Quantum Corporation                     |
| 5392302   | 02/21/1995 | Address Error Detection Technique For Increasing The Reliability Of A Storage Subsystem  | Quantum Corporation                     |
| 5396376   | 3/7/95     | Multi-Track Embedded Servo Recording Format And Method   | Seagate Removable Storage Solutions LLC |
| 5402273   | 3/28/95    | Circuit For Determining Window Margin For Data Transitions In A Streaming Data Device  | Seagate Removable Storage Solutions LLC |
| 5402285   | 3/28/95    | Five And One-Quarter Inch Form Factor Combination DAT Tape Drive And Cassette Magazine Loader  | Seagate Removable Storage Solutions LLC |
| 5414585   | 05/09/1995 | Rotating Tape Edge Guide   | Quantum Corporation                     |
| 5426551   | 06/20/1995 | Magnetic Tape Head   | Quantum Corporation                     |
| 5448438   | 09/05/1995 | Head Actuator Having Spring Loaded Split Nut   | Quantum Corporation                     |
| 5454098   | 9/26/95    | Method Of Emulating Access To A Sequential Access Data Storage Device While Actually Using A Random Access Storage Device                                | Seagate Removable Storage Solutions LLC |
| 5455729   | 10/3/95    | Multi-Channel Rotating Transformer   | Seagate Removable Storage Solutions LLC |
| 5459742   | 10/17/1995 | Solid State Disk Memory Using Storage Devices With Defects   | Quantum Corporation                     |
| 5474253   | 12/12/1995 | Weged Reels In Streaming Tape Drives And Tape Cartridges   | Quantum Corporation                     |
| 5475553   | 12/12/1995 | Tape Head With Self-Regulating Wear Regions  | Quantum Corporation                     |
| 5485606   | 1/16/96    | System And Method For Storing And Retrieving Files For Archival Purposes   | Seagate Removable Storage Solutions LLC |

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| 5491595   | 2/13/96    | Magnetic Head Guidance And Calibration System And Method Description                                  | Seagate Removable Storage Solutions LLC |
| 5513326   | 4/30/96    | System For Optimizing Data Transfer   | Quantum Corporation                     |
| 5515213   | 05/07/1996 | Tape Drive Machine For Selectively Reading A Plurality Of Recording Tape Cartridges                   | Quantum Corporation                     |
| 5523539   | 6/4/96     | Processor For Manufacturing Recording Heads For Magnetic Storage Devices                              | Seagate Removable Storage Solutions LLC |
| 5523904   | 06/04/1996 | Linear Tape Write Servo Using Embedded Azimuth Servo Blocks   | Quantum Corporation                     |
| 5532886   | 7/2/96     | Data Stream Smoothing Method And Circuit For A Tape Drive   | Seagate Removable Storage Solutions LLC |
| 5535399   | 07/09/1996 | Solid State Disk Drive Unit Having On-Board Backup Non-Volatile Memory                                | Quantum Corporation                     |
| 5581458   | 12/3/96    | Buffered Intelligent Digital Tape Controller With Onboard ECC And Featuring Global Control Variables  | Seagate Removable Storage Solutions LLC |
| 5585978   | 12/17/96   | Arcuate Scan Tape Drive   | Seagate Removable Storage Solutions LLC |
| 5589746   | 12/31/96   | Brushless Motor Speed Control Arrangement Having Derived Common Mode Supply Signal Component          | Seagate Removable Storage Solutions LLC |
| 5592342   | 01/07/1997 | Method For Packing Variable Size User Data Records Into Fixed Size Blocks On A Storage Medium         | Quantum Corporation                     |
| 5602703   | 2/11/97    | Recording Head For Recording Track-Centering Servo Signals On A Multi-Track Recording Medium          | Seagate Removable Storage Solutions LLC |
| 5608584   | 03/04/1997 | Recognition Of Tape Recording Media Type Using Plural In-Line Holes                                   | Quantum Corporation                     |
| 5617269   | 4/1/97     | System For Recording Track-Centering Servo Signals On Multi-Track Magnetic Medium                     | Seagate Removable Storage Solutions LLC |
| 5642461   | 6/24/97    | Economical Wide Range Speed Control System  | Seagate Removable Storage Solutions LLC |
| 5652682   | 07/29/1997 | Apparatus For Loading And Unloading Cartridges  | Quantum Corporation                     |
| 5660345   | 8/26/97    | Tape Drive With Movable Cartridge Door Opening Mechanism  | Seagate Removable Storage Solutions LLC |
| 5671389   | 09/23/1997 | Adaptive Compression Caching For Tape Recording   | Quantum Corporation                     |
| 5675447   | 10/7/97    | Method And Arrangement For Initiating Search For Start Of Data In Arcuately Recorded Data Tracks      | Seagate Removable Storage Solutions LLC |
| 5680278   | 10/21/1997 | Apparatus For Combining Linear And Rotational Motion Of An Azimuth Read/Write Head                    | Quantum Corporation                     |
| 5690293   | 11/25/97   | Belt Drive Mechanism For A Tape Drive   | Seagate Removable Storage Solutions LLC |
| 5729890   | 3/24/98    | Method Of Making An Arcuate Scan Tape Drive   | Seagate Removable Storage Solutions LLC |
| 5748396   | 5/5/98     | Arrangement And Method For Optimizing The Recorded Signal To Noise Ratio In Contact Recording Systems | Seagate Removable Storage Solutions LLC |



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| 5754372   | 05/19/1998 | Actuator Bearing Cartridge For Top Down Assembly   | Quantum Corporation                     |
| 5760995   | 06/02/1998 | Multi-Drive, Multi-Magazine Mass Storage And Retrieval Unit For Tape Cartridges                            | Quantum Corporation                     |
| 5769346   | 06/23/1998 | Tape Buckling Mechanism For Single Reel Cartridge Tape Recording   | Quantum Corporation                     |
| 5774306   | 6/30/98    | Multi-Channel, High Speed, Tape Head Contour   | Seagate Removable Storage Solutions LLC |
| 5790337   | 8/4/98     | Tape Cartridge Qualified By Location, And Identified By Geometry, Of Type Aperture                         | Quantum Corporation                     |
| 5793552   | 8/11/98    | Method And Apparatus For High Speed Searching In Arcuate Scan Tape Drives                                  | Seagate Removable Storage Solutions LLC |
| 5793574   | 08/11/1998 | Tape Head Actuator Assembly Having A Shock Suppression Sleeve  | Quantum Corporation                     |
| 5796537   | 8/18/98    | Method And Arrangement For Servoing And Formatting Magnetic Recording Tape                                 | Seagate Removable Storage Solutions LLC |
| 5803388   | 09/08/1998 | Tape Reel With Flange Sections For Uniform Tape Stacking   | Quantum Corporation                     |
| 5815337   | 9/29/98    | Tape Drive Having An Arcuate Scanner And A Method For Calibrating The Arcuate Scanner                      | Seagate Removable Storage Solutions LLC |
| 5833161   | 11/10/98   | Low Profile Mechanism For Biased Driving Of Driven Roller In Tape Cartridge                                | Seagate Removable Storage Solutions LLC |
| 5841600   | 11/24/1998 | Randomly Ordered Data Block Envelope Tape Format   | Quantum Corporation                     |
| 5847892   | 12/8/98    | Servoing And Formatting Magnetic Recording Tape In An Arcuate Scanner System                               | Seagate Removable Storage Solutions LLC |
| 5854877   | 12/29/98   | Economical Wide Range Speed Control System   | Seagate Removable Storage Solutions LLC |
| 5857634   | 01/12/1999 | Take-Up Reel Lock  | Quantum Corporation                     |
| 5862014   | 01/19/1999 | Multi-Channel Magnetic Tape Head Module Including Flex Circuit   | Quantum Corporation                     |
| 5867339   | 02/02/1999 | Two Channel Azimuth And Two Channel Non-Azimuth Read-After-Write Longitudinal Magnetic Head                | Quantum Corporation                     |
| 5868333   | 2/9/99     | Tape Media Cartridge System And Components Thereof And Methods Of Making And Using The Same                | Seagate Removable Storage Solutions LLC |
| 5883864   | 03/16/1999 | Media Library Having Locally Vectored Driver Addressing  | Quantum Corporation                     |
| 5890669   | 4/6/99     | Tape Drive With Movable Centering Guide And Door Opening Arrangement                                       | Seagate Removable Storage Solutions LLC |
| 5892631   | 4/6/99     | Method And An Arrangement For Detecting State Transitions In A Read Signal During A Bit Cell Timing Window | Seagate Removable Storage Solutions LLC |
| 5894425   | 04/13/1999 | Wireless Secondary Interface For Data Storage Device   | Quantum Corporation                     |
| 5901008   | 5/4/99     | Voice Coil Driven Positioner For Coarse And Fine Positioning Of Magnetic Head In Multi-Track Tape Drive    | Seagate Removable Storage Solutions LLC |

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| 5925119   | 7/20/99    | Computer Architecture For Automated Storage Library  | Quantum Corporation   |
| 5936795   | 8/10/99    | Magazine Cassette Locking Device   | Seagate Removable Storage Solutions LLC   |
| 5940238   | 8/17/99    | Mechanism To Reduce Adjacent Track Interference In A Magnetic Tape Data Storage System   | Seagate Removable Storage Solutions LLC   |
| 5940253   | 08/27/1999 | Laminated Plated Pole Pieces For Thin Film Magnetic Transducers  | Quantum Corporation   |
| 5949604   | 09/07/1999 | Method Of Writing And Reading Servo On Tracks Having A Longitudinal Gap  | Quantum Corporation   |
| 5969894   | 10/19/99   | Method For Detecting Data Encoded As State Transitions In A Read Signal  | Seagate Removable Storage Solutions LLC   |
| 5971310   | 10/26/1999 | Positive Engagement Buckle For A Tape Drive And Cartridge  | Quantum Corporation   |
| 5973872   | 10/26/1999 | Method And Apparatus For A Low Cost Multi-Channel Tape Recording Head  | Quantum Corporation   |
| 5973874   | 10/26/99   | Four Channel Azimuth And Two Channel Non-Azimuth Read-After-Write Longitudinal Magnetic Head   | Quantum Corporation   |
| 5973891   | 10/26/1999 | Data Transducer And Method For Writing Data Utilizing The Bottom Pole As The Trailing Edge Of A Thin-Film Magnetic A Tape Write Head | Quantum Corporation   |
| 5978172   | 11/2/99    | Voice Coil Driven Positioner For Coarse And Fine Positioning Of Magnetic Head In Multi-Track Tape Drive                              | Seagate Removable Storage Solutions LLC   |
| 5986846   | 11/16/99   | Methods And Apparatus For Track Centering An Arcuate Scanner Head Assembly   | Seagate Removable Storage Solutions LLC   |
| 5986856   | 11/16/99   | Magneto-resistive Sensor With Improved Stability   | Seagate Removable Storage Solutions LLC   |
| 6003802   | 12/21/99   | Tape Leader Pin Assembly And Method For Making The Same  | Seagate Removable Storage Solutions LLC, Hewlett-Packard Company, and IBM Corporation |
| 6018434   | 01/25/2000 | Tape Cartridge Having Written-In-Defect Servo Patterns For Rapid Head Position Calibration   | Quantum Corporation   |
| 6031681   | 2/29/00    | Method And Arrangement For Servoing And Formatting Magnetic Recording Tape   | Seagate Removable Storage Solutions LLC   |
| 6034839   | 3/7/00     | Mechanism And Method For Loading A Tape From A Cartridge To A Take-Up Reel   | Seagate Removable Storage Solutions LLC   |
| 6034850   | 03/07/2000 | Two-Part Tape Cartridge Reel Locking Mechanism   | Quantum Corporation   |
| 6038099   | 3/14/00    | Multiple Cartridge Tape Auto Loader Utilizing A Drive Plate For Positioning Of Drive Mechanism                                       | Seagate Removable Storage Solutions LLC   |
| 6040964   | 3/21/00    | Method And Apparatus For Multiple Channel Head Assembly  | Quantum Corporation   |
| 6043953   | 3/28/00    | Gear Train Capstan Drive Assembly For A Tape Drive   | Seagate Removable Storage Solutions LLC   |

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| 6059212   | 5/9/00     | Tape Moving Mechanism Using A Direct Drive Motor   | Seagate Removable Storage Solutions LLC |
| 6061199   | 5/9/00     | Method And Arrangement For Servoing And Formatting Magnetic Recording Tape   | Seagate Removable Storage Solutions LLC |
| 6062500   | 05/16/2000 | High Speed Reel  | Quantum Corporation                     |
| 6067481   | 05/23/2000 | Virtual Magnetic Tape Drive Library System   | Quantum Corporation                     |
| 6072653   | 6/6/00     | Methods And Apparatus For Calibration Of A Rotating Scanner To A Track Recorded On A Tape  | Seagate Removable Storage Solutions LLC |
| 6075678   | 06/13/2000 | Pivoting Lever Cam Guide Tape Head Positioner  | Quantum Corporation                     |
| 6079651   | 6/27/00    | Tape Coupling Arrangement For Single Reel Cartridge  | Seagate Removable Storage Solutions LLC |
| 6082652   | 7/4/00     | Independent Double Hub Take-Up Reel Arrangement For Use With A Single Reel Cartridge Tape Drive  | Seagate Removable Storage Solutions LLC |
| 6088183   | 7/11/00    | Arcuate Scan Read/Write Assembly   | Seagate Removable Storage Solutions LLC |
| 6092754   | 07/25/2000 | Buckler For A Tape Drive   | Quantum Corporation                     |
| 6095445   | 08/01/2000 | Cartridge Buckler For A Tape Drive   | Quantum Corporation                     |
| 6095446   | 8/1/00     | Tape Drive With Movable Centering Guide And Door Opening Arrangement   | Seagate Removable Storage Solutions LLC |
| 6097566   | 8/1/00     | A Multi-Drive, Multi-Magazine Mass Storage And Retrieval Unit For Tape Cartridges  | Quantum Corporation                     |
| 6101061   | 8/8/00     | Methods And Apparatus For Calibration Of A Rotating Scanner To A Plurality Of Data Track Groups Recorded On A Tape   | Seagate Removable Storage Solutions LLC |
| 6103365   | 08/15/2000 | Magnetic Tape  | Quantum Corporation                     |
| 6108159   | 08/22/2000 | Data Track Edge Follower Servo Method And Apparatus  | Quantum Corporation                     |
| 6113020   | 9/5/00     | Reel Lock And Coupling Engagement Mechanisms For A Cartridge   | Seagate Removable Storage Solutions LLC |
| 6115218   | 9/5/00     | Tape Support System For Arcuate Scan Rotating Head   | Seagate Removable Storage Solutions LLC |
| 6128717   | 10/03/2000 | Method And Apparatus For Storage Application Programming Interface For Digital Mass Storage And Retrieval Based Upon Data Object Type Or Size And Characteristics Of The Data Storage Device | Quantum Corporation                     |
| 6130792   | 10/10/00   | Flat Servo Bursts For Arcuate Track Scanner  | Seagate Removable Storage Solutions LLC |
| 6130804   | 10/10/00   | Four Channel Azimuth And Two Channel Non-Azimuth Read-After-Write Longitudinal Magnetic Head   | Quantum Corporation                     |
| 6141174   | 10/31/2000 | Method Of Reading Of Recording Information From A Magnetic Tape That Compensates For Track Pitch Changes   | Quantum Corporation                     |
| 6141184   | 10/31/2000 | Tape Drive Data Storage Device Having Perpendicularly Adjusted Tape Guides   | Quantum Corporation                     |

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| 6148430   | 11/14/2000 | Encoding Apparatus For Raid-6 System And Tape Drives  | Quantum Corporation                     |
| 6157516   | 12/05/2000 | Method And Apparatus For Preventing Electrostatic Damage To The EAD/Write Head Of A Tape Drive              | Quantum Corporation                     |
| 6175470   | 01/16/2001 | Storage Medium Cartridge Having An Integral Key   | Quantum Corporation                     |
| 6184806   | 02/06/2001 | Rate 321/33 (D=0, K=6) Run Length Limited Modulation Code Having Optimized Error Propagation                | Quantum Corporation                     |
| 6186430   | 02/13/2001 | Tape Drive Connection Sensing Assembly  | Quantum Corporation                     |
| 6188532   | 02/13/2001 | Backward Compatible Head And Head Positioning Assembly For A Linear Digital Tape Drive                      | Quantum Corporation                     |
| 6236340   | 05/22/2001 | Modulation Encoders And Decoders  | Quantum Corporation                     |
| 6241171   | 06/05/2001 | Leaderless Tape Drive   | Quantum Corporation                     |
| 6246535   | 06/12/2001 | Optical Apparatus For Tracking A Magnetic Tape  | Quantum Corporation                     |
| 6257514   | 07/10/2001 | Guiding Assembly For Protecting A Magnetic Tape Head  | Quantum Corporation                     |
| 6267313   | 07/31/2001 | Wide Tape Cartridge   | Quantum Corporation                     |
| 6267325   | 07/31/2001 | Tape Support  | Quantum Corporation                     |
| 6270030   | 08/07/2001 | System For Controlling Compatibility Of Tape Cartridges Having The Same Form Factor                         | Quantum Corporation                     |
| 6271991   | 08/07/2001 | Tape Cartridge  | Quantum Corporation                     |
| 6281675   | 8/28/01    | Self Calibrating Embedded Stripe Based Timing Tracking Servo System For Helical Recorders                   | Seagate Removable Storage Solutions LLC |
| 6288870   | 09/11/2001 | Self-Aligned Metal Film Core Multi-Channel Recording Head For Tape Drives                                   | Quantum Corporation                     |
| 6292325   | 9/18/01    | Offset Gear Segment Arm Employed To Accommodate The Meshing Alignment In A Tape Cartridge-Loading Mechanism | Seagate Removable Storage Solutions LLC |
| 6297949   | 10/2/01    | Recessed Bezel Apparatus  | Seagate Removable Storage Solutions LLC |
| 6304439   | 10/16/2001 | Disk Drive Sled Insertion And Removal System  | Quantum Corporation                     |
| 6305628   | 10/23/01   | Controlled Tape Stopping With Feed Forward During Power Loss  | Seagate Removable Storage Solutions LLC |
| 6307718   | 10/23/01   | Tape Drive Head Positioning Device For Adjusting Head Tilt And Azimuth                                      | Quantum Corporation                     |
| 6311915   | 11/06/2001 | Buckler For A Tape Drive  | Quantum Corporation                     |
| 6317283   | 11/13/01   | Methods And Apparatus For Calibration Of A Rotating Scanner To A Track Recorded On A Tape                   | Seagate Removable Storage Solutions LLC |
| 6319595   | 11/20/2001 | Magnetic Tape   | Quantum Corporation                     |
| 6320727   | 11/20/2001 | Roller Guide System For Delivery Of Tape Media Along A Tape Path  | Quantum Corporation                     |
| 6331920   | 12/18/01   | Backward Compatible Head And Head Positioning Assembly For A Linear Tape Drive                              | Quantum Corporation                     |
| 6344944   | 2/5/02     | Mini-Cartridge Adapter For Adapting A Mini-Cartridge To An Industry Standard Tape Cartridge Format          | Quantum Corporation                     |

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| 6349020   | 2/19/02    | Head Tilting Mechanism For Tape Drives   | Quantum Corporation  |
| 6349891   | 02/26/2002 | Tape Drive Ejection Assembly   | Quantum Corporation  |
| 6359748   | 3/19/02    | Electronically Damped Flexure Based Actuator System  | Seagate Removable Storage Solutions LLC                        |
| 6360979   | 03/26/2002 | Takeup Leader For Single Reel Tape Drives With Increased Flexibility For Improved Performance                                  | Quantum Corporation  |
| 6369982   | 04/09/2002 | Floating Tape Head Having Side Wings For Longitudinal And Azimuth Play Back With Minimized Tape Wrap Angle                     | Quantum Corporation  |
| 6375063   | 04/23/2002 | Multi-Step Stud Design And Method For Producing Closely Packed Interconnects In Magnetic Recording Heads                       | Quantum Corporation  |
| 6375108   | 04/23/2002 | Multi-Layered Drive Leader For A Tape Drive  | Quantum Corporation  |
| 6380873   | 04/30/2002 | Method For Reducing Radio Frequency Emissions On High-Speed Serial Buses   | Quantum Corporation, Intel Corporation, and Maxtor Corporation |
| 6386470   | 05/14/2002 | Takeup Reel For Single Reel Tape Drives  | Quantum Corporation  |
| 6392836   | 5/21/02    | Tape Cartridge-Loading Mechanism   | Seagate Removable Storage Solutions LLC                        |
| 6392837   | 5/21/02    | Technique For Opening Door Of A Tape Cartridge To Access The Tape Leader Pin   | Seagate Removable Storage Solutions LLC                        |
| 6398143   | 06/04/2002 | Drive Leader And Take-Up Reel For A Tape Drive   | Quantum Corporation  |
| 6404598   | 6/11/02    | Flexible Circuit Routing Configuration For A Fine/Coarse Positioner For A Tape Drive   | Seagate Removable Storage Solutions LLC                        |
| 6424481   | 7/23/02    | Five And One-Quarter Inch Form Factor Combination DAT Tape Drive And Cassette Magazine Loader                                  | Seagate Removable Storage Solutions LLC                        |
| 6424496   | 07/23/2002 | Flat Tape Head With Cantilevered Tape Supports   | Quantum Corporation  |
| 6424499   | 07/23/2002 | Improved Flexible Trace Interconnect Array For Multi-Channel Tape Head   | Quantum Corporation  |
| 6427934   | 08/06/2002 | Tape Reel Minimizing Print Through   | Quantum Corporation  |
| 6439489   | 08/27/2002 | Tape Cartridge Leader For Single Reel Tape Cartridges Having Increased Flexibility For Improved Performance                    | Quantum Corporation  |
| 6445533   | 09/03/2002 | Transfer Linkage For A Cartridge Adapter Of A Tape Drive   | Quantum Corporation  |
| 6450431   | 09/17/2002 | Method For Preventing A Reverse Connection Failure In A Single Reel Tape Drive   | Quantum Corporation  |
| 6450432   | 09/17/2002 | Tape Cartridge   | Quantum Corporation  |
| 6464509   | 10/15/2002 | System And Method Requiring Zero Insertion Force And Positive Retention Of Removable Storage Media In A Data Storage Subsystem | Quantum Corporation  |
| 6469867   | 10/22/02   | Floating Tape Head Having Side Wings For Longitudinal And Azimuth Playback With Minimized Tape Wrap Angle                      | Quantum Corporation  |

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| 6470291   | 10/22/02   | Velocity Feedback Measurement Method   | Seagate Removable Storage Solutions LLC   |
| 6473262   | 10/29/02   | Techniques For Compensating For High Initial Unloading Force Requirement In Tape Cartridge-Loading Mechanism                   | Seagate Removable Storage Solutions LLC   |
| 6488462   | 12/03/2002 | Transport Mechanism For A Storage System   | Quantum Corporation   |
| 6490133   | 12/03/2002 | Tape Cartridge With A Cell For A Leader Hook Member And A Cell For A Leader  | Quantum Corporation   |
| 6493959   | 12/17/2002 | Tape Path Adjustment Tool  | Quantum Corporation   |
| 6499684   | 12/31/02   | Tape Leader Pin Assembly And Method For Making The Same  | Seagate Removable Storage Solutions LLC, Hewlett-Packard Company, and IBM Corporation |
| 6508428   | 01/21/2003 | Multi-Purpose Wide Media Cartridges And Cartridge Chassis Subassemblies  | Quantum Corporation   |
| 6512644   | 01/28/2003 | Method And Apparatus For Read-After-Write Verification With Error Tolerance  | Quantum Corporation   |
| 6512962   | 01/28/2003 | Cabling Picker In A Library Of Stationary Memory Devices   | Quantum Corporation   |
| 6515819   | 02/04/2003 | Adaptive Update Of Seek Time Prediction Data   | Quantum Corporation   |
| 6524689   | 02/25/2003 | Castellation Technique For Improved Lift-Off Of Photoresist In Thin-Film Device Processing And A Thin-Film Device Made Thereby | Quantum Corporation   |
| 6537013   | 03/25/2003 | Picking Mechanism With Ventilation System For Automated Library Of Memory Storage Units  | Quantum Corporation   |
| 6538841   | 03/25/2003 | Cartridge Stop/Compression Pad For A Tape Cartridge Picker   | Quantum Corporation   |
| 6540528   | 04/01/2003 | Releasable, Repeatable Electrical Connection Employing Compression   | Quantum Corporation   |
| 6545865   | 04/08/2003 | Shock Mount For A Device Packaged In A Portable Cartridge  | Quantum Corporation   |
| 6550710   | 04/22/2003 | Tape Cartridge Leader For Single Reel Tape Cartridges Having Increased Flexibility For Improved Performance                    | Quantum Corporation   |
| 6558774   | 05/06/2003 | Multiple-Layer Backcoating For Magnetic Tape   | Quantum Corporation   |
| 6565029   | 05/20/2003 | Method Of Detecting And Correcting For Slippage Of A Tape Media In A Tape Storage Device                                       | Quantum Corporation   |
| 6568618   | 05/27/2003 | Half-Inch Tape Drive In Half High Form Factor  | Quantum Corporation   |
| 6570731   | 05/27/2003 | System For Detecting An Edge Of A Moving Data Storage Medium   | Quantum Corporation   |
| 6572046   | 06/03/2003 | Method For Unlocking A Single Reel Tape Cartridge Locking Mechanism In A Tape Cartridge Load Operation                         | Quantum Corporation   |
| 6577469   | 6/10/03    | Variable Width Flat Tape Head For Bi-Directional Contact Recording And Method For Making The Same                              | Quantum Corporation   |
| 6580582   | 06/17/2003 | Cartridge Magazine For A Tape Library  | Quantum Corporation   |

| PAT. NUM. | ISSUE DATE | TITLE   | OWNER               |
|-----------|------------|---|---------------------|
| 6581865   | 06/24/2003 | Retracting Door Assembly  | Quantum Corporation |
| 6587305   | 07/01/2003 | Tape Head With Transducer Supports Having Raised, Wear-Resistant Surfaces At Edges Of Softer Core                             | Quantum Corporation |
| 6588694   | 07/08/2003 | "Take-Up Reel Leader For DLT Tape Drive"  | Quantum Corporation |
| 6600624   | 07/29/2003 | Guiding Method Utilizing Roller Surface Features  | Quantum Corporation |
| 6600703   | 07/29/2003 | Magazine For A Plurality Of Removable Hard Disk Drives  | Quantum Corporation |
| 6604701   | 08/12/2003 | Single Reel Tape Cartridge Sliding Door With Auxiliary Leader Retractor   | Quantum Corporation |
| 6606218   | 08/12/2003 | Single Tape Cartridge Interface Having A Cartridge Reinsertion Preventing Mechanism In An Automated Autoloader/Library System | Quantum Corporation |
| 6606220   | 0812/2003  | Systems And Methods For Providing Beginning-Of-Tape And End-Of-Tape Indicators  | Quantum Corporation |
| 6611398   | 08/26/2003 | Tape Head With Support Bars   | Quantum Corporation |
| 6614611   | 09/02/2003 | Method For Buckler Rotation Test  | Quantum Corporation |
| 6618249   | 09/09/2003 | Thermal Cooling System For Densely Packed Storage Devices   | Quantum Corporation |
| 6618255   | 09/09/2003 | Quick Release Fastening System For Storage Devices  | Quantum Corporation |
| 6622164   | 09/16/2003 | Mass Storage Device With Network Interface  | Quantum Corporation |
| 6636942   | 10/21/2003 | Storage Structure For Storing Formatted Data On A Random Access Medium  | Quantum Corporation |
| 6648574   | 11/18/03   | Transport Mechanism For A Storage System  | Quantum Corporation |
| 6650601   | 11/18/2003 | Hard Disk Drive Picking Device And Method   | Quantum Corporation |
| 6655623   | 12/02/2003 | Leader Tape And Tape Cartridge  | Quantum Corporation |
| 6665137   | 12/16/2003 | Method For Locating Data Tracks On A Tape Media   | Quantum Corporation |
| 6676070   | 01/13/2004 | Backward Compatible Tape Support  | Quantum Corporation |
| 6685122   | 02/03/2004 | Tape Drive Leader Connection Sensing Assembly   | Quantum Corporation |
| 6690539   | 02/10/2004 | Portable Data Storage Drive Cartridge With External Interface At Each End   | Quantum Corporation |
| 6693758   | 02/17/2004 | Tape Cartridge Transport Magazine For An Automated Tape Cartridge Autoloader/Library System                                   | Quantum Corporation |
| 6693759   | 02/17/2004 | Compact Form Factor For An Automated Tape Cartridge Autoloader/Library System   | Quantum Corporation |
| 6693859   | 02/17/2004 | Gripper Assembly Apparatus For Interfacing With A Storage Device  | Quantum Corporation |
| 6697214   | 02/24/2004 | Removable Disk Drive With Separable Electrical And Mechanical Components  | Quantum Corporation |
| 6699013   | 03/02/2004 | Forced Air Cooling Fan Having Pivotal Fan Blades For Unidirectional Air Flow  | Quantum Corporation |
| 6702215   | 3/9/04     | Repositionable Memory Element In A Single Reel Tape Cartridge   | Quantum Corporation |

| PAT. NUM. | ISSUE DATE | TITLE  | OWNER               |
|-----------|------------|--|---------------------|
| 6704171   | 03/09/2004 | Apparatus And Systems For Lifting A Tape Drive Transducer Head   | Quantum Corporation |
| 6710962   | 03/23/2004 | Automated Tape Library   | Quantum Corporation |
| 6710969   | 03/23/2004 | Rotary Magazine Tape Storage System  | Quantum Corporation |
| 6714381   | 03/30/2004 | Tape Media Guiding Assembly For Protecting A Tape Head   | Quantum Corporation |
| 6716515   | 4/6/04     | Castellation Technique For Improved Lift-Off Of Photoresist In Thin-Film Device Processing And A Thin-Film Device Made Thereby | Quantum Corporation |
| 6722599   | 4/20/04    | Single Reel Tape Cartridge Sliding Door With Auxiliary Leader Retractor  | Quantum Corporation |
| 6722895   | 04/20/2004 | Releasable, Repeatable Electrical Connection Employing Compression   | Quantum Corporation |
| 6725394   | 04/20/2004 | Media Library With Fail Over Capability  | Quantum Corporation |
| 6729825   | 05/04/2004 | Storage Medium Cartridge Use With A Storage Medium Cartridge Gripping Assembly   | Quantum Corporation |
| 6731455   | 05/04/2004 | Automated Library System Including A Gripper Assembly Apparatus For Interfacing With A Storage Device                          | Quantum Corporation |
| 6741415   | 05/25/2004 | Method Of Writing Servo Signal On Magnetic Tape  | Quantum Corporation |
| 6744595   | 06/01/2004 | Portable Data Storage Cartridge Encoded Multi-Position Mechanical Indicator  | Quantum Corporation |
| 6754768   | 06/22/2004 | Library Of Hard Disk Drives With Transparent Emulating Interface   | Quantum Corporation |
| 6766412   | 07/20/2004 | Data Storage Media Library With Scalable Throughput Rate For Data Routing And Protocol Conversion                              | Quantum Corporation |
| 6768608   | 7/27/04    | Multi-Channel Magnetic Tape System Having Optical Tracking Servo   | Quantum Corporation |
| 6771448   | 08/03/2004 | Tension/Compression Compliant Link For Cartridge Loading Apparatus   | Quantum Corporation |
| 6771450   | 08/03/2004 | Method Of Writing Servo Signal On Magnetic Tape  | Quantum Corporation |
| 6772390   | 08/03/2004 | Erasure Correction For ECC Entities  | Quantum Corporation |
| 6773281   | 08/10/2004 | Strain Relief For Flexible Circuit   | Quantum Corporation |
| 6775092   | 08/10/2004 | Lateral Tape Motion Sensor   | Quantum Corporation |
| 6778387   | 8/17/04    | Thermal Cooling System For Densely Packed Storage Devices  | Quantum Corporation |
| 6785078   | 08/31/2004 | Concurrent Read And Write Access To Simulated Sequential Data Of A Removable Random Access Data Storage Medium                 | Quantum Corporation |
| 6791789   | 09/14/2004 | Thermal Insulator For Protecting A Storage Tape In A Tape Drive  | Quantum Corporation |
| 6795309   | 09/21/2004 | Tool-Less Field Replaceable Peripheral Mounting System   | Quantum Corporation |



| PAT. NUM. | ISSUE DATE | TITLE  | OWNER               |
|-----------|------------|--|---------------------|
| 6801383   | 10/05/2004 | Method For Calibrating A Tape Media Using Staggered Calibration Tracks                                     | Quantum Corporation |
| 6816331   | 11/09/2004 | Tape Cartridge Picker For An Automated Tape Cartridge Autoloader/Library System                            | Quantum Corporation |
| 6819524   | 11/16/2004 | Storage Device Apparatus Having Multiple Interfaces  | Quantum Corporation |
| 6826004   | 11/30/2004 | Gripper Assembly For Interfacing With Portable Storage Devices In A Storage Library                        | Quantum Corporation |
| 6829116   | 12/07/2004 | Automated Tape Cartridge Autoloader/Library System   | Quantum Corporation |
| 6831797   | 12/14/2004 | Programmable Write Equalization Circuit  | Quantum Corporation |
| 6837718   | 01/04/2005 | Releasable, Repeatable Electrical Connection Employing Compression   | Quantum Corporation |
| 6839196   | 01/04/2005 | Magnetic Track Following Servo Algorithm Using Signal Quality  | Quantum Corporation |
| 6850380   | 02/01/2005 | Stackable Connector System For Automated Removal/Addition In A Storage Media Library                       | Quantum Corporation |
| 6853548   | 02/08/2005 | 1u Rack Mount Equipment Enclosure With Increased Structural Support  | Quantum Corporation |
| 6853652   | 02/08/2005 | Spatial Filtering Of Laser Ghosts  | Quantum Corporation |
| 6854982   | 02/15/2005 | Releasable, Repeatable Electrical Connection Employing Compression   | Quantum Corporation |
| 6856484   | 02/15/2005 | Magnetic Servo Of A Recording Headhard   | Quantum Corporation |
| 6865640   | 03/08/2005 | Hard Disk Drive Library  | Quantum Corporation |
| 6867942   | 03/15/2005 | Storage Device Mounted In Portable Data Storage Media Type Cartridges                                      | Quantum Corporation |
| 6879470   | 04/12/2005 | Thin Film Recording Head With A Localized Coating To Protect Against Corrosion And Electrostatic Discharge | Quantum Corporation |
| 6892275   | 05/10/2005 | Storage System Utilizing An Active Subset Of Drives During Data Storage And Retrieval Operations           | Quantum Corporation |
| 6900960   | 05/31/2005 | Multi-Receiver Cartridge Transport System  | Quantum Corporation |
| 6902128   | 06/07/2005 | Buckler Assembly Having A Drive Leader Sensor In A Tape Drive  | Quantum Corporation |
| 6914748   | 07/05/2005 | Head Shield For A Tape Drive   | Quantum Corporation |
| 6918554   | 07/19/2005 | Tape Cartridge Format Identification In A Single Reel Tape Handling Device                                 | Quantum Corporation |
| 6923395   | 8/2/05     | Tape Drive Leader Connection Sensing Assembly  | Quantum Corporation |
| 6929208   | 08/16/2005 | Cartridge Housing For Inhibiting Damage To Recording Media   | Quantum Corporation |
| 6937435   | 08/30/2005 | Tape Head With Thin Support Surface And Method Of Manufacture  | Quantum Corporation |
| 6940676   | 09/06/2005 | Triple Push-Pull Optical Tracking System   | Quantum Corporation |
| 6940681   | 09/06/2005 | Optical To Magnetic Alignment In Magnetic Tape System  | Quantum Corporation |

| PAT. NUM. | ISSUE DATE | TITLE  | OWNER               |
|-----------|------------|--|---------------------|
| 6943979   | 9/13/05    | Method And Apparatus For Written-In Tracking Error Compensation For Linear Tape Drives                 | Certance, LLC       |
| 6957291   | 10/18/2005 | Removable Disk Storage Array Emulating Tape Library Having Backup And Archive Capability               | Quantum Corporation |
| 6961200   | 11/01/2005 | Optical Servo Track Identification On Tape Storage Media   | Quantum Corporation |
| 6961246   | 11/01/2005 | Workshelf For A Computer Rack  | Quantum Corporation |
| 6962304   | 11/08/2005 | Single Reel Tape Cartridge With Tape Reel Centering Features   | Quantum Corporation |
| 6965811   | 11/15/2005 | Media Drive Module And Storage Library System  | Quantum Corporation |
| 6980390   | 12/27/2005 | Magnetic Media With Embedded Optical Servo Tracks  | Quantum Corporation |
| 6985328   | 01/10/2006 | One And Three Quarters Inch Form Factor Tape Cartridge Autoloader                                      | Quantum Corporation |
| 6994287   | 02/07/2006 | Tape Cartridge   | Quantum Corporation |
| 7016138   | 03/21/2006 | Tension Feedback System For A Tape Drive   | Quantum Corporation |
| 7016151   | 03/21/2006 | Tape Cartridge Improved Boss Door  | Quantum Corporation |
| 7023650   | 04/04/2006 | Optical Sensor To Recording Head Alignment   | Quantum Corporation |
| 7023876   | 04/04/2006 | Point-To-Point Protocol  | Quantum Corporation |
| 7027250   | 04/11/2006 | Magnetic Tape Head With Thinfilmm Thermosensors For Head-Media Interface Temperature Monitoring        | Quantum Corporation |
| 7029726   | 04/18/2006 | Method For Forming A Servo Pattern On A Magnetic Tape  | Quantum Corporation |
| 7061711   | 06/13/2006 | Detection Of A Lower Limit Of Tape Head Travel In A Single Reel Tape Drive                             | Quantum Corporation |
| 7064913   | 06/20/2006 | Enhanced Read Margining Using Dither Enhanced Write Marginalization For Mass Data Storage Applications | Quantum Corporation |
| 7073742   | 7/11/2006  | Tape Guiding Reel  | Quantum Corporation |
| 7076333   | 7/11/2006  | Releasable, Repeatable Electrical Connection Employing Compression                                     | Quantum Corporation |
| 7076606   | 7/11/2006  | Accelerated Raid With Rewind Capability  | Quantum Corporation |
| 7076723   | 7/11/2006  | Error Correction Codes   | Quantum Corporation |
| 7077354   | 7/18/2006  | Edge Guiding Tape Reel   | Quantum Corporation |
| 7085095   | 8/1/2006   | Electromagnetic Void-Sensing Probes And Position Control Systems                                       | Quantum Corporation |

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**EXHIBIT C**  
**TRADEMARKS**

**TRADEMARK APPLICATIONS**

| SER. NO. | FILING DATE | WORD MARK          | OWNER               |
|----------|-------------|--------------------|---------------------|
| 76329838 | 10/25/2001  | COLOR PROTECT      | Quantum Corporation |
| 76449769 | 09/09/2002  | TAPECARE           | Quantum Corporation |
| 76471251 | 11/18/2002  | ATL VALUELOADER    | Quantum Corporation |
| 76471252 | 11/18/2002  | ATL SUPERLOADER    | Quantum Corporation |
| 76539221 | 08/20/2003  | EMP60              | Quantum Corporation |
| 76539222 | 08/20/2003  | MP60               | Quantum Corporation |
| 76585004 | 04/05/2004  | TRUVUE             | Quantum Corporation |
| 76603451 | 07/22/2004  | DLTICE             | Quantum Corporation |
| 76613994 | 09/30/2004  | SDLT               | Quantum Corporation |
| 78481629 | 09/10/2004  | (Design Only)      | Quantum Corporation |
| 78510625 | 11/03/2004  | DLT                | Quantum Corporation |
| 78659908 | 06/28/2005  | GOVAULT            | Quantum Corporation |
| 78918030 | 06/27/2006  | STORAGECARE VISION | Quantum Corporation |

**REGISTERED TRADEMARKS**

| SER. NO. | REG. NO. | REG. DATE  | WORD MARK  | OWNER                                   |
|----------|----------|------------|------------|---|
| 72327773 | 0926161  | 12/28/1971 | QUANTUM    | Quantum Corporation                     |
| 73127739 | 1089619  | 04/18/1978 | QUANTUM    | Quantum Corporation                     |
| 73322102 | 1199437  | 06/29/1982 | SIDEWINDER | Archive Corporation                     |
| 73589198 | 1410326  | 09/23/1986 | IRWIN      | Conner Peripherals, Inc.                |
| 73465592 | 1414004  | 10/21/1986 | FLOPPYTAPE | Conner Peripherals, Inc.                |
| 73553051 | 1414785  | 10/28/1986 | FASTAPE    | Seagate Removable Storage Solutions LLC |
| 73610341 | 1442874  | 06/16/1987 | ARCHIVE    | Seagate Removable Storage Solutions LLC |
| 73610993 | 1452091  | 08/11/1987 | ARCHIVE    | Seagate Removable Storage Solutions LLC |
| 73653438 | 1462655  | 10/27/1987 | ARCHIVEXL  | Seagate Removable Storage Solutions LLC |
| 73655202 | 1464451  | 11/10/1987 | VIPER      | Seagate Removable Storage Solutions LLC |
| 73673453 | 1478488  | 03/01/1988 | DISCACHE   | Quantum Corporation                     |
| 73685306 | 1489175  | 05/24/1988 | QIC STREAM | Seagate Removable Storage Solutions LLC |
| 73667641 | 1501056  | 08/23/1988 | HARDCARD   | Quantum Corporation                     |
| 73747179 | 1531795  | 03/28/1989 | ARCHIVE VP | Seagate Removable Storage Solutions LLC |
| 74242149 | 1749927  | 02/02/1993 | QUANTUM    | Quantum Corporation                     |

| SER. NO. | REG. NO. | REG. DATE  | WORD MARK   | OWNER  |
|----------|----------|------------|---|--|
| 74429328 | 1869317  | 12/27/1994 | TAPESTOR  | Certance LLC   |
| 74614091 | 1957517  | 02/20/1996 | CONNER  | Certance LLC   |
| 74678698 | 2012843  | 10/29/1996 | QUANTUM SIROCCO   | Quantum Corporation                                    |
| 75052261 | 2075239  | 07/01/1997 | QUANTUM   | Quantum Corporation                                    |
| 75399623 | 2373379  | 08/01/2000 | DLT TAPE  | Quantum Corporation                                    |
| 75387699 | 2386775  | 09/19/2000 | QUANTUM   | Quantum Corporation                                    |
| 75604153 | 2392749  | 10/10/2000 | QUANTUM   | Quantum Corporation                                    |
| 75601999 | 2411810  | 12/12/2000 | QUANTUM   | Quantum Corporation                                    |
| 75608837 | 2434568  | 03/13/2001 | QUANTUM   | Quantum Corporation                                    |
| 75552214 | 2472677  | 07/31/2001 | QUANTUM   | Quantum Corporation                                    |
| 75462005 | 2487984  | 09/11/2001 | ULTRIUM   | Certance LLC, IBM Corporation and Hewlett-Packard Ltd. |
| 75462012 | 2487985  | 09/11/2001 | LTO   | Certance LLC, IBM Corporation and Hewlett-Packard Ltd. |
| 76123461 | 2490615  | 09/18/2001 | TURNING<br>TRANSACTIONS INTO<br>LOYAL CUSTOMERS                                 | Quantum Corporation                                    |
| 75660932 | 2496768  | 10/09/2001 | LANVAULT  | Quantum Corporation                                    |
| 75823333 | 2518368  | 12/11/2001 | DLT SUPER TAPE  | Quantum Corporation                                    |
| 75659483 | 2576453  | 06/04/2002 | ULTRIUM LTO   | Certance LLC, IBM Corporation and Hewlett-Packard Ltd. |
| 76236199 | 2737984  | 07/15/2003 | VALUSMART TAPE  | Quantum Corporation                                    |
| 78079913 | 2745030  | 07/29/2003 | VALUSMART   | Quantum Corporation                                    |
| 76303944 | 2765102  | 09/16/2003 | RADICAL SIMPLICITY  | Quantum Corporation                                    |
| 75659481 | 2815237  | 02/17/2004 | LTO LINEAR TAPE-OPEN<br>(and design)  | Certance LLC, IBM Corporation and Hewlett-Packard Ltd. |
| 76320040 | 2820244  | 03/02/2004 | THE 3 R'S OF DATA<br>PROTECTION:<br>RELIABILITY,<br>REDUNDANCY, AND<br>RECOVERY | Quantum Corporation                                    |
| 75983433 | 2836782  | 04/27/2004 | LINEAR TAPE-OPEN  | Certance LLC, IBM Corporation and Hewlett-Packard Ltd. |
| 76487967 | 2864338  | 07/20/2004 | DLT   | Quantum Corporation                                    |
| 76487968 | 2864339  | 07/20/2004 | DLTTAPE   | Quantum Corporation                                    |
| 78220191 | 2924217  | 02/01/2005 | (design only)   | Certance LLC   |
| 78214246 | 2926907  | 02/15/2005 | CERTANCE  | Certance LLC   |
| 78080096 | 2935989  | 03/29/2005 | VS TAPE   | Quantum Corporation                                    |
| 76482946 | 2937229  | 04/05/2005 | WHEN FAILURE IS NOT<br>AN OPTION  | Quantum Corporation                                    |
| 78079921 | 2938735  | 04/05/2005 | VS TAPE VALUSMART   | Quantum Corporation                                    |
| 76471253 | 2957502  | 05/31/2005 | VALUELOADER   | Quantum Corporation                                    |

| SER. NO. | REG. NO. | REG. DATE  | WORD MARK   | OWNER               |
|----------|----------|------------|-------------|---------------------|
| 76325313 | 2987717  | 08/23/2005 | SUPERLOADER | Quantum Corporation |
| 76518536 | 3018998  | 11/29/2005 | STORAGECARE | Quantum Corporation |
| 76613992 | 3078209  | 04/11/2006 | SDLTTAPE    | Quantum Corporation |

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**EXHIBIT D**

**DOMAIN NAMES**

| <b>DOMAIN NAME</b>      | <b>OWNER</b>        |
|-------------------------|---------------------|
| atfp.com                | Quantum Corporation |
| certance.com            | Quantum Corporation |
| colorprotect.com        | Quantum Corporation |
| dlt sage.com            | Quantum Corporation |
| dltstorage.com          | Quantum Corporation |
| dlttape.com             | Quantum Corporation |
| dltvs.com               | Quantum Corporation |
| dltvs.net               | Quantum Corporation |
| govault.net             | Quantum Corporation |
| hp600rebate.com*        | Quantum Corporation |
| ibmtr7offer.com*        | Quantum Corporation |
| myfirstautoloader.com   | Quantum Corporation |
| networkstorageu.com     | Quantum Corporation |
| qa-apac.com             | Quantum Corporation |
| qntm.com                | Quantum Corporation |
| quantum.com             | Quantum Corporation |
| quantumacademy.com      | Quantum Corporation |
| storagedataservices.com | Quantum Corporation |
| tape4tapelessworld.com  | Quantum Corporation |
| welcometoquantum.com    | Quantum Corporation |

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**EXHIBIT E**  
**PRIORITY LIENS**

**TRADEMARK LIENS**

1. Evidence of the release of a security interest executed 11/22/00 in favor of The Chase Manhattan Bank, as collateral agent, has not yet been filed against the following trademarks.

| SER. NO. | REG. NO. | REG. DATE  | WORD MARK  | OWNER                                   |
|----------|----------|------------|------------|---|
| 73322102 | 1199437  | 06/29/1982 | SIDEWINDER | Archive Corporation                     |
| 74429328 | 1869317  | 12/27/1994 | TAPESTOR   | Certance LLC                            |
| 73589198 | 1410326  | 09/23/1986 | IRWIN      | Conner Peripherals, Inc.                |
| 73465592 | 1414004  | 10/21/1986 | FLOPPYTAPE | Conner Peripherals, Inc.                |
| 73553051 | 1414785  | 10/28/1986 | FASTAPE    | Seagate Removable Storage Solutions LLC |
| 73610341 | 1442874  | 06/16/1987 | ARCHIVE    | Seagate Removable Storage Solutions LLC |
| 73610993 | 1452091  | 08/11/1987 | ARCHIVE    | Seagate Removable Storage Solutions LLC |
| 73653438 | 1462655  | 10/27/1987 | ARCHIVEXL  | Seagate Removable Storage Solutions LLC |
| 73655202 | 1464451  | 11/10/1987 | VIPER      | Seagate Removable Storage Solutions LLC |
| 73685306 | 1489175  | 05/24/1988 | QIC STREAM | Seagate Removable Storage Solutions LLC |
| 73747179 | 1531795  | 03/28/1989 | ARCHIVE VP | Seagate Removable Storage Solutions LLC |

2. Certain of the Company's trademarks are subject to an unreleased security interest executed 12/17/02 in favor of Keybank N.A. pursuant to the 2002 secured financing.
3. Evidence of the releases of security interests executed 01/06/92, 02/18/92 and 03/24/94 in favor of Morgan Guaranty Trust Corp. of New York by previous owner, Memorex Telex N.V. have not yet been filed against the following trademarks.

| SER. NO. | REG. NO. | REG. DATE  | WORD MARK | OWNER               |
|----------|----------|------------|-----------|---------------------|
| 73127739 | 1089619  | 04/18/1978 | QUANTUM   | Quantum Corporation |
| 72327773 | 0926161  | 12/28/1971 | QUANTUM   | Quantum Corporation |

### PATENT LIENS

1. Evidence of the release of a security interest executed 10/03/96 in favor of Canadian Imperial Bank of Commerce has not yet been filed against the following patents.

| PAT. NUM. | ISSUE DATE | TITLE   | OWNER               |
|-----------|------------|---|---------------------|
| D395879   | 07/07/1998 | Tape Drive Bezel  | Quantum Corporation |
| 5671389   | 09/23/1997 | Adaptive Compression Caching For Tape Recording                         | Quantum Corporation |
| 5769346   | 06/23/1998 | Tape Buckling Mechanism For Single Reel Cartridge Tape Recording        | Quantum Corporation |
| 5841600   | 11/24/1998 | Randomly Ordered Data Block Envelope Tape Format                        | Quantum Corporation |
| 5862014   | 01/19/1999 | Multi-Channel Magnetic Tape Head Module Including Flex Circuit          | Quantum Corporation |
| 5949604   | 09/07/1999 | Method Of Writing And Reading Servo On Tracks Having A Longitudinal Gap | Quantum Corporation |

2. Various patents and patent applications are subject to an unreleased security interest executed 12/17/02 in favor of Keybank N.A.



- Evidence of the release of a security interest executed 4/24/90 in favor of Barclays Bank PLC granted by predecessor Irwin Magnetic Systems, Inc. has not yet been filed against the following patents.

| PAT. NUM. | ISSUE DATE | TITLE  | OWNER                        |
|-----------|------------|--|------------------------------|
| 4849841   | 4/18/89    | Transducer Head Core Structure With Recessed Magnetic Closures | Archive Corporation          |
| 4954921   | 9/4/90     | Magnetic Transducer Head Structure                             | Irwin Magnetic Systems, Inc. |

### COPYRIGHT LIENS

- Evidence of the released of a security interest in favor of Canadian Imperial Bank of Commerce, dated 10/03/94, has not yet been filed against the following opyrights:

| REG. NO.    | TITLE    | OWNER               |
|-------------|----------|---------------------|
| TXu-446-027 | RF71V102 | Quantum Corporation |
| TXu-446-028 | RF71V103 | Quantum Corporation |
| TXu-446-030 | RF71V104 | Quantum Corporation |
| TXu-446-031 | RF71V105 | Quantum Corporation |
| TXu-446-025 | RF30V102 | Quantum Corporation |
| TXu-446-024 | RF30V103 | Quantum Corporation |
| TXu-446-026 | RF30V104 | Quantum Corporation |
| TXu-446-029 | RF30V105 | Quantum Corporation |

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**SCHEDULE 4.2**

1. The following patents and applications of Quantum Corporation are still listed as owned (or partially owned) by their inventors:

| PAT./APP. NUM. | APP./ISSUE DATE | TITLE   | OWNER  | COMMENTS   |
|----------------|-----------------|---|--|--|
| 11243938       | 10/04/05        | A Motor/Encoder Assembly For Tape Drives                                  | Ashok B Nayak; Robert R Heinze;                    | Not assigned by inventors  |
| 10259738       | 09/30/02        | A Motor/Encoder Assembly For Tape Drives                                  | Ashok B. Nayak; Robert R. Heinze                   | Not assigned by inventors  |
| 11316049       | 12/21/05        | Computer Peripheral Device Mounting Arrangement With Two Locking Elements | Douglas A. Green; Scott L. Hanson; Mark R Thompson | Not assigned by inventors  |
| 10412043       | 04/10/2003      | Recovery Of Data On A Primary Data Volume                                 | Quantum Corporation                                | Inventor David Leory Rand has assigned his interest to Quantum, but Lloyd Alan Poston has not.   |
| 6092754        | 07/25/2000      | Buckler For A Tape Drive  | Quantum Corporation                                | Inventor Sheldon Helms assigned his interest to Quantum, but Christopher Rathweg has not.  |
| 6434674        | 08/13/2002      | Multiport Memory Architecture With Direct Data Flow                       | Advanced Digital Information Corporation           | Original assignment to predecessor holder Pathlight Technology, Inc. was from Mark DeWilde and Said Rahmani Khezri. Named inventors were Mark DeWilde and Stephen Stone. |

2. **Missing Irwin Assignment:** The following patents of Quantum Corporation are missing an assignment from Irwin Magnetic Systems, Inc. to Archive Corporation in their chain of title.

| PAT. NUM. | ISSUE DATE | TITLE                              | OWNER                        |
|-----------|------------|------------------------------------|------------------------------|
| 4954921   | 9/4/90     | Magnetic Transducer Head Structure | Irwin Magnetic Systems, Inc. |

3. **Missing Archive Corp Assignment:** The following patents of Quantum Corporation are missing an assignment from Archive Corporation to Connor Peripherals, Inc. in their chain of title.

| PAT. NUM. | ISSUE DATE | TITLE | OWNER |
|-----------|------------|-------|-------|
|-----------|------------|-------|-------|

| PAT. NUM. | ISSUE DATE | TITLE  | OWNER               |
|-----------|------------|--|---------------------|
| 4816932   | 3/28/89    | Circuit For Providing A Symmetric Current To The Head Of A Magnetic Recording Device   | Archive Corporation |
| 4819107   | 4/4/89     | Magnetic Transducer Head Structure   | Archive Corporation |
| 4833418   | 5/23/89    | Compensation Circuit For Nullifying Differential Offset Voltage And Regulating Common Mode Voltage Of Differential Signals           | Archive Corporation |
| 4837643   | 6/6/89     | Circuit For Controlling Frequency And Phase Of Voltage Controlled Oscillator In A Data Smoother For A Streaming Cartridge Tape Drive | Archive Corporation |
| 4852825   | 8/1/89     | Extraction And Insertion Mechanism For A Leader Block Of A Tape Cartridge  | Archive Corporation |
| 4858039   | 8/15/89    | Streaming Tape Drive With Direct Block Addressability  | Archive Corporation |
| 4933636   | 6/12/90    | Self-Aligning Tachometer And Method Of Manufacturing Same  | Archive Corporation |
| 4949914   | 8/21/90    | Tape Transport With Rigid Arm Threader Mechanism For Leader Block Tape Cartridge   | Archive Corporation |
| 4963810   | 10/16/90   | Variable Load Motor Drive Control  | Archive Corporation |
| 4978955   | 12/18/90   | Data Randomizing/De-Randomizing Circuit For Randomizing And De-Randomizing Data  | Archive Corporation |
| 5001580   | 3/19/91    | Method To Compensate For Tape Slope And Head Azimuth Errors  | Archive Corporation |
| 5001584   | 3/19/91    | Head-Positioner Arm For Data Recorders   | Archive Corporation |
| 5003408   | 3/26/91    | Method And Apparatus For Removing Data Stream Variations   | Archive Corporation |
| 5006819   | 4/9/91     | Track And Hold Phase Locked Loop Circuit   | Archive Corporation |
| 5025334   | 6/18/91    | Auto-Loading Transport For Tape Cartridge With Tape Access Door And Belt Capstan Roller  | Archive Corporation |
| 5050020   | 9/17/91    | Cartridge Loader For Loading Each Of A Plurality Of Cartridges Into A Cartridge Insertion Slot                                       | Archive Corporation |
| 5050025   | 9/17/91    | Lead Screw And Follower-Type Head Positioner For Data Recorders  | Archive Corporation |
| 5055951   | 10/8/91    | Method And Apparatus For Servo-Positioning Movable Transducer Heads  | Archive Corporation |
| 5081547   | 1/14/92    | Apparatus And Method For Automatic Adjustment Of Read Amplitude Threshold In A Digital Tape Drive                                    | Archive Corporation |
| 5101311   | 3/31/92    | Tape And Mechanism Protection Methods For Dat Drives   | Archive Corporation |
| 5109308   | 4/28/92    | Stationary Head Tape Drive With A Movable Door Opening Mechanism   | Archive Corporation |
| 5122916   | 6/16/92    | Electromagnetic Head Having Interference Compensation Circuitry  | Archive Corporation |
| 5157564   | 10/20/92   | Storage Module Changer For A Computer Data Storage Drive   | Archive Corporation |

| PAT. NUM. | ISSUE DATE | TITLE   | OWNER                        |
|-----------|------------|---|------------------------------|
| 5163136   | 11/10/92   | System For Assembling Playback Data Frames Using Indexed Frame Buffer Group According To Logical Frame Numbers In Valid Subcode Or Frame Header | Archive Corporation          |
| 5172280   | 12/15/92   | Apparatus And Method For Automatic Write Current Calibration In A Streaming Tape Drive  | Archive Corporation          |
| 5182687   | 1/26/93    | Method And Apparatus For Aligning Cartridges With A Cartridge Insertion Slot  | Archive Corporation          |
| 5198947   | 3/30/93    | Apparatus For Adjusting A Tape Head For A Magnetic Tape   | Archive Corporation          |
| 4849841   | 4/18/89    | Transducer Head Core Structure With Recessed Magnetic Closures  | Archive Corporation          |
| 4954921   | 9/4/90     | Magnetic Transducer Head Structure  | Irwin Magnetic Systems, Inc. |

4. **Missing Conner Change of Name:** The following trademarks of Quantum Corporation are missing a change of name from Conner Peripherals, Inc. to Seagate Technology, Inc. in their chain of title.

| SER. NO. | REG. NO. | REG. DATE  | WORD MARK  | OWNER                    |
|----------|----------|------------|------------|--------------------------|
| 73589198 | 1410326  | 09/23/1986 | IRWIN      | Conner Peripherals, Inc. |
| 73465592 | 1414004  | 10/21/1986 | FLOPPYTAPE | Conner Peripherals, Inc. |

5. **Missing Archive Corp Assignment:** The following trademark of Quantum Corporation is missing an assignment from Archive Corporation to Connor Peripherals, Inc. in their chain of title.

| SER. NO. | REG. NO. | REG. DATE  | WORD MARK  | OWNER               |
|----------|----------|------------|------------|---------------------|
| 73322102 | 1199437  | 06/29/1982 | SIDEWINDER | Archive Corporation |

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