



Registration of a Charge

Company name: **GRASS VALLEY (UK) LIMITED**

Company number: **01023834**



X99EOMS9

Received for Electronic Filing: **16/07/2020**

Details of Charge

Date of creation: **02/07/2020**

Charge code: **0102 3834 0004**

Persons entitled: **MGG INVESTMENT GROUP LP**

Brief description:

Contains fixed charge(s).

Contains negative pledge.

Authentication of Form

This form was authorised by: **a person with an interest in the registration of the charge.**

Authentication of Instrument

Certification statement: **WE CERTIFY THAT SAVE FOR MATERIAL REDACTED PURSUANT TO S.859G OF THE COMPANIES ACT 2006 THE ELECTRONIC COPY INSTRUMENT DELIVERED AS PART OF THIS APPLICATION FOR REGISTRATION IS A CORRECT COPY OF THE ORIGINAL INSTRUMENT.**

Certified by: **STEPHENSON HARWOOD LLP**



CERTIFICATE OF THE REGISTRATION OF A CHARGE

Company number: 1023834

Charge code: 0102 3834 0004

The Registrar of Companies for England and Wales hereby certifies that a charge dated 2nd July 2020 and created by GRASS VALLEY (UK) LIMITED was delivered pursuant to Chapter A1 Part 25 of the Companies Act 2006 on 16th July 2020 .

Given at Companies House, Cardiff on 17th July 2020

The above information was communicated by electronic means and authenticated by the Registrar of Companies under section 1115 of the Companies Act 2006



Companies House



THE OFFICIAL SEAL OF THE
REGISTRAR OF COMPANIES

EXECUTION VERSION

PLEDGE AND SECURITY AGREEMENT

PLEDGE AND SECURITY AGREEMENT (this "Agreement"), dated as of July 2, 2020, made by each of the Grantors referred to below, in favor of MGG Investment Group LP, a Delaware limited partnership ("MGG"), in its capacity as collateral agent for the Secured Parties referred to below (in such capacity, together with its successors and assigns in such capacity, if any, the "Collateral Agent").

RECITALS:

WHEREAS, Grass Valley Intermediate LLC, a Delaware limited liability company (the "Parent"), Grass Valley Holdco Inc., a Delaware corporation (the "Intermediate Parent"), Grass Valley Merger Sub LLC, a Delaware limited liability company (the "Initial US Borrower") (the Initial US Borrower to be merged with and into Grass Valley USA, LLC, a Delaware limited liability company ("GV USA"), with GV USA as the surviving entity (the "US Borrower") (the foregoing merger, the "US Merger"), Grass Valley U.K. Acquisition Limited, a private limited company organized under the laws of England and Wales (the "U.K. Borrower"), Grass Valley Canada Acquisition ULC, an unlimited liability corporation organized under the laws of the Province of Alberta (the "Initial Canadian Borrower") (the Initial Canadian Borrower to be amalgamated with and into Grass Valley Canada ULC, an unlimited liability corporation organized under the laws of the Province of Alberta, with Grass Valley Canada ULC as the resulting entity (the "Canadian Borrower") (the foregoing amalgamation, the "Canadian Merger") and Grass Valley Dutch Holdco B.V., a private limited liability company incorporated under the laws of the Netherlands and registered with the Dutch trade register under number 77640225 ("Dutch Holdco") and Grass Valley Dutch Acquisition B.V., a private limited liability company incorporated under the laws of the Netherlands and registered with the Dutch trade register under number 77643119 (the "Dutch MergerCo"; and together with Dutch Holdco, collectively, the "Initial Dutch Borrowers") (the Dutch MergerCo to be merged with and into Grass Valley Nederland B.V., a private limited liability company incorporated under the laws of the Netherlands and registered with the Dutch trade register under number 20097776, with Grass Valley Nederland B.V. as the surviving entity (and together with Dutch Holdco, each a "Dutch Borrower" and collectively, the "Dutch Borrowers") (the foregoing merger, the "Dutch Merger") (together with the Initial US Borrower, the US Borrower, the U.K. Borrower, the Initial Canadian Borrower and the Canadian Borrower, each a "Borrower" and collectively, the "Borrowers"), each subsidiary of the Parent listed as a "Guarantor" on the signature pages thereto (together with the Parent and each other Person that executes a joinder agreement and becomes a "Guarantor" thereunder, each a "Guarantor" and collectively, the "Guarantors", and together with the Borrowers and each other Person that becomes an "Additional Grantor" hereunder, each a "Grantor" and collectively, the "Grantors"), the lenders from time to time party thereto (each a "Lender" and collectively, the "Lenders"), the Collateral Agent, and MGG, as administrative agent for the Lenders (in such capacity, together with its successors and assigns in such capacity, the "Administrative Agent" and together with the Collateral Agent, each an "Agent" and collectively, the "Agents") are parties to a Financing Agreement, dated as of the date hereof (such agreement, as amended, restated, supplemented, modified or otherwise changed from time to time, including any replacement agreement therefor, being hereinafter referred to as the "Financing Agreement");

WHEREAS, pursuant to the Financing Agreement, the Lenders have agreed to make

certain term loans (each a "Loan" and collectively, the "Loans"), to the Borrowers;

WHEREAS, it is a condition precedent to the Lenders making any Loan and providing any other financial accommodation to the Borrowers pursuant to the Financing Agreement that each Grantor shall have executed and delivered this Agreement to the Collateral Agent for the benefit of the Secured Parties;

WHEREAS, the Grantors are mutually dependent on each other in the conduct of their respective businesses as an integrated operation, with credit needed from time to time by each Grantor often being provided through financing obtained by the other Grantors and the ability to obtain such financing being dependent on the successful operations of all of the Grantors as a whole; and

WHEREAS, each Grantor has determined that the execution, delivery and performance of this Agreement directly benefit, and are in the best interest of, such Grantor.

NOW, THEREFORE, in consideration of the premises and the agreements herein and in order to induce the Collateral Agent, the Administrative Agent and the Lenders to make and maintain the Loans and to provide other financial accommodations to the Borrowers pursuant to the Financing Agreement, the Grantors hereby jointly and severally agree with the Collateral Agent, for the benefit of the Secured Parties, as follows:

SECTION 1. Definitions.

(a) Reference is hereby made to the Financing Agreement for a statement of the terms thereof. All capitalized terms used in this Agreement and the recitals hereto which are defined in the Financing Agreement or in Article 8 or 9 of the Code and which are not otherwise defined herein shall have the same meanings herein as set forth therein; provided that terms used herein which are defined in the Code on the date hereof shall continue to have the same meaning notwithstanding any replacement or amendment of such statute except as the Collateral Agent may otherwise determine.

(b) The following terms shall have the respective meanings provided for in the Code: "Accounts", "Account Debtor", "Cash Proceeds", "Certificate of Title", "Chattel Paper", "Commercial Tort Claim", "Commodity Account", "Commodity Contracts", "Deposit Account", "Documents", "Electronic Chattel Paper", "Equipment", "Fixtures", "General Intangibles", "Goods", "Instruments", "Inventory", "Investment Property", "Letter-of-Credit Rights", "Noncash Proceeds", "Payment Intangibles", "Proceeds", "Promissory Notes", "Record", "Security Account", "Software", "Supporting Obligations" and "Tangible Chattel Paper".

(c) As used in this Agreement, the following terms shall have the respective meanings indicated below, such meanings to be applicable equally to both the singular and plural forms of such terms:

"Additional Collateral" has the meaning specified therefor in Section 4(a)(i) hereof.

"Additional Grantor" has the meaning specified therefor in Section 13(f) hereof.

"Administrative Agent" has the meaning specified therefor in the Recitals hereto.

"Agent" and "Agents" have the respective meanings specified therefor in the Recitals hereto.

"Agreement" has the meaning specified therefor in the preamble hereto.

"Borrower" and "Borrowers" have the respective meanings specified therefor in the Recitals hereto.

"Canadian Borrower" has the meaning specified therefor in the Recitals hereto.

"Canadian Merger" has the meaning specified therefor in the Recitals hereto.

"Certificated Entities" has the meaning specified therefor in Section 5(m) hereof.

"Code" means the Uniform Commercial Code as in effect from time to time in the State of New York.

"Collateral" has the meaning specified therefor in Section 2 hereof.

"Collateral Agent" has the meaning specified therefor in the preamble hereto.

"Copyright Licenses" means all licenses, contracts or other agreements, whether written or oral, naming any Grantor as licensee or licensor and providing for the grant of any right to use or sell any works covered by any Copyright.

"Copyrights" means all domestic and foreign copyrights, whether registered or unregistered, including, without limitation, all copyright rights (whether now or hereafter arising) in any and all media (whether now or hereafter developed), in and to all original works of authorship fixed in any tangible medium of expression (including computer software and internet website content) now or hereafter owned, acquired, developed or used by any Grantor, all applications, registrations and recordings thereof (including, without limitation, applications, registrations and recordings in the United States Copyright Office or in any similar office or agency of the United States or any other country or any political subdivision thereof), and all reissues, divisions, continuations, continuations in part and extensions or renewals thereof.

"Dutch Borrower" and "Dutch Borrowers" have the respective meanings specified therefor in the Recitals hereto.

"Dutch Holdco" has the meaning specified therefor in the Recitals hereto.

"Dutch Merger" has the meaning specified therefor in the Recitals hereto.

"Dutch MergerCo" has the meaning specified therefor in the Recitals hereto.

"Excluded Property" has the meaning specified therefor in Section 2 hereof.

"Financing Agreement" has the meaning specified therefor in the Recitals hereto.

"Grantor" and "Grantors" have the respective meanings specified therefor in the Recitals hereto.

"Guarantor" and "Guarantors" have the respective meanings specified therefor in the Recitals hereto.

"Initial Canadian Borrower" has the meaning specified therefor in the Recitals hereto.

"Initial Dutch Borrowers" has the meaning specified therefor in the Recitals hereto.

"Intellectual Property" means all Copyrights, Patents, Trademarks and Other Intellectual Property.

"Intellectual Property Security Agreements" means agreements entered into by and between the Collateral Agent and each applicable Grantor, each in form and substance reasonably satisfactory to such parties and annexed hereto as Exhibit B.

"Irrevocable Proxy" has the meaning specified therefor in Section 4(a)(i) hereof.

"Lender" and "Lenders" have the respective meanings specified therefor in the Recitals hereto.

"Licenses" means the Copyright Licenses, the Patent Licenses and the Trademark Licenses.

"Loan" and "Loans" have the respective meanings specified therefor in the Recitals hereto.

"MGG" has the meaning specified therefor in the preamble hereto.

"Other Intellectual Property" means all trade secrets, ideas, concepts, methods, techniques, processes, proprietary information, technology, know-how, formulae, rights of publicity and privacy and other general intangibles of like nature, now or hereafter acquired, owned, developed or used by any Grantor.

"Parent" has the meaning specified therefor in the Recitals hereto.

"Patent Licenses" means all licenses, contracts or other agreements, whether written or oral, naming any Grantor as licensee or licensor and providing for the grant of any right to manufacture, use or sell any invention covered by any Patent.

"Patents" means all domestic and foreign letters patent, design patents and utility patents, now existing or hereafter acquired, all applications, registrations and recordings thereof, and all reissues, divisions, continuations, continuations in part and extensions or renewals thereof.

"Perfection Requirement" and "Perfection Requirements" have the respective meanings specified therefor in Section 5(j) hereof.

"Pledge Amendment" has the meaning specified therefor in Section 4(a)(ii) hereof.

"Pledged Debt" means the indebtedness described in Schedule VII hereto and all indebtedness from time to time owned or acquired by a Grantor, the Promissory Notes and other Instruments evidencing any or all of such indebtedness, in each case, having an aggregate value or face amount of \$250,000 or more for any such indebtedness, and all interest, cash, Instruments, Investment Property, financial assets, securities, Equity Interests, stock options and Commodity Contracts, notes, debentures, bonds, Promissory Notes or other evidences of indebtedness and all other property from time to time received, receivable or otherwise distributed in respect of or in exchange for any or all of such indebtedness.

"Pledged Interests" means, collectively, (a) the Pledged Debt, (b) the Pledged Shares and (c) all security entitlements in any and all of the foregoing.

"Pledged Issuers" means, collectively, (a) the issuers of the shares of Equity Interests described in Schedule VIII hereto and (b) any other issuer of Equity Interests at any time and from time to time owned or acquired by a Grantor whose shares of Equity Interests are required to be pledged as Collateral under this Agreement.

"Pledged Partnership/LLC Agreement" has the meaning specified therefor in Section 6(k)(ii) hereof.

"Pledged Shares" means (a) the shares of Equity Interests of the Pledged Issuers, whether or not evidenced or represented by any stock certificate, certificated security or other Instrument, (b) the certificates representing such shares of Equity Interests, all options and other rights, contractual or otherwise, in respect thereof and all dividends, distributions, cash, Instruments, Investment Property, financial assets, securities, Equity Interests, stock options and Commodity Contracts, notes, debentures, bonds, Promissory Notes or other evidences of indebtedness and all other property (including, without limitation, any stock dividend and any distribution in connection with a stock split) from time to time received, receivable or otherwise distributed in respect of or in exchange for any or all of such Equity Interests and (c) without affecting the obligations of any Grantor under any provision prohibiting such action under this Agreement, the Financing Agreement or any other Loan Document, in the event of any consolidation or merger involving any Pledged Issuer and in which such Pledged Issuer is not the surviving entity, all Equity Interests of the successor entity formed by or resulting from such consolidation or merger.

"Registration Page" has the meaning specified therefor in Section 4(a)(i) hereof.

"Secured Obligations" has the meaning specified therefor in Section 3 hereof.

"Security Agreement Supplement" has the meaning specified therefor in Section 13(f) hereof.

"Titled Collateral" means all Collateral for which the title to such Collateral is governed by a Certificate of Title or certificate of ownership, including, without limitation, all motor vehicles (including, without limitation, all trucks, trailers, tractors, service vehicles, automobiles and other mobile equipment) for which the title to such motor vehicles is governed

by a Certificate of Title or certificate of ownership; provided that, the term "Titled Collateral" shall not include any motor vehicle or other goods for which the title is governed by a Certificate of Title or certificate of ownership to the extent the current fair market value of such motor vehicle or other good at the time of acquisition by the applicable Person of such motor vehicle or other good, as determined in good faith by the Administrative Borrower, is equal to or less than \$50,000.

"Trademark Licenses" means all licenses, contracts or other agreements, whether written or oral, naming any Grantor as licensor or licensee and providing for the grant of any right concerning any Trademark, together with any goodwill connected with and symbolized by any such trademark licenses, contracts or agreements and the right to prepare for sale or lease and sell or lease any and all Inventory now or hereafter owned by any Grantor and now or hereafter covered by such licenses.

"Trademarks" means all domestic and foreign trademarks, service marks, collective marks, certification marks, trade names, business names, d/b/a's, Internet domain names, trade styles, designs, logos and other source or business identifiers and all general intangibles of like nature, now or hereafter owned, adopted, acquired or used by any Grantor, all applications, registrations and recordings thereof (including, without limitation, applications, registrations and recordings in the United States Patent and Trademark Office or in any similar office or agency of the United States, any state thereof or any other country or any political subdivision thereof), and all reissues, extensions or renewals thereof, together with all goodwill of the business symbolized by such marks and all customer lists, formulae and other Records of any Grantor relating to the distribution of products and services in connection with which any of such marks are used.

"U.K. Borrower" has the meaning specified therefor in the Recitals hereto.

"US Borrower" has the meaning specified therefor in the Recitals hereto.

"US Merger" has the meaning specified therefor in the Recitals hereto.

SECTION 2. Grant of Security Interest. As collateral security for the payment, performance and observance of all of the Secured Obligations, each Grantor hereby pledges and assigns to the Collateral Agent (and its agents and designees), and grants to the Collateral Agent (and its agents and designees), for the benefit of the Secured Parties, a continuing security interest in, all personal property and Fixtures of such Grantor, wherever located and whether now or hereafter existing and whether now owned or hereafter acquired, of every kind and description, tangible or intangible, including, without limitation, the following (all being collectively referred to herein as the "Collateral"):

- (a) all Accounts;
- (b) all Chattel Paper (whether tangible or electronic);
- (c) all Commercial Tort Claims, including, without limitation, the Commercial Tort Claims described in Schedule VI hereto;
- (d) all Deposit Accounts, all cash, and all other property from time to time deposited therein or otherwise credited thereto and the monies and property in the possession

or under the control of any Agent or any Lender or any affiliate, representative, agent or participant of any Agent or any Lender;

- (e) all Documents;
- (f) all General Intangibles (including, without limitation, all Payment Intangibles, Intellectual Property and Licenses);
- (g) all Goods, including, without limitation, all Equipment, Fixtures and Inventory;
- (h) all Instruments (including, without limitation, Promissory Notes);
- (i) all Investment Property;
- (j) all Letter-of-Credit Rights;
- (k) all Pledged Interests;
- (l) all Supporting Obligations;
- (m) all Additional Collateral;
- (n) all other tangible and intangible personal property and Fixtures of such Grantor (whether or not subject to the Code), including, without limitation, all bank and other accounts and all cash and all investments therein, all proceeds, products, offspring, accessions, rents, profits, income, benefits, substitutions and replacements of and to any of the property of such Grantor described in the preceding clauses of this Section 2 hereof (including, without limitation, any proceeds of insurance thereon and all causes of action, claims and warranties now or hereafter held by such Grantor in respect of any of the items listed above), and all books, correspondence, files and other Records, including, without limitation, all tapes, disks, cards, Software, data and computer programs in the possession or under the control of such Grantor or any other Person from time to time acting for such Grantor that at any time evidence or contain information relating to any of the property described in the preceding clauses of this Section 2 hereof or are otherwise necessary or helpful in the collection or realization thereof; and
- (o) all Proceeds, including all Cash Proceeds and Noncash Proceeds, and products of any and all of the foregoing Collateral;

in each case, howsoever such Grantor's interest therein may arise or appear (whether by ownership, security interest, claim or otherwise).

Notwithstanding anything herein to the contrary, the term "Collateral" shall not include, and no Grantor is pledging, nor granting a security interest hereunder in (the following, collectively, the "Excluded Property"), (i) any of such Grantor's right, title or interest in any lease, license, contract or agreement to which such Grantor is a party or any of its right, title or interest thereunder to the extent, but only to the extent, that is pledged or granted as security interests under the Japanese Security Documents, or that such a grant would, under the express terms of such lease, license,

contract or agreement result in a breach of the terms of, or constitute a default under, such lease, license, contract or agreement (other than to the extent that any such term (A) has been waived or (B) would be rendered ineffective pursuant to Sections 9-406, 9-408, 9-409 of the Code or other applicable provisions of the Uniform Commercial Code of any relevant jurisdiction or any other applicable law (including the Bankruptcy Code) or principles of equity); provided, that (x) immediately upon the ineffectiveness, lapse, termination or waiver of any such provision, the Collateral shall include, and such Grantor shall be deemed to have granted a security interest in, all such right, title and interest as if such provision had never been in effect and (y) the foregoing exclusion shall in no way be construed so as to limit, impair or otherwise affect the Collateral Agent's unconditional continuing security interest in and liens upon any rights or interests of a Grantor in or to the proceeds of, or any monies due or to become due under, any such license, contract or agreement; (ii) any intent-to-use United States trademark applications for which an amendment to allege use or statement of use has not been filed under 15 U.S.C. § 1051(c) or 15 U.S.C. § 1051(d), respectively, or if filed, has not been deemed in conformance with 15 U.S.C. § 1051(a) or examined and accepted, respectively, by the United States Patent and Trademark Office, provided that upon such filing and acceptance, such intent-to-use applications shall be included in the definition of Collateral; (iii) any fee-owned real property with a Current Value less than \$500,000 and all leasehold interests in real property; (iv) commercial tort claims with a potential recovery reasonably determined by the Collateral Agent to be less than \$500,000; (v) any asset or property right of such Grantor of any nature to the extent that any Requirement of Law prohibits the creation of a security interest thereon (other than to the extent that any such term would be rendered ineffective pursuant to Sections 9-406, 9-407, 9-408 or 9-409 of the Code (or any successor provision or provisions); (vi) Equity Interests in non-wholly owned Subsidiaries and joint ventures which cannot be pledged without the consent of one or more third parties (other than any Affiliate of the Loan Parties) (after giving effect to any applicable anti-assignment provision of the Code or other applicable law and commercially reasonable efforts to obtain such consent); (vii) those assets as to which Collateral Agent and the Administrative Borrower mutually agree that the cost or other consequence (including any Tax consequence) of obtaining such a security interest or perfection thereof are excessive in relation to the value afforded thereby; (viii) letter of credit rights to the extent not constituting a supporting obligation for other Collateral, having an aggregate value or face amount of \$250,000 or less (except to the extent a security interest therein can be perfected by the filing of Uniform Commercial Code financing statements); (ix) Equity Interests in captive insurance companies; and (x) motor vehicles and other goods subject to certificates of title to the extent a security interest therein cannot be perfected by the filing of a UCC-1 financing statement and the current fair market value of such motor vehicle or other goods subject to certificates of title is equal to or less than \$50,000; provided, that the Excluded Property will not include, and the Collateral shall include and the security interest granted in the Collateral shall attach to, (A) all proceeds, products, substitutions or replacements of any such Excluded Property referred to herein unless such proceeds, products, substitutions or replacements would constitute Excluded Property hereunder, (B) all rights to payment due or to become due under any such Excluded Property referred to herein, and (C) if and when the prohibition which prevents the granting of a security interest in any such Excluded Property is removed, terminated, or otherwise becomes unenforceable as a matter of law, Collateral Agent will be deemed to have, and at all times to have had, a security interest in such property, and the Collateral will be deemed to include, and at all times to have included, such property without further action or notice by any Person.

SECTION 3. Security for Secured Obligations. The security interest created hereby in the Collateral constitutes continuing collateral security for all of the following obligations, whether now existing or hereafter incurred (the "Secured Obligations"):

(a) the prompt payment by each Grantor, as and when due and payable (whether by scheduled maturity, required prepayment, acceleration, demand or otherwise), of all amounts from time to time owing by the Borrowers in respect of the Financing Agreement and/or the other Loan Documents, including, without limitation, (i) all Obligations, (ii) in the case of a Guarantor, all amounts from time to time owing by such Grantor in respect of its guaranty made pursuant to Article XI of the Financing Agreement or under any other Guaranty to which it is a party, including, without limitation, all obligations guaranteed by such Grantor and (iii) all interest, fees, commissions, charges, expense reimbursements, indemnifications and all other amounts due or to become due under any Loan Document (including, without limitation, all interest, fees, commissions, charges, expense reimbursements, indemnifications and other amounts that accrue after the commencement of any Insolvency Proceeding of any Loan Party, whether or not the payment of such interest, fees, commissions, charges, expense reimbursements, indemnifications and other amounts are unenforceable or are not allowable, in whole or in part, due to the existence of such Insolvency Proceeding); and

(b) the prompt payment and due performance and observance by each Grantor of all of its other obligations from time to time existing in respect of this Agreement and any other Loan Document.

SECTION 4. Delivery of the Pledged Interests.

(a) (i) All Promissory Notes currently evidencing the Pledged Debt and all certificates currently representing the Pledged Shares shall be delivered to the Collateral Agent on or prior to the Effective Date. All other Promissory Notes, certificates and Instruments constituting Pledged Interests from time to time required to be pledged to the Collateral Agent pursuant to the terms of this Agreement or the Financing Agreement (the "Additional Collateral") shall be delivered to the Collateral Agent promptly upon, but in any event, (A) in the case of any such Additional Collateral located in the United States, within 10 Business Days (or such longer period as agreed to by the Collateral Agent in its sole discretion), and (B) in the case of any such Additional Collateral located elsewhere, within 30 days (or such longer period as agreed to by the Collateral Agent in its sole discretion) of, receipt thereof by or on behalf of any of the Grantors. All such Promissory Notes, certificates and Instruments shall be (1) held by or on behalf of the Collateral Agent pursuant hereto, (2) delivered in suitable form for transfer by delivery or shall be accompanied by duly executed instruments of transfer or assignment executed in blank and (3) with respect to any Pledged Shares, accompanied by (x) a duly executed irrevocable proxy coupled with an interest, in substantially the form of Exhibit D hereto (an "Irrevocable Proxy"), and (y) a duly acknowledged Equity Interest registration page, in blank, from each Pledged Issuer, substantially in the form of Exhibit E hereto, or otherwise in form and substance reasonably satisfactory to the Collateral Agent (a "Registration Page"), all in form and substance reasonably satisfactory to the Collateral Agent. If any Pledged Interests consist of uncertificated securities, unless the immediately following sentence is applicable thereto, such Grantor shall cause (x) the Collateral Agent (or its designated custodian or nominee) to become the registered holder thereof, or (y) each issuer of such securities to agree that, upon the occurrence and during the continuance

of an Event of Default, it will comply with instructions originated by the Collateral Agent with respect to such securities without further consent by such Grantor. If any Pledged Interests consist of security entitlements, such Grantor shall (x) transfer such security entitlements to the Collateral Agent (or its custodian, nominee or other designee), or (y) cause the applicable securities intermediary to agree that, upon the occurrence and during the continuance of an Event of Default, it will comply with entitlement orders by the Collateral Agent without further consent by such Grantor.

(ii) Within (A) in the case of any Additional Collateral located in the United States, 10 Business Days (or such longer period as agreed to by the Collateral Agent in its sole discretion) or (B) in the case of any Additional Collateral located elsewhere, 30 days (or such longer period as agreed to by the Collateral Agent in its sole discretion) of the receipt by a Grantor of any Additional Collateral, a pledge amendment duly executed by such Grantor, in substantially the form of Exhibit A hereto (a "Pledge Amendment"), shall be delivered to the Collateral Agent, in respect of the Additional Collateral that must be pledged pursuant to this Agreement or the Financing Agreement. The Pledge Amendment shall from and after delivery thereof constitute part of Schedules VII and VIII hereto. Each Grantor hereby authorizes the Collateral Agent to attach each Pledge Amendment to this Agreement and agrees that all Promissory Notes, certificates or Instruments listed on any Pledge Amendment delivered to the Collateral Agent shall for all purposes hereunder constitute Pledged Interests and such Grantor shall be deemed upon delivery thereof to have made the representations and warranties set forth in Section 5 hereof with respect to such Additional Collateral.

(b) If any Grantor shall receive, by virtue of such Grantor being or having been an owner of any Pledged Interests, any Additional Collateral consisting of any (i) Equity Interest certificate (including, without limitation, any certificate representing an Equity Interest dividend or distribution in connection with any increase or reduction of capital, reclassification, merger, consolidation, sale of assets, combination of shares, stock split, spin-off or split-off), Promissory Note or other Instrument, (ii) option or right, whether as an addition to, substitution for, or in exchange for, any Pledged Interests, or otherwise, (iii) dividends or distributions payable in cash (except such dividends and/or distributions permitted to be retained by any such Grantor pursuant to Section 7 hereof) or in securities or other property or (iv) dividends, distributions, cash, Instruments, Investment Property and other property in connection with a partial or total liquidation or dissolution or in connection with a reduction of capital, capital surplus or paid-in surplus, such Grantor shall receive such Equity Interest certificate, Promissory Note, Instrument, option, right, payment or distribution in trust for the benefit of the Collateral Agent, shall segregate it from such Grantor's other property and shall promptly deliver it to the Collateral Agent, in the exact form received, with any necessary indorsement and/or instrument of transfer or assignment executed in blank (and, in the case of any Additional Collateral described in clause (b)(i) above, with an Irrevocable Proxy and Registration Page with respect to any such Additional Collateral), all in form and substance reasonably satisfactory to the Collateral Agent, to be held by the Collateral Agent as Pledged Interests.

SECTION 5. Representations and Warranties. Each Grantor jointly and severally represents and warrants as follows:

(a) Schedule I hereto sets forth a complete and accurate list as of the

date hereof of (i) the exact legal name of each Grantor, (ii) the jurisdiction of organization of each Grantor, (iii) the type of organization of each Grantor and (iv) the organizational identification number of each Grantor (or states that no such organizational identification number exists). The Perfection Certificate, dated as of the date hereof, a copy of which has been previously delivered to the Collateral Agent, is true, complete and correct in all respects.

(b) All Equipment, Fixtures, Inventory and other Goods now existing are, and all Equipment, Fixtures, Inventory (other than (i) Inventory in transit in the ordinary course of business, (ii) Equipment being used by employees in the ordinary course of business, (iii) Equipment which is being refurbished or repaired in the ordinary course of business and (iv) Equipment and Inventory with an aggregate value not exceeding \$500,000) and other Goods hereafter existing will be, located at the addresses specified therefor in Schedule III hereto (as amended, supplemented or otherwise modified from time to time in accordance with Section 6(b)). Each Grantor's chief place of business and chief executive office, the place where such Grantor keeps its Records concerning Accounts and all originals of all Chattel Paper are located at the addresses specified therefor in Schedule III hereto (as amended, supplemented or otherwise modified from time to time in accordance with the terms hereof). None of the Accounts is evidenced by Promissory Notes or other Instruments except for Promissory Notes evidencing indebtedness of not more than \$500,000 in the aggregate. Set forth in Schedule IV hereto is a complete and accurate list, as of the date of this Agreement, of each Deposit Account, Securities Account and Commodity Account of each Grantor, together with the name and address of each institution at which each such Account is maintained, the account number for each such Account and a description of the purpose of each such Account. Set forth in Schedule II hereto is (i) a complete and correct list of each trade name used by each Grantor and (ii) the name of, and each trade name used by, each Person from which such Grantor has acquired any substantial part of the Collateral within five years of the date hereof.

(c) Each Grantor has delivered to the Collateral Agent true, complete and correct copies of each License described in Schedule II hereto, including all schedules and exhibits thereto, which represents all of the Licenses existing on the date of this Agreement. Each such License sets forth the entire agreement and understanding of the parties thereto relating to the subject matter thereof, and there are no other agreements, arrangements or understandings, written or oral, relating to the matters covered thereby or the rights of any Grantor or any of its Affiliates in respect thereof. Each License now existing is, and each other License will be, the legal, valid and binding obligation of the parties thereto, enforceable against such parties in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally. No default under any License by any such party has occurred, nor does any defense, offset, deduction or counterclaim exist thereunder in favor of any such party. No party to any License has given any Grantor notice of its intention to cancel, terminate or fail to renew any License.

(d) Schedule II hereto sets forth a complete and accurate list of all registered or applied-for Intellectual Property constituting Collateral owned by each Grantor as of the date hereof. All such Intellectual Property is subsisting and in full force and effect, has not been adjudged invalid or unenforceable, has not been abandoned in whole or in part and is, to each Grantor's knowledge, valid and enforceable. No such Intellectual Property is the subject of any exclusive licensing or franchising agreement (excluding, for the avoidance of doubt, non-exclusive

licenses entered into in the ordinary course of business). No such Intellectual Property conflicts with the rights of others to any Intellectual Property and no Grantor is now infringing or in conflict with any such rights of others, and to each Grantor's knowledge, no other Person is now infringing or in conflict with any such properties, assets and rights owned or used by any Grantor, except for infringements and conflicts that could not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect. No Grantor has received any notice that it is violating or has violated the Intellectual Property rights of any third party, excluding any notice of any alleged infringement that, if adversely determined, would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the value of any material Intellectual Property of any Grantor.

(e) To the knowledge of each Grantor, none of the Other Intellectual Property of any Grantor constituting Collateral has been used, divulged, disclosed or appropriated to the detriment of such Grantor for the benefit of any other Person other than such Grantor; no employee, independent contractor or agent of any Grantor has misappropriated any Other Intellectual Property of any other Person in the course of the performance of his or her duties as an employee, independent contractor or agent of such Grantor; and no employee, independent contractor or agent of any Grantor is in default or breach in any material respect of any term of any employment agreement, non-disclosure agreement, assignment of inventions agreement or similar agreement, or contract relating in any way to the protection, ownership, development, use or transfer of such Grantor's Intellectual Property.

(f) The Pledged Issuers set forth in Schedule VIII that are Subsidiaries of a Grantor are such Grantor's only Subsidiaries. The Pledged Shares have been duly authorized and validly issued and are fully paid and nonassessable and the holders thereof are not entitled to any preemptive, first refusal or other similar rights. Except as noted in Schedule VIII hereto, the Pledged Shares constitute 100% of the issued shares of Equity Interests of the Pledged Issuers as of the date hereof. All other shares of Equity Interests constituting Pledged Interests will be duly authorized and validly issued, fully paid and nonassessable.

(g) The Promissory Notes evidencing the Pledged Debt have been, and all other Promissory Notes from time to time evidencing Pledged Debt, when executed and delivered, will have been, duly authorized, executed and delivered by the respective makers thereof, and all such Promissory Notes are or will be, as the case may be, legal, valid and binding obligations of such makers, enforceable against such makers in accordance with their respective terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally.

(h) The Grantors are and will be at all times the sole and exclusive owners of, or otherwise have and will have adequate rights in, the Collateral free and clear of any Liens except for the Permitted Liens. No effective financing statement or other instrument similar in effect covering all or any part of the Collateral is on file in any recording or filing office except such as may have been filed to perfect or protect any Permitted Lien.

(i) The exercise by the Collateral Agent of any of its rights and remedies hereunder will not contravene any law or Contractual Obligation binding on or otherwise affecting any Grantor or any of its properties and will not result in, or require the creation of, any

Lien upon or with respect to any of its properties.

(j) No authorization or approval or other action by, and no notice to or filing with, any Governmental Authority or any other Person, is required for (i) the due execution, delivery and performance by any Grantor of this Agreement, (ii) the grant by any Grantor of the security interest purported to be created hereby in the Collateral or (iii) the exercise by the Collateral Agent of any of its rights and remedies hereunder, except, in the case of this clause (iii), as may be required in connection with any sale of any Pledged Interests by laws affecting the offering and sale of securities generally. No authorization or approval or other action by, and no notice to or filing with, any Governmental Authority or any other Person, is required for the perfection of the security interest purported to be created hereby in the Collateral, except (A) for the filing under the Uniform Commercial Code as in effect in the applicable jurisdiction of the financing statements described in Schedule V hereto, all of which financing statements have been duly filed and are in full force and effect, (B) with respect to the perfection of the security interest created hereby in the United States Intellectual Property, for the recording of the appropriate Intellectual Property Security Agreement in the United States Patent and Trademark Office or the United States Copyright Office, as applicable, (C) with respect to the perfection of the security interest created hereby in foreign Intellectual Property, solely to the extent so reasonably requested by the Collateral Agent in any applicable jurisdiction located outside of the United States, for registrations and filings in such jurisdiction and covering rights in such jurisdiction relating to such foreign Intellectual Property, (D) with respect to the perfection of the security interest created hereby in Titled Collateral as required by the Collateral Agent hereunder, for the submission of an appropriate application requesting that the Lien of the Collateral Agent be noted on the Certificate of Title or certificate of ownership, completed and authenticated by the applicable Grantor, together with the Certificate of Title or certificate of ownership, with respect to such Titled Collateral, to the appropriate Governmental Authority, (E) with respect to any action that may be necessary to obtain control of Collateral constituting Deposit Accounts, Electronic Chattel Paper, Investment Property or Letter-of-Credit Rights, the taking of such actions, and (F) the Collateral Agent's having possession of all Documents, Chattel Paper, Instruments and cash constituting Collateral (subclauses (A) -- (F), each a "Perfection Requirement" and collectively, the "Perfection Requirements").

(k) This Agreement creates a legal, valid and enforceable security interest in favor of the Collateral Agent, for the benefit of the Secured Parties, in the Collateral, as security for the Secured Obligations. The Perfection Requirements result in the perfection of such security interests. Such security interests are, or in the case of Collateral in which any Grantor obtains rights after the date hereof, will be, perfected, first priority security interests, subject in priority only to the Permitted Liens, and the recording of such instruments of assignment described above. Such Perfection Requirements and all other action necessary or desirable to perfect and protect such security interest have been duly made or taken, except for (i) the Collateral Agent's having possession of all Instruments, Documents, Chattel Paper and cash constituting Collateral after the date hereof, (ii) the Collateral Agent's having control of all Deposit Accounts, Electronic Chattel Paper, Investment Property or Letter-of-Credit Rights constituting Collateral after the date hereof, and (iii) the other filings and recordings and actions described in Section 5(j) hereof.

(l) As of the date hereof, no Grantor holds any Commercial Tort Claims in respect of which a claim has been filed in a court of law or a written notice by an attorney has

been given to a potential defendant, except for such claims described in Schedule VI.

(m) Each Grantor and any of its Subsidiaries formed in the United States that is a partnership or a limited liability company with certificated Equity Interests, has irrevocably opted into (and has caused each of its Subsidiaries that is a partnership or a limited liability company with certificated Equity Interests, and a Pledged Issuer to opt into) Article 8 of the relevant Uniform Commercial Code (collectively, the "Certificated Entities"). Such interests are securities for purposes of Article 8 of the relevant Uniform Commercial Code. With respect to each Grantor and its Subsidiaries that is a partnership or a limited liability company and is not a Certificated Entity, the partnership interests or membership interests of each such Person are not (i) dealt in or traded on securities exchanges or in securities markets, (ii) securities for purposes of Article 8 of any relevant Uniform Commercial Code, (iii) investment company securities within the meaning of Section 8-103 of any relevant Uniform Commercial Code or (iv) evidenced by a certificate.

SECTION 6. Covenants as to the Collateral. In accordance with Section 7.01 of the Financing Agreement, during the period from the Effective Date until the Termination Date, unless the Collateral Agent shall otherwise consent in writing:

(a) Further Assurances. Each Grantor will take such action and execute, acknowledge and deliver, at its sole cost and expense, such agreements, instruments or other documents as the Collateral Agent may require from time to time in order (i) to evidence, perfect and protect, or maintain the perfection of, the security interest and Lien purported to be created hereby; (ii) to enable the Collateral Agent to exercise and enforce its rights and remedies hereunder in respect of the Collateral; or (iii) otherwise to effect the purposes of this Agreement, including, without limitation: (A) at the request of the Collateral Agent, marking conspicuously all Chattel Paper, Instruments, Licenses and all of its Records pertaining to the Collateral, in each case, in excess of \$500,000 in the aggregate with a legend, in form and substance reasonably satisfactory to the Collateral Agent, indicating that such Chattel Paper, Instrument, License or Records is subject to the security interest created hereby, (B) if any Account in excess of \$500,000 in the aggregate shall be evidenced by a Promissory Note or other Instrument or Chattel Paper, delivering and pledging to the Collateral Agent such Promissory Note, other Instrument or Chattel Paper, duly endorsed and accompanied by executed instruments of transfer or assignment, all in form and substance reasonably satisfactory to the Collateral Agent, (C) executing and filing (to the extent, if any, that such Grantor's signature is required thereon) or authenticating the filing of, such financing or continuation statements, or amendments thereto, (D) with respect to Intellectual Property hereafter existing and not covered by an appropriate security interest grant, the executing and recording in the United States Patent and Trademark Office or the United States Copyright Office, as applicable, appropriate instruments granting a security interest, as may be necessary or desirable or that the Collateral Agent may reasonably request in order to perfect and preserve the security interest purported to be created hereby, (E) delivering to the Collateral Agent Irrevocable Proxies and Registration Pages in respect of the Pledged Interests, (F) furnishing to the Collateral Agent from time to time statements and schedules further identifying and describing the Collateral and such other reports in connection with the Collateral as the Collateral Agent may reasonably request, all in reasonable detail, (G) if at any time after the date hereof, any Grantor acquires or holds any Commercial Tort Claim with a potential value in excess of \$500,000, immediately notifying the Collateral Agent in a writing signed by such Grantor setting forth a brief description

of such Commercial Tort Claim and granting to the Collateral Agent a security interest therein and in the proceeds thereof, which writing shall incorporate the provisions hereof and shall be in form and substance reasonably satisfactory to the Collateral Agent, (H) upon the acquisition after the date hereof by any Grantor of any Titled Collateral (other than Equipment that is subject to a purchase money security interest that constitutes a Permitted Lien under the Financing Agreement), promptly notifying the Collateral Agent of such acquisition, setting forth a description of the Titled Collateral acquired and a good faith estimate of the current value of such Titled Collateral, and if so requested by the Collateral Agent, immediately causing the Collateral Agent to be listed as the lienholder on such Certificate of Title or certificate of ownership and delivering evidence of the same to the Collateral Agent, and (I) taking all actions required by law in any relevant Uniform Commercial Code jurisdiction, or by other law as applicable in any foreign jurisdiction. No Grantor shall take or fail to take any action which could in any manner impair the validity or enforceability of the Collateral Agent's security interest in and Lien on any Collateral.

(b) Location of Equipment and Inventory. Each Grantor will keep the Equipment and Inventory at the locations specified in Schedule III hereto or, upon not less than 30 days' prior written notice to the Collateral Agent accompanied by a new Schedule III hereto indicating each new location of the Equipment and Inventory, at such other locations in the continental United States as the Grantors may elect, provided that (i) all action has been taken to grant to the Collateral Agent a perfected, first priority security interest in such Equipment and Inventory (subject only to Permitted Liens) in favor of the Collateral Agent, for the benefit of the Secured Parties, and (ii) the Collateral Agent's rights in such Equipment and Inventory, including, without limitation, the existence, perfection and priority of the security interest created hereby in such Equipment and Inventory, are not adversely affected thereby.

(c) Condition of Equipment. Each Grantor will promptly furnish to the Collateral Agent a statement describing in reasonable detail any loss or damage in excess of \$500,000 to any Equipment. Each Grantor will maintain or cause the Equipment which is necessary or useful in the proper conduct of its business to be maintained and preserved in good condition, repair and working order as when acquired and in accordance with any manufacturer's manual, ordinary wear and tear excepted, and will forthwith, or in the case of any loss or damage to any Equipment promptly after the occurrence thereof, make or cause to be made all repairs, replacements and other improvements in connection therewith which are necessary or desirable, consistent with past practice, or which the Collateral Agent may request to such end.

(d) Provisions Concerning the Accounts and the Licenses.

(i) Each Grantor will, except as otherwise provided in this subsection (d), continue to collect, at its own expense, all amounts due or to become due under the Accounts. In connection with such collections, each Grantor may (and, at the Collateral Agent's direction, will) take such action as such Grantor (or, if applicable, the Collateral Agent) may deem necessary or advisable to enforce collection or performance of the Accounts; provided, however, that the Collateral Agent shall have the right at any time, upon the occurrence and during the continuance of an Event of Default, to notify the Account Debtors or obligors under any Accounts of the assignment of such Accounts to the Collateral Agent and to direct such Account Debtors or obligors to make payment of all amounts due or to become due to such Grantor thereunder directly to the Collateral Agent or its designated agent and, upon such notification and at the expense of

such Grantor and to the extent permitted by law, to enforce collection of any such Accounts and to adjust, settle or compromise the amount or payment thereof, in the same manner and to the same extent as such Grantor might have done. After receipt by any Grantor of a notice from the Collateral Agent that the Collateral Agent has notified, intends to notify, or has enforced or intends to enforce a Grantor's rights against the Account Debtors or obligors under any Accounts as referred to in the proviso to the immediately preceding sentence, (A) all amounts and proceeds (including Instruments) received by such Grantor in respect of the Accounts shall be received in trust for the benefit of the Collateral Agent hereunder, shall be segregated from other funds of such Grantor and shall be forthwith paid over to the Collateral Agent or its designated agent in the same form as so received (with any necessary endorsement) to be held as cash collateral and either (x) credited to the Loan Account so long as no Event of Default shall have occurred and be continuing or (y) if any Event of Default shall have occurred and be continuing, applied as specified in the Financing Agreement hereof, and (B) such Grantor will not adjust, settle or compromise the amount or payment of any Account or release wholly or partly any Account Debtor or obligor thereof or allow any credit or discount thereon. Any such securities, cash, investments and other items so received by the Collateral Agent or its designated agent shall (in the sole and absolute discretion of the Collateral Agent) be held as additional Collateral for the Secured Obligations or distributed in accordance with Section 9 hereof.

(ii) Upon the occurrence and during the continuance of any material breach or default under any License by any party thereto other than a Grantor, (A) the relevant Grantor will, promptly after obtaining knowledge thereof, give the Collateral Agent written notice of the nature and duration thereof, specifying what action, if any, it has taken and proposes to take with respect thereto, (B) no Grantor will, without the prior written consent of the Collateral Agent, declare or waive any such breach or default or affirmatively consent to the cure thereof or exercise any of its remedies in respect thereof, and (C) each Grantor will, upon written instructions from the Collateral Agent and at such Grantor's expense, take such action as the Collateral Agent may deem necessary or advisable in respect thereof.

(iii) Each Grantor will, at its expense, promptly deliver to the Collateral Agent a copy of each notice or other communication received by it by which any other party to any License (A) declares a breach or default by a Grantor of any material term thereunder, (B) terminates such License or (C) purports to exercise any of its rights or affect any of its obligations thereunder, together with a copy of any reply by such Grantor thereto.

(iv) Each Grantor will exercise promptly and diligently each and every right which it may have under each License (other than any right of termination) and will duly perform and observe in all material respects all of its obligations under each License and will take all action necessary to maintain the Licenses in full force and effect. No Grantor will, without the prior written consent of the Collateral Agent, cancel, terminate, amend or otherwise modify in any respect, or waive any provision of, any License.

(e) Notices and Communications; Defense of Title; Amendments; Equity Issuances. Each Grantor will

(i) at the Grantors' joint and several expense, promptly deliver to the Collateral Agent a copy of each material notice or other communication received by it in

respect of the Pledged Interests;

(ii) at the Grantors' joint and several expense, defend the Collateral Agent's right, title and security interest in and to the Pledged Interests against the claims of any Person, keep the Pledged Interests free from all Liens (except Permitted Liens), and not sell, exchange, transfer, assign, lease or otherwise dispose of the Pledged Interests or any interest therein, except as permitted under the Financing Agreement and the other Loan Documents;

(iii) not make or consent to any amendment or other modification or waiver with respect to any Pledged Interests or enter into any agreement or permit to exist any restriction with respect to any Pledged Interests other than as expressly permitted under the Financing Agreement; and

(iv) not permit the issuance of (A) any additional shares of any class of Equity Interests of any Pledged Issuer, (B) any securities convertible voluntarily by the holder thereof or automatically upon the occurrence or non-occurrence of any event or condition into, or exchangeable for, any such shares of Equity Interests or (C) any warrants, options, contracts or other commitments entitling any Person to purchase or otherwise acquire any such shares of Equity Interests, in each case, other than as permitted under the Financing Agreement.

(f) Intellectual Property.

(i) If applicable, each Grantor has duly executed and delivered the applicable Intellectual Property Security Agreement(s). Except as provided in subsection (ii) below, each Grantor (either itself or through licensees) will, and will use reasonable efforts to cause each licensee thereof to, take all action reasonably necessary to maintain all of the Intellectual Property constituting Collateral in full force and effect, including, without limitation, using the proper statutory notices and markings and using the Trademarks on each applicable trademark class of goods in order to so maintain the Trademarks in full force, free from any claim of abandonment for non-use, and no Grantor will (nor permit any licensee thereof to) do any act or knowingly omit to do any act whereby any Intellectual Property may become invalidated.

(ii) Notwithstanding the foregoing, so long as no Event of Default has occurred and is continuing, no Grantor shall have an obligation to use or to maintain any Intellectual Property (A) that relates solely to any product or work, that has been, or is in the process of being, discontinued, abandoned or terminated, (B) that is being replaced with Intellectual Property substantially similar to the Intellectual Property that may be abandoned or otherwise become invalid, so long as the failure to use or maintain such Intellectual Property does not materially adversely affect the validity of such replacement Intellectual Property and so long as such replacement Intellectual Property is subject to the Lien created by this Agreement, (C) that is substantially the same as any other Intellectual Property that is in full force, so long as the failure to use or maintain such Intellectual Property does not materially adversely affect the validity of such replacement Intellectual Property and so long as such other Intellectual Property is subject to the Lien and security interest created by this Agreement or (D) that a Grantor elects to abandon and such abandonment constitutes a Permitted Disposition.

(iii) Each Grantor will cause to be taken all necessary steps in any

proceeding before the United States Patent and Trademark Office and the United States Copyright Office or any similar office or agency in any other country or political subdivision thereof in which Collateral is located to maintain each registration of the Intellectual Property (other than the Intellectual Property described in the proviso to the immediately preceding sentence), including, without limitation, filing of renewals, affidavits of use, affidavits of incontestability and opposition, interference and cancellation proceedings and payment of maintenance fees, filing fees, taxes or other governmental fees, except as could not reasonably be expected to have a Material Adverse Effect. If any Intellectual Property is infringed, misappropriated, diluted or otherwise violated in any material respect by a third party, the Grantors shall (A) upon obtaining knowledge of such infringement, misappropriation, dilution or other violation, notify the Collateral Agent simultaneously with the next delivery of the financial statements of the Parent and its Subsidiaries required by Section 7.01(a)(ii) of the Financing Agreement, as applicable, and (B) to the extent the Grantors shall deem appropriate in their discretion under the circumstances, promptly sue for infringement, misappropriation, dilution or other violation, seek injunctive relief where appropriate and recover any and all damages for such infringement, misappropriation, dilution or other violation, or take such other actions as the Grantors shall deem appropriate in their discretion under the circumstances to protect such Intellectual Property.

(iv) Each Grantor shall furnish to the Collateral Agent statements and schedules further identifying and describing the Intellectual Property and material Licenses (excluding agreements for unmodified, commercially available products with fees less than \$250,00 per year or \$500,000 in the aggregate) and such other reports in connection with the Intellectual Property and material Licenses as the Collateral Agent may reasonably request, all in reasonable detail and promptly upon request of the Collateral Agent, following receipt by the Collateral Agent of any such statements, schedules or reports, the Grantors shall modify this Agreement by amending Schedule II hereto to include any Intellectual Property and material Licenses, as the case may be, which become part of the Collateral under this Agreement, and shall execute and authenticate such documents and do such acts as shall be necessary or, in the judgment of the Collateral Agent, desirable to subject such Intellectual Property and material Licenses to the Lien and security interest created by this Agreement, except to the extent such Intellectual Property or material Licenses constitute Excluded Property.

(v) Notwithstanding anything herein to the contrary, upon the occurrence and during the continuance of an Event of Default, no Grantor may abandon or otherwise permit any Intellectual Property to become invalid without the prior written consent of the Collateral Agent, and if any Intellectual Property is infringed, misappropriated, diluted or otherwise violated in any material respect by a third party, the Grantors will take such action as the Collateral Agent shall deem reasonably appropriate under the circumstances to protect such Intellectual Property.

(vi) In the event that any Grantor shall (A) obtain rights to any new Trademarks used in the operation of its business, or any reissue, renewal or extension of any existing Trademark used in the operation of its business, (B) obtain rights to or develop any new patentable inventions, or become entitled to the benefit of any Patent, or any reissue, division, continuation, renewal, extension or continuation-in-part of any existing Patent or any improvement thereof (whether pursuant to any license or otherwise), (C) obtain rights to or develop any new works protectable by Copyright, or become entitled to the benefit of any rights with respect to any Copyright or any registration or application therefor, or any renewal or extension of any existing

Copyright or any registration or application therefor, or (D) obtain rights to or develop new Other Intellectual Property, the provisions of Section 2 hereof shall automatically apply thereto (except to the extent that any such Intellectual Property constitutes Excluded Property) and such Grantor shall give to the Collateral Agent prompt notice thereof in accordance with the terms of this Agreement and the Financing Agreement. Except as otherwise provided herein or in the Financing Agreement each Grantor, either itself or through any agent, employee, licensee or designee, shall, simultaneously with the next delivery of the financial statements of the Parent and its Subsidiaries required by Section 7.01(a)(ii) of the Financing Agreement, as applicable, give the Collateral Agent written notice of each application submitted by it for the registration of any Trademark or Copyright or the issuance of any Patent with the United States Patent and Trademark Office or the United States Copyright Office, as applicable, or in any similar office or agency of the United States or any country or any political subdivision thereof in which Collateral is located.

(vii) Each Grantor hereby appoints the Collateral Agent its attorney-in-fact to execute and/or authenticate and file all such writings for the foregoing purposes, all acts of such attorney being hereby ratified and confirmed, and such power (being coupled with an interest) shall be irrevocable until the Termination Date; provided, that absent the occurrence and continuance of an Event of Default, the Collateral Agent shall not exercise such attorney-in-fact powers unless such Grantor fails to execute such agreements in accordance with Section 6(a).

(g) Deposit, Commodities and Securities Accounts. In accordance with Section 8 of the Financing Agreement, each Grantor shall cause each bank and other financial institution with an account referred to in Schedule IV hereto to execute and deliver to the Collateral Agent (or its designee) a Control Agreement, in form and substance reasonably satisfactory to the Collateral Agent, duly executed by such Grantor and such bank or financial institution, or enter into other arrangements in form and substance reasonably satisfactory to the Collateral Agent, pursuant to which such institution shall irrevocably agree (unless otherwise agreed to by the Collateral Agent), among other things, that (i) it will comply at any time with the instructions originated by the Collateral Agent (or its designee) to such bank or financial institution directing the disposition of cash, Commodity Contracts, securities, Investment Property and other items from time to time credited to such account, without further consent of such Grantor, which instructions the Collateral Agent (or its designee) will not give to such bank or other financial institution in the absence of a continuing Event of Default, (ii) all cash, Commodity Contracts, securities, Investment Property and other items of such Grantor deposited with such institution shall be subject to a perfected, first priority security interest in favor of the Collateral Agent (or its designee), and (iii) any right of set off, banker's Lien or other similar Lien, security interest or encumbrance shall be fully waived as against the Collateral Agent (or its designee). The provisions of this Section 6(g) shall not apply to any Excluded Accounts.

(h) Titled Collateral.

(i) Each Grantor shall (a) cause all Collateral, now owned or hereafter acquired by any Grantor, which under applicable law are required to be registered, to be properly registered in the name of such Grantor, (b) cause all motor vehicles (including, without limitation, all trucks, trailers, tractors, service vehicles, automobiles and other mobile equipment) for which the title to such motor vehicles is governed by a Certificate of Title or certificate of ownership, to be properly titled in the name of such Grantor, and if in excess of \$50,000 and

requested by the Collateral Agent, with the Collateral Agent's Lien noted thereon and (c) if requested by the Collateral Agent, promptly deliver to the Collateral Agent (or its custodian) originals of all such Certificates of Title or certificates of ownership for such Titled Collateral, with the Collateral Agent's Lien noted thereon.

(ii) Upon the acquisition after the date hereof by any Grantor of any Titled Collateral (other than Equipment to be acquired that is subject to a purchase money security interest that constitutes a Permitted Lien under the Financing Agreement), such Grantor shall promptly notify the Collateral Agent of such acquisition, set forth a description of such Titled Collateral acquired and a good faith estimate of the current value of such Titled Collateral, and if so requested by the Collateral Agent, immediately deliver to the Collateral Agent (or its custodian) originals of the Certificates of Title or certificates of ownership for such Titled Collateral, together with the manufacturer's statement of origin, and an application duly executed by the appropriate Grantor to evidence the Collateral Agent's Lien thereon.

(iii) Subject to this Section 6(h), each Grantor hereby appoints the Collateral Agent as its attorney-in-fact, effective the date hereof and terminating upon the termination of this Agreement, for the purpose of (A) executing on behalf of such Grantor title or ownership applications for filing with appropriate Governmental Authority to enable Titled Collateral now owned or hereafter acquired by such Grantor to be amended to reflect the Collateral Agent listed as lienholder thereof, (B) filing such applications with such Governmental Authority, and (C) executing such other documents and instruments on behalf of, and taking such other action in the name of, such Grantor as the Collateral Agent may deem necessary or advisable to accomplish the purposes of this Section 6(h) (including, without limitation, for the purpose of creating in favor of the Collateral Agent a perfected Lien on such Titled Collateral and exercising the rights and remedies of the Collateral Agent hereunder). This appointment as attorney-in-fact is coupled with an interest and is irrevocable until the Termination Date.

(iv) So long as no Event of Default shall have occurred and be continuing, upon the request of any Grantor, the Collateral Agent shall execute and deliver to such Grantor such instruments as such Grantor shall reasonably request to remove the notation of the Collateral Agent as lienholder on any Certificate of Title or certificate of ownership for any Titled Collateral; provided that any such instruments shall be delivered, and the release shall be effective, only upon receipt by the Collateral Agent of a certificate from such Grantor, stating that the Titled Collateral, the Lien on which is to be released, is to be sold in accordance with the terms of the Financing Agreement or has suffered a casualty loss (with title thereto passing to the casualty insurance company therefor in settlement of the claim for such loss), the amount that such Grantor will receive as sale proceeds or insurance proceeds and whether or not such sale proceeds or insurance proceeds are required by the Financing Agreement to be paid to the Collateral Agent to be applied to the Secured Obligations and, to the extent required by the Financing Agreement, any proceeds of such sale or casualty loss shall be paid to the Collateral Agent hereunder to be applied to the Secured Obligations in accordance with the terms of the Financing Agreement.

(i) Control. Each Grantor hereby agrees to take any or all action that may be necessary or desirable or that the Collateral Agent may request in order for the Collateral Agent to obtain control in accordance with Sections 9-104, 9-105, 9-106, and 9-107 of the Code with respect to the following Collateral: (i) Deposit Accounts, (ii) Securities Accounts; (iii)

Electronic Chattel Paper, (iv) Investment Property and (v) Letter-of-Credit Rights. Each Grantor hereby acknowledges and agrees that any agent or designee of the Collateral Agent shall be deemed to be a "secured party" with respect to the Collateral under the control of such agent or designee for all purposes.

(j) Records: Inspection and Reporting.

(i) Each Grantor shall keep adequate records concerning the Accounts, Chattel Paper and Pledged Interests.

(ii) Except as otherwise expressly permitted by Section 6(b), no Grantor shall, without the prior written consent of the Collateral Agent, amend, modify or otherwise change (A) its name, organizational identification number or FEIN (B) its jurisdiction of organization as set forth in Schedule I hereto or (C) its chief executive office as set forth in Schedule III hereto. Each Grantor shall immediately notify the Collateral Agent upon obtaining an organizational identification number, if on the date hereof, such Grantor did not have such identification number.

(k) Partnership and Limited Liability Company Interests.

(i) Except with respect to partnership interests and limited liability company interests evidenced by a certificate, which certificate has been pledged and delivered to the Collateral Agent pursuant to Section 4 hereof, no Grantor that is a partnership or a limited liability company shall, nor shall any Grantor with any Subsidiary that is a partnership or a limited liability company, permit such Subsidiary's partnership interests or membership interests to (A) be dealt in or traded on securities exchanges or in securities markets, (B) become a security for purposes of Article 8 of any relevant Uniform Commercial Code, (C) become an investment company security within the meaning of Section 8-103 of any relevant Uniform Commercial Code or (D) be evidenced by a certificate. Each Grantor agrees that such partnership interests or membership interests shall constitute General Intangibles.

(ii) Each Grantor covenants and agrees that each limited liability agreement, operating agreement, membership agreement, partnership agreement or similar agreement to which a Grantor formed in the United States is a party and relating to any Pledged Interests (as amended, restated, supplemented or otherwise modified from time to time, each a "Pledged Partnership/LLC Agreement") is hereby amended by this Section 6(k) (A) to permit each member, manager and partner that is a Grantor (1) to pledge all of the Pledged Interests in which such Grantor has rights, (2) to grant and collaterally assign to the Collateral Agent, for the benefit of each Secured Party, a lien on and security interest in such Pledged Interests and (3) to, upon any foreclosure by the Collateral Agent on such Pledged Interests (or any other sale or transfer of such Pledged Interests in lieu of such foreclosure), transfer to the Collateral Agent (or to the purchaser or other transferee of such Pledged Interests in lieu of such foreclosure) its rights and powers to manage and control the affairs of the applicable Pledged Issuer, in each case, without any further consent, approval or action by any other party, including, without limitation, any other party to any Pledged Partnership/LLC Agreement or otherwise and (B) to provide that (1) the bankruptcy or insolvency of such Grantor shall not cause such Grantor to cease to be a holder of such Pledged Interests, (2) upon the occurrence of such an event, the applicable Pledged Issuer shall continue

without dissolution and (3) such Grantor waives any right it might have to agree in writing to dissolve the applicable Pledged Issuer upon the bankruptcy or insolvency of such Grantor, or the occurrence of an event that causes such Grantor to cease to be a holder of such Pledged Interests.

(iii) Upon the occurrence and during the continuance of an Event of Default, the Collateral Agent or its designee shall have the right (but not the obligation) to be substituted for the applicable Grantor as a member, manager or partner under the applicable Pledged Partnership/LLC Agreement, and the Collateral Agent or its designee shall have all rights, powers and benefits of such Grantor as a member, manager or partner, as applicable, under such Pledged Partnership/LLC Agreement in accordance with the terms of this Section 6(k). For avoidance of doubt, such rights, powers and benefits of a substituted member, manager or partner shall include all voting and other rights and not merely the rights of an economic interest holder.

(iv) During the period from the Effective Date until the Termination Date, no further consent, approval or action by any other party, including, without limitation, any other party to the applicable Pledged Partnership/LLC Agreement or otherwise shall be necessary to permit the Collateral Agent or its designee to be substituted as a member, manager or partner pursuant to this Section 6(k). The rights, powers and benefits granted pursuant to this paragraph shall inure to the benefit of the Collateral Agent, on its own behalf and on behalf of each other Secured Party, and each of their respective successors, assigns and designees, as intended third party beneficiaries.

(v) Each Grantor and each applicable Pledged Issuer agrees that during the period from the Effective Date until the Termination Date, no Pledged Partnership/LLC Agreement shall be amended to be inconsistent with the provisions of this Section 6(k) without the prior written consent of the Collateral Agent.

SECTION 7. Voting Rights, Dividends, Etc. in Respect of the Pledged Interests.

(a) So long as no Event of Default shall have occurred and be continuing:

(i) each Grantor may exercise any and all voting and other consensual rights pertaining to any Pledged Interests for any purpose not inconsistent with the terms of this Agreement, the Financing Agreement or the other Loan Documents; provided, however, that (A) no Grantor will exercise or refrain from exercising any such right, as the case may be, if the Collateral Agent gives such Grantor notice that, in the Collateral Agent's judgment, such action (or inaction) could reasonably be expected to violate the terms of any Loan Document or have a Material Adverse Effect and (B) each Grantor will give the Collateral Agent at least 5 Business Days' notice of the manner in which it intends to exercise, or the reasons for refraining from exercising, any such right which could reasonably be expected to adversely affect the value, liquidity or marketability of any Collateral or the creation, perfection and priority of the Collateral Agent's Lien thereon; and

(ii) each Grantor may receive and retain any and all dividends, interest or other distributions paid in respect of the Pledged Interests to the extent permitted by the

Financing Agreement; provided, however, that any and all (A) dividends and interest paid or payable other than in cash in respect of, and Instruments and other property received, receivable or otherwise distributed in respect of or in exchange for, any Pledged Interests, (B) dividends and other distributions paid or payable in cash in respect of any Pledged Interests in connection with a partial or total liquidation or dissolution or in connection with a reduction of capital, capital surplus or paid-in surplus, and (C) cash paid, payable or otherwise distributed in redemption of, or in exchange for, any Pledged Interests, together with any dividend, interest or other distribution or payment which at the time of such payment was not permitted by the Financing Agreement, shall be, and shall forthwith be delivered to the Collateral Agent, to hold as, Pledged Interests and shall, if received by any of the Grantors, be received in trust for the benefit of the Collateral Agent, shall be segregated from the other property or funds of the Grantors, and shall be forthwith delivered to the Collateral Agent in the exact form received with any necessary indorsement and/or appropriate instruments of transfer or assignment or undated stock powers duly executed in blank, to be held by the Collateral Agent as Pledged Interests and as further collateral security for the Secured Obligations.

(b) Upon the occurrence and during the continuance of an Event of Default:

(i) all rights of each Grantor to exercise the voting and other consensual rights which it would otherwise be entitled to exercise pursuant to Section 7(a)(i) hereof, and to receive the dividends, distributions, interest and other payments that it would otherwise be authorized to receive and retain pursuant to Section 7(a)(ii) hereof, shall cease, and all such rights shall thereupon become vested in the Collateral Agent, which shall thereupon have the sole right to exercise such voting and other consensual rights and to receive and hold as Pledged Interests such dividends, distributions and interest payments, and the Collateral Agent (personally or through an agent) shall thereupon be solely authorized and empowered to transfer and register in the Collateral Agent's name, or in the name of the Collateral Agent's nominee, the whole or any part of the Pledged Interests, it being acknowledged by each Grantor that such transfer and registration may be effected by the Collateral Agent by the delivery of a Registration Page to the Grantor or to the Pledged Issuer, as applicable, reflecting the Collateral Agent or its designee as the holder of such Pledged Interests, or otherwise by the Collateral Agent through its irrevocable appointment as attorney-in-fact pursuant to Section 8 hereof;

(ii) the Collateral Agent is authorized to notify each debtor with respect to the Pledged Debt to make payment directly to the Collateral Agent (or its designee) and may collect any and all moneys due or to become due to any Grantor in respect of the Pledged Debt, and each of the Grantors hereby authorizes each such debtor to make such payment directly to the Collateral Agent (or its designee) without any duty of inquiry;

(iii) without limiting the generality of the foregoing, the Collateral Agent may, at its option, exercise any and all rights of conversion, exchange, subscription or any other rights, privileges or options pertaining to any of the Pledged Interests as if it were the absolute owner thereof, including, without limitation, the right to exchange, in its discretion, any and all of the Pledged Interests upon the merger, consolidation, reorganization, recapitalization or other adjustment of any Pledged Issuer, or upon the exercise by any Pledged Issuer of any right, privilege or option pertaining to any Pledged Interests, and, in connection

therewith, to deposit and deliver any and all of the Pledged Interests with any committee, depository, transfer agent, registrar or other designated agent upon such terms and conditions as it may determine; and

(iv) all dividends, distributions, interest and other payments that are received by any of the Grantors contrary to the provisions of Section 7(b)(i) hereof shall be received in trust for the benefit of the Collateral Agent, shall be segregated from other funds of the Grantors, and shall be forthwith paid over to the Collateral Agent as Pledged Interests in the exact form received with any necessary indorsement and/or appropriate instruments of transfer or assignment or undated Equity Interest powers duly executed in blank, to be held by the Collateral Agent as Pledged Interests and as further collateral security for the Secured Obligations.

SECTION 8. Additional Provisions Concerning the Collateral.

(a) To the maximum extent permitted by applicable law, and for the purpose of taking any action that the Collateral Agent may deem necessary or advisable to accomplish the purposes of this Agreement, each Grantor hereby (i) authorizes the Collateral Agent to execute any such agreements, instruments or other documents in such Grantor's name and to file such agreements, instruments or other documents in such Grantor's name and in any appropriate filing office, (ii) authorizes the Collateral Agent at any time and from time to time to file, one or more financing or continuation statements and amendments thereto, relating to the Collateral (including, without limitation, any such financing statements that (A) describe the Collateral as "all assets" or "all personal property" (or words of similar effect) or that describe or identify the Collateral by type or in any other manner as the Collateral Agent may determine, regardless of whether any particular asset of such Grantor falls within the scope of Article 9 of the Uniform Commercial Code or whether any particular asset of such Grantor constitutes part of the Collateral, and (B) contain any other information required by Part 5 of Article 9 of the Code for the sufficiency or filing office acceptance of any financing statement, continuation statement or amendment, including, without limitation, whether such Grantor is an organization, the type of organization and any organizational identification number issued to such Grantor) and (iii) ratifies such authorization to the extent that the Collateral Agent has filed any such financing statements, continuation statements, or amendments thereto, prior to the date hereof. A photocopy or other reproduction of this Agreement or any financing statement covering the Collateral or any part thereof shall be sufficient as a financing statement where permitted by law.

(b) Each Grantor hereby irrevocably appoints the Collateral Agent as its attorney-in-fact and proxy, with full authority in the place and stead of such Grantor and in the name of such Grantor or otherwise, from time to time in the Collateral Agent's discretion, to take any action and to execute any instrument that the Collateral Agent may deem necessary or advisable to accomplish the purposes of this Agreement (subject to the rights of a Grantor under Section 6 hereof and Section 7(a) hereof), including, without limitation, (i) to obtain and adjust insurance required to be paid to the Collateral Agent pursuant to the Financing Agreement, (ii) to ask, demand, collect, sue for, recover, compound, receive and give acquittance and receipts for moneys due and to become due under or in respect of any Collateral, (iii) to receive, endorse, and collect any drafts or other Instruments, Documents and Chattel Paper in connection with clause (i) or (ii) above, (iv) to receive, indorse and collect all Instruments made payable to such Grantor representing any dividend, interest payment or other distribution in respect of any Pledged Interests

and to give full discharge for the same, (v) to file any claims or take any action or institute any proceedings which the Collateral Agent may deem necessary or desirable for the collection of any Collateral or otherwise to enforce the rights of each Secured Party with respect to any Collateral, (vi) to execute assignments, licenses and other documents to enforce the rights of each Secured Party with respect to any Collateral, (vii) to pay or discharge taxes or Liens levied or placed upon or threatened against the Collateral, the legality or validity thereof and the amounts necessary to discharge the same to be determined by the Collateral Agent (in its sole discretion), and such payments made by the Collateral Agent shall constitute additional Secured Obligations of such Grantor to the Collateral Agent, be due and payable immediately without demand, and shall bear interest from the date payment of said amounts is demanded at the Post-Default Rate, and (viii) to sign and endorse any invoices, freight or express bills, bills of lading, storage or warehouse receipts, assignments, verifications and notices in connection with Accounts, Chattel Paper and other documents relating to the Collateral. This power is coupled with an interest and is irrevocable until the Termination Date.

(c) Solely for the purpose of enabling the Collateral Agent to exercise rights and remedies hereunder, at such time as the Collateral Agent shall be lawfully entitled to exercise such rights and remedies, and for no other purpose, each Grantor hereby grants to the Collateral Agent an irrevocable, non-exclusive license (exercisable without payment of royalty or other compensation to any Grantor) to use, assign, license or sublicense any Intellectual Property constituting Collateral now or hereafter owned by any Grantor, wherever the same may be located, including in such license reasonable access to all media in which any of the licensed items may be recorded or stored and to all computer programs used for the compilation or printout thereof; provided, however, that such license (i) shall be subject to those exclusive Licenses granted by the Grantors in effect, if any, and those granted by any Grantor hereafter, as permitted under the Loan Documents, to the extent conflicting, (ii) shall not violate the express terms of any agreement between a Grantor and a third party governing the applicable Grantor's use of such Collateral or give such third party any right of acceleration, modification, or cancellation therein, (iii) shall not violate any applicable Law, (iv) may be exercised only upon the occurrence and during the continuation of an Event of Default, and (v) shall apply to the use of the Trademarks in connection with goods and services of similar type and quality to those theretofore sold by such Grantor under such Trademark. Notwithstanding anything contained herein to the contrary, but subject to the provisions of the Financing Agreement that limit the right of a Grantor to dispose of its property or as specified herein, each Grantor may exploit, use, enjoy, protect, license, sublicense, assign, sell, dispose of or take other actions with respect to the Intellectual Property in the ordinary course of business. The exercise of rights and remedies hereunder by Collateral Agent shall not terminate the rights of the holders of any licenses or sublicenses theretofore granted by any Grantor. Each Grantor hereby releases the Collateral Agent from, and indemnifies the Collateral Agent against, any claims, causes of action and demands at any time arising out of or with respect to any actions taken or omitted to be taken by the Collateral Agent under the powers of attorney or license granted herein; provided, however, that the Grantors shall not have any obligation to release and indemnify the Collateral Agent under this subsection (c) for (i) any actions taken or omitted to be taken through the Collateral Agent's gross negligence or willful misconduct, (ii) a material breach of the applicable license by the Collateral Agent and (iii) any claims, causes of action and demands that do not involve an act or omission by any Loan Party or any of its Affiliates and is solely among the Secured Parties (other than claims against any Agent in its capacity in or fulfilling its role as an agent or arranger under this Agreement or any other Loan Document), in each case, as

determined by a final determination of a court of competent jurisdiction.

(d) If any Grantor fails to perform any agreement or obligation contained herein, the Collateral Agent may itself perform, or cause performance of, such agreement or obligation, in the name of such Grantor or the Collateral Agent, and the fees and expenses of the Collateral Agent incurred in connection therewith shall be jointly and severally payable by the Grantors pursuant to Section 10 hereof constitute additional Secured Obligations of the Grantor to the Collateral Agent, be due and payable immediately without demand and bear interest from the date payment of said amounts is demanded at the Post-Default Rate.

(e) The powers conferred on the Collateral Agent hereunder are solely to protect its interest in the Collateral and shall not impose any duty upon it to exercise any such powers. Other than the exercise of reasonable care to assure the safe custody of any Collateral in its possession and the accounting for moneys actually received by it hereunder, the Collateral Agent shall have no duty as to any Collateral or as to the taking of any necessary steps to preserve rights against other parties or any other rights pertaining to any Collateral and shall be relieved of all responsibility for any Collateral in its possession upon surrendering it or tendering surrender of it to any of the Grantors (or whomsoever shall be lawfully entitled to receive the same or as a court of competent jurisdiction shall direct). The Collateral Agent shall be deemed to have exercised reasonable care in the custody and preservation of any Collateral in its possession if such Collateral is accorded treatment substantially equal to that which the Collateral Agent accords its own property, it being understood that the Collateral Agent shall not have responsibility for ascertaining or taking action with respect to calls, conversions, exchanges, maturities, tenders or other matters relating to any Collateral, whether or not the Collateral Agent has or is deemed to have knowledge of such matters. The Collateral Agent shall not be liable or responsible for any loss or damage to any of the Collateral, or for any diminution in the value thereof, by reason of the act or omission of any warehouseman, carrier, forwarding agency, consignee or other agent or bailee selected by the Collateral Agent in good faith.

(f) Anything herein to the contrary notwithstanding (i) each Grantor shall remain liable under the Licenses and otherwise in respect of the Collateral to the extent set forth therein to perform all of its obligations thereunder to the same extent as if this Agreement had not been executed, (ii) the exercise by the Collateral Agent of any of its rights hereunder shall not release any Grantor from any of its obligations under the Licenses or otherwise in respect of the Collateral, and (iii) the Collateral Agent shall not have any obligation or liability by reason of this Agreement under the Licenses or otherwise in respect of the Collateral, nor shall the Collateral Agent be obligated to perform any of the obligations or duties of any Grantor thereunder or to take any action to collect or enforce any claim for payment assigned hereunder.

(g) The Collateral Agent may at any time in its discretion (i) without notice to any Grantor, transfer or register in the name of the Collateral Agent or any of its nominees any or all of the Pledged Interests, subject only to the revocable rights of such Grantor under Section 7(a) hereof, and (ii) exchange certificates or Instruments constituting Pledged Interests for certificates or Instruments of smaller or larger denominations.

SECTION 9. Remedies Upon Default. If any Event of Default shall have occurred and be continuing:

(a) The Collateral Agent may exercise in respect of the Collateral, in addition to any other rights and remedies provided for herein or otherwise available to it, all of the rights and remedies of a secured party upon default under the Code (whether or not the Code applies to the affected Collateral), and also may (i) take absolute control of the Collateral, including, without limitation, transfer into the Collateral Agent's name or into the name of its nominee or nominees (to the extent the Collateral Agent has not theretofore done so) and thereafter receive, for the benefit of each Secured Party, all payments made thereon, give all consents, waivers and ratifications in respect thereof and otherwise act with respect thereto as though it were the outright owner thereof, (ii) require each Grantor to, and each Grantor hereby agrees that it will at its expense and upon request of the Collateral Agent forthwith, assemble all or part of the Collateral as directed by the Collateral Agent and make it available to the Collateral Agent at a place or places to be designated by the Collateral Agent that is reasonably convenient to both parties, and the Collateral Agent may enter into and occupy any premises owned or leased by any Grantor where the Collateral or any part thereof is located or assembled for a reasonable period in order to effectuate the Collateral Agent's rights and remedies hereunder or under law, without obligation to any Grantor in respect of such occupation, and (iii) without notice except as specified below and without any obligation to prepare or process the Collateral for sale, (A) sell the Collateral or any part thereof in one or more parcels at public or private sale, at any of the Collateral Agent's offices, at any exchange or broker's board or elsewhere, for cash, on credit or for future delivery, and at such price or prices and upon such other terms as the Collateral Agent may deem commercially reasonable and/or (B) lease, license or otherwise dispose of the Collateral or any part thereof upon such terms as the Collateral Agent may deem commercially reasonable. Each Grantor agrees that, to the extent notice of sale or any other disposition of the Collateral shall be required by law, at least 10 days' prior notice to the applicable Grantor of the time and place of any public sale or the time after which any private sale or other disposition of the Collateral is to be made shall constitute reasonable notification. If the Collateral Agent sells any of the Collateral upon credit, the Grantors will be credited only with payments actually received by the Collateral Agent from the purchaser thereof, and if such purchaser fails to pay for the Collateral, the Collateral Agent may resell the Collateral and the Grantors shall be credited with proceeds of the sale. The Collateral Agent shall not be obligated to make any sale or other disposition of Collateral regardless of notice of sale having been given. The Collateral Agent may adjourn any public or private sale from time to time by announcement at the time and place fixed therefor, and such sale may, without further notice, be made at the time and place to which it was so adjourned. Each Grantor hereby waives any claims against each Secured Party arising by reason of the fact that the price at which the Collateral may have been sold at a private sale was less than the price which might have been obtained at a public sale or was less than the aggregate amount of the Secured Obligations, even if the Collateral Agent accepts the first offer received and does not offer the Collateral to more than one offeree, and waives all rights that such Grantor may have to require that all or any part of the Collateral be marshaled upon any sale (public or private) thereof. Each Grantor hereby acknowledges that (A) any such sale of the Collateral by the Collateral Agent shall be made without warranty, (B) the Collateral Agent may specifically disclaim any warranties of title, possession, quiet enjoyment or the like, (C) the Collateral Agent may bid (which bid may be, in whole or in part, in the form of cancellation of indebtedness), if permitted by law, for the purchase, lease, license or other disposition of the Collateral or any portion thereof for the account

of the Collateral Agent (on behalf of itself and each Secured Party) and (D) such actions set forth in clauses (A), (B) and (C) above shall not adversely affect the commercial reasonableness of any such sale of the Collateral. In addition to the foregoing, (1) upon written notice to any Grantor from the Collateral Agent, each Grantor shall cease any use of the Intellectual Property or any trademark, patent or copyright similar thereto for any purpose described in such notice; (2) the Collateral Agent may, at any time and from time to time, upon 5 days' prior notice to any Grantor, license, whether general, special or otherwise, and whether on an exclusive or non-exclusive basis, any of the Intellectual Property, throughout the universe for such term or terms, on such conditions, and in such manner, as the Collateral Agent shall in its sole discretion determine, provided, however, that such license (x) shall be subject to those exclusive Licenses granted by the Grantors then in effect, if any, and (y) shall not violate the express terms of any agreement between a Grantor and a third party governing the applicable Grantor's use of the relevant Collateral; and (3) the Collateral Agent may, at any time, execute and deliver on behalf of a Grantor, one or more instruments of assignment of the Intellectual Property (or any application or registration thereof), in form suitable for filing, recording or registration in any country.

(b) In the event that the Collateral Agent determines to exercise its right to sell all or any part of the Pledged Interests pursuant to Section 9(a) hereof, each Grantor will, at such Grantor's expense and upon request by the Collateral Agent: (i) execute and deliver, and cause each issuer of such Pledged Interests and the directors and officers thereof to execute and deliver, all such instruments and documents, and do or cause to be done all such other acts and things, as may be necessary or, in the opinion of the Collateral Agent, advisable to register such Pledged Interests under the provisions of the Securities Act, and to cause the registration statement relating thereto to become effective and to remain effective for such period as prospectuses are required by law to be furnished, and to make all amendments and supplements thereto and to the related prospectus which, in the opinion of the Collateral Agent, are necessary or advisable, all in conformity with the requirements of the Securities Act and the rules and regulations of the SEC applicable thereto, (ii) cause each issuer of such Pledged Interests to qualify such Pledged Interests under the state securities or "Blue Sky" laws of each jurisdiction, and to obtain all necessary governmental approvals for the sale of the Pledged Interests, as requested by the Collateral Agent, (iii) cause each Pledged Issuer to make available to its security holders, as soon as practicable, an earnings statement which will satisfy the provisions of Section 11(a) of the Securities Act, and (iv) do or cause to be done all such other acts and things as may be necessary to make such sale of such Pledged Interests valid and binding and in compliance with applicable law. Each Grantor acknowledges the impossibility of ascertaining the amount of damages which would be suffered by the Collateral Agent by reason of the failure by any Grantor to perform any of the covenants contained in this Section 9(b) and, consequently, agrees that, if any Grantor fails to perform any of such covenants, it shall pay, as liquidated damages and not as a penalty, an amount equal to the value of the Pledged Interests on the date the Collateral Agent demands compliance with this Section 9(b); provided, however, that the payment of such amount shall not release any Grantor from any of its obligations under any of the other Loan Documents.

(c) Notwithstanding the provisions of Section 9(b) hereof, each Grantor recognizes that the Collateral Agent may deem it impracticable to effect a public sale of all or any part of the Pledged Shares or any other securities constituting Pledged Interests and that the Collateral Agent may, therefore, determine to make one or more private sales of any such securities to a restricted group of purchasers who will be obligated to agree, among other things, to acquire

such securities for their own account, for investment and not with a view to the distribution or resale thereof. Each Grantor acknowledges that any such private sale may be at prices and on terms less favorable to the seller than the prices and other terms which might have been obtained at a public sale and, notwithstanding the foregoing, agrees that such private sales shall be deemed to have been made in a commercially reasonable manner and that the Collateral Agent shall have no obligation to delay the sale of any such securities for the period of time necessary to permit the issuer of such securities to register such securities for public sale under the Securities Act. Each Grantor further acknowledges and agrees that any offer to sell such securities which has been (i) publicly advertised on a bona fide basis in a newspaper or other publication of general circulation in the financial community of New York, New York (to the extent that such an offer may be so advertised without prior registration under the Securities Act) or (ii) made privately in the manner described above to not less than fifteen bona fide offerees shall be deemed to involve a "public disposition" for the purposes of Section 9-610(c) of the Code (or any successor or similar, applicable statutory provision) as then in effect in the State of New York, notwithstanding that such sale may not constitute a "public offering" under the Securities Act, and that the Collateral Agent may, in such event, bid for the purchase of such securities.

(d) Any cash held by the Collateral Agent (or its agent or designee) as Collateral and all Cash Proceeds received by the Collateral Agent (or its agent or designee) in respect of any sale of or collection from, or other realization upon, all or any part of the Collateral, the Collateral Agent may, in the discretion of the Collateral Agent, be held by the Collateral Agent (or its agent or designee) as collateral for, and/or then or at any time thereafter applied (after payment of any amounts payable to the Collateral Agent pursuant to Section 10 hereof) in whole or in part by the Collateral Agent against, all or any part of the Secured Obligations in such order as the Collateral Agent shall elect, consistent with the provisions of the Financing Agreement. Any surplus of such cash or Cash Proceeds held by the Collateral Agent (or its agent or designee) and remaining after the Termination Date shall be paid over to whomsoever shall be lawfully entitled to receive the same or as a court of competent jurisdiction shall direct.

(e) In the event that the proceeds of any such sale, collection or realization are insufficient to pay all amounts to which each Secured Party is legally entitled, the Grantors shall be jointly and severally liable for the deficiency, together with interest thereon at the highest rate specified in any applicable Loan Document for interest on overdue principal thereof or such other rate as shall be fixed by applicable law, together with the costs of collection and the reasonable fees, costs, expenses and other client charges of any attorneys employed by the Collateral Agent to collect such deficiency.

(f) Each Grantor hereby acknowledges that if the Collateral Agent complies with any applicable requirements of law in connection with a disposition of the Collateral, such compliance will not adversely affect the commercial reasonableness of any sale or other disposition of the Collateral.

(g) The Collateral Agent shall not be required to marshal any present or future collateral security (including, but not limited to, this Agreement and the Collateral) for, or other assurances of payment of, the Secured Obligations or any of them or to resort to such collateral security or other assurances of payment in any particular order, and all of the Collateral Agent's rights hereunder and in respect of such collateral security and other assurances of payment

shall be cumulative and in addition to all other rights, however existing or arising. To the extent that any Grantor lawfully may, such Grantor hereby agrees that it will not invoke any law relating to the marshalling of collateral which might cause delay in or impede the enforcement of the Collateral Agent's rights under this Agreement or under any other instrument creating or evidencing any of the Secured Obligations or under which any of the Secured Obligations is outstanding or by which any of the Secured Obligations is secured or payment thereof is otherwise assured, and, to the extent that it lawfully may, each Grantor hereby irrevocably waives the benefits of all such laws.

SECTION 10. Indemnity and Expenses.

(a) Each Grantor jointly and severally agrees to defend, protect, indemnify and hold harmless each Agent and each other Indemnitee in accordance with Section 12.15 of the Financing Agreement.

(b) Each Grantor jointly and severally agrees to pay each Agent's costs and expenses in accordance with Section 12.04 of the Financing Agreement.

SECTION 11. Notices, Etc. All notices and other communications provided for hereunder shall be given in accordance with the notice provision of the Financing Agreement.

SECTION 12. Security Interest Absolute; Joint and Several Obligations.

(a) All rights of the Secured Parties, all Liens and all obligations of each of the Grantors hereunder shall be absolute and unconditional irrespective of (i) any lack of validity or enforceability of the Financing Agreement or any other Loan Document, (ii) any change in the time, manner or place of payment of, or in any other term in respect of, all or any of the Secured Obligations, or any other amendment or waiver of or consent to any departure from the Financing Agreement or any other Loan Document, (iii) any exchange or release of, or non-perfection of any Lien on any Collateral, or any release or amendment or waiver of or consent to departure from any guaranty, for all or any of the Secured Obligations, or (iv) any other circumstance that might otherwise constitute a defense available to, or a discharge of, any of the Grantors in respect of the Secured Obligations. All authorizations and agencies contained herein with respect to any of the Collateral are irrevocable and powers coupled with an interest.

(b) Each Grantor hereby waives (i) promptness and diligence, (ii) notice of acceptance and notice of the incurrence of any Secured Obligation by any Borrower, (iii) notice of any actions taken by any Agent, any Lender, any Guarantor or any other Person under any Loan Document or any other agreement, document or instrument relating thereto, (iv) all other notices, demands and protests, and all other formalities of every kind in connection with the enforcement of the Secured Obligations, the omission of or delay in which, but for the provisions of this subsection (b), might constitute grounds for relieving such Grantor of any such Grantor's obligations hereunder and (v) any requirement that any Agent or any Lender protect, secure, perfect or insure any security interest or other lien on any property subject thereto or exhaust any right or take any action against any Grantor or any other Person or any collateral.

(c) All of the obligations of the Grantors hereunder are joint and several. The Collateral Agent may, in its sole and absolute discretion, enforce the provisions hereof against

any of the Grantors and shall not be required to proceed against all Grantors jointly or seek payment from the Grantors ratably. In addition, the Collateral Agent may, in its sole and absolute discretion, select the Collateral of any one or more of the Grantors for sale or application to the Secured Obligations, without regard to the ownership of such Collateral, and shall not be required to make such selection ratably from the Collateral owned by all of the Grantors. The release or discharge of any Grantor by the Collateral Agent shall not release or discharge any other Grantor from the obligations of such Person hereunder.

SECTION 13. Miscellaneous.

(a) No amendment of any provision of this Agreement (including any Schedule attached hereto) shall be effective unless it is in writing and signed by each Grantor affected thereby and the Collateral Agent, and no waiver of any provision of this Agreement, and no consent to any departure by any Grantor therefrom, shall be effective unless it is in writing and signed by the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

(b) No failure on the part of the Secured Parties to exercise, and no delay in exercising, any right hereunder or under any other Loan Document shall operate as a waiver thereof; nor shall any single or partial exercise of any such right preclude any other or further exercise thereof or the exercise of any other right. The rights and remedies of the Secured Parties provided herein and in the other Loan Documents are cumulative and are in addition to, and not exclusive of, any rights or remedies provided by law. The rights of the Secured Parties under any Loan Document against any party thereto are not conditional or contingent on any attempt by such Person to exercise any of its rights under any other Loan Document against such party or against any other Person, including but not limited to, any Grantor.

(c) This Agreement shall create a continuing security interest in the Collateral and shall (i) remain in full force and effect, subject to paragraph (e) below, until the Termination Date and (ii) be binding on each Grantor all other Persons who become bound as debtor to this Agreement in accordance with Section 9-203(d) of the Code, and shall inure, together with all rights and remedies of the Secured Parties hereunder, to the benefit of the Secured Parties and their respective successors, transferees and assigns. Without limiting the generality of clause (ii) of the immediately preceding sentence, each Secured Party may assign or otherwise transfer its respective rights and obligations under this Agreement and any other Loan Document to any other Person pursuant to the terms of the Financing Agreement, and such other Person shall thereupon become vested with all of the benefits in respect thereof granted to the Secured Parties herein or otherwise. Upon any such assignment or transfer, all references in this Agreement to any Secured Party shall mean the assignee of any such Secured Party. None of the rights or obligations of any Grantor hereunder may be assigned or otherwise transferred without the prior written consent of the Collateral Agent, and any such assignment or transfer shall be null and void.

(d) After the occurrence of the Termination Date, (i) subject to paragraph (e) below, this Agreement and the security interests and licenses created hereby shall terminate and all rights to the Collateral shall revert to the Grantors, (ii) the Collateral Agent agrees to file UCC amendments on or promptly after the Termination Date to evidence the termination of the Liens so released and (iii) the Collateral Agent will, upon the Grantors' request and at the

Grantors' cost and expense, (A) promptly return to the Grantors (or whomsoever shall be lawfully entitled to receive the same or as a court of competent jurisdiction shall direct) such of the Collateral as shall not have been sold or otherwise disposed of or applied pursuant to the terms hereof, and (B) promptly execute and deliver to the Grantors such documents and make such other filings as the Grantors shall reasonably request to evidence such termination, without representation, warranty or recourse of any kind. In addition, upon any sale or disposition of any item of Collateral in a transaction expressly permitted under the Financing Agreement, the Collateral Agent agrees to execute a release of its security interest in such item of Collateral, and the Collateral Agent shall, upon the reasonable request of the Grantors and at the Grantors' cost and expense, execute and deliver to the Grantors such documents as the Grantors shall reasonably request to evidence such release, without representation, warranty or recourse of any kind.

(e) This Agreement shall remain in full force and effect and continue to be effective should any petition be filed by or against any Grantor for liquidation or reorganization, should any Grantor become insolvent or make an assignment for the benefit of any creditor or creditors or should a receiver or trustee be appointed for all or any significant part of any Grantor's assets, and shall continue to be effective or be reinstated, as the case may be, if at any time payment or performance of the Secured Obligations, or any part thereof, is, pursuant to applicable law, rescinded or reduced in amount, or must otherwise be restored or returned by any obligee of the Secured Obligations, whether as a "voidable preference," "fraudulent conveyance," or otherwise, all as though such payment or performance had not been made. In the event that any payment, or any part thereof, is rescinded, reduced, restored or returned, the Secured Obligations shall be reinstated and deemed reduced only by such amount paid and not so rescinded, reduced, restored or returned.

(f) Upon the execution and delivery, or authentication, by any Person of a security agreement supplement in substantially the form of Exhibit C hereto (each a "Security Agreement Supplement"), (i) such Person shall be referred to as an "Additional Grantor" and shall be and become a Grantor, and each reference in this Agreement to "Grantor" shall also mean and be a reference to such Additional Grantor, and each reference in this Agreement and the other Loan Documents to "Collateral" shall also mean and be a reference to the Collateral of such Additional Grantor, and (ii) the supplemental Schedules I-VIII attached to each Security Agreement Supplement shall be incorporated into and become a part of and supplement Schedules I-VIII, respectively, hereto, and the Collateral Agent may attach such Schedules as supplements to such Schedules, and each reference to such Schedules shall mean and be a reference to such Schedules, as supplemented pursuant hereto.

(g) THIS AGREEMENT SHALL BE GOVERNED BY, CONSTRUED AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, EXCEPT (I) AS REQUIRED BY MANDATORY PROVISIONS OF LAW AND (II) TO THE EXTENT THAT THE VALIDITY AND PERFECTION OR THE PERFECTION AND THE EFFECT OF PERFECTION OR NON-PERFECTION OF THE SECURITY INTEREST CREATED HEREBY, OR REMEDIES HEREUNDER, IN RESPECT OF ANY PARTICULAR COLLATERAL ARE GOVERNED BY THE LAW OF A JURISDICTION OTHER THAN THE STATE OF NEW YORK.

(h) In addition to and without limitation of any of the foregoing, this

Agreement shall be deemed to be a Loan Document and shall otherwise be subject to all of terms and conditions contained in Sections 12.10 and 12.11 of the Financing Agreement, *mutatis mutandi*.

(i) Each Grantor irrevocably and unconditionally waives any right it may have to claim or recover in any legal action, suit or proceeding with respect to this Agreement any special, exemplary, punitive or consequential damages.

(j) Any provision of this Agreement which is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining portions hereof or affecting the validity or enforceability of such provision in any other jurisdiction.

(k) Section headings herein are included for convenience of reference only and shall not constitute a part of this Agreement for any other purpose.

(l) This Agreement may be executed in any number of counterparts and by the different parties hereto on separate counterparts, each of which shall be deemed an original, but all of such counterparts taken together shall constitute one and the same agreement. Delivery of an executed counterpart of this Agreement by facsimile or electronic mail shall be equally effective as delivery of an original executed counterpart.

(m) For purposes of this Agreement, all references to Schedules I-VIII attached hereto shall be deemed to refer to each such Schedule as updated from time to time in accordance with the terms of this Agreement.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, each Grantor has caused this Agreement to be executed and delivered by its officer thereunto duly authorized, as of the date first above written.

GRANTORS:

GRASS VALLEY U.K. ACQUISITION LIMITED

By: Signature redacted
Name: Timothy Greenfield
Title: Director

Prior to the US Merger

GRASS VALLEY MERGER SUB LLC

By: Signature redacted
Name: Timothy Greenfield
Title: President

Immediately Upon Consummation of the US Merger:

GRASS VALLEY USA, LLC

By: Signature redacted
Name: Timothy Greenfield
Title: President

Prior to the Canadian Merger:

GRASS VALLEY CANADA ACQUISITION ULC,
by its sole shareholder GRASS VALLEY DUTCH
HOLDCO B.V., by Intertrust (Netherlands) B.V. in
its capacity of attorney in fact for GRASS VALLEY
DUTCH HOLDCO B.V.

Signature redacted

By:

Name: ~~Mark Roerink~~
Title: Authorized Signatory

Signature redacted

By:

Name: ~~Gert Jan Rietberg~~
Title: Authorized Signatory

Immediately Upon Consummation of the Canadian
Merger:

GRASS VALLEY CANADA ULC

By:

Name: Timothy Greenfield
Title: President & Director

Prior to the Dutch Merger:

GRASS VALLEY DUTCH HOLDCO B.V., by
Intertrust (Netherlands) B.V. in its capacity of
attorney in fact

Signature redacted

By:

Name: ~~Mark Roerink~~
Title: Authorized Signatory

Signature redacted

By:

Name: ~~Gert Jan Rietberg~~
Title: Authorized Signatory

Prior to the Canadian Merger:

GRASS VALLEY CANADA ACQUISITION ULC,
by its sole shareholder GRASS VALLEY DUTCH
HOLDCO B.V., by Intertrust (Netherlands) B.V. in
its capacity of attorney in fact for GRASS VALLEY
DUTCH HOLDCO B.V.

By:

Name: Mark Roerink
Title: Authorized Signatory

By:


Name: Gert Jan Rietberg
Title: Authorized Signatory

Immediately Upon Consummation of the Canadian
Merger:

GRASS VALLEY CANADA ULC

By:

Name: Timothy Greenfield
Title: President & Director

 Signature redacted

Prior to the Dutch Merger:

GRASS VALLEY DUTCH HOLDCO B.V., by
Intertrust (Netherlands) B.V. in its capacity of
attorney in fact

By:

Name: Mark Roerink
Title: Authorized Signatory

By:

Name: Gert Jan Rietberg
Title: Authorized Signatory

GRASS VALLEY DUTCH ACQUISITION B.V.,
by Intertrust (Netherlands) B.V. in its capacity of
attorney in fact

By: Signature redacted
Name: ~~Mark Roerink~~
Title: ~~Authorized Signatory~~

By: Signature redacted
Name: ~~Gert Jan Rietberg~~
Title: ~~Authorized Signatory~~

Immediately Upon Consummation of the Dutch
Merger:

GRASS VALLEY DUTCH HOLDCO B.V., by
Intertrust (Netherlands) B.V. in its capacity of
attorney in fact

By: Signature redacted
Name: ~~Mark Roerink~~
Title: ~~Authorized Signatory~~

By: Signature redacted
Name: ~~Gert Jan Rietberg~~
Title: ~~Authorized Signatory~~

GRASS VALLEY NEDERLAND B.V.

By: Signature redacted
Name: ~~Timothy Greenfield~~
Title: ~~Authorized Signatory~~

GRASS VALLEY DUTCH ACQUISITION B.V.,
by Intertrust (Netherlands) B.V. in its capacity of
attorney in fact

By:

Name: Mark Roerink
Title: Authorized Signatory

By:

Name: Gert Jan Rietberg
Title: Authorized Signatory

Immediately Upon Consummation of the Dutch
Merger:

GRASS VALLEY DUTCH HOLDCO B.V., by
Intertrust (Netherlands) B.V. in its capacity of
attorney in fact

By:

Name: Mark Roerink
Title: Authorized Signatory

By:

Name: Gert Jan Rietberg
Title: Authorized Signatory

GR

Signature redacted

By:

Name: Timothy Greenfield
Title: Authorized Signatory

GRASS VALLEY INTERMEDIATE LLC

By: Signature redacted
Name: Timothy Greenfield
Title: President

GRASS VALLEY HOLDCO INC.

Signature redacted
Name: Timothy Greenfield
Title: President

GRASS VALLEY JAPAN ACQUISITION G.K., by
GRASS VALLEY DUTCH HOLDCO B.V., as
Representative Member, by Intertrust (Netherlands)
B.V. in its capacity as attorney in fact for GRASS
VALLEY DUTCH HOLDCO B.V.

By: _____
Name: Mark Roerink
Title: Authorized Signatory

By: _____
Name: Gert Jan Rietberg
Title: Authorized Signatory

QUANTEL, INC.

By: Signature redacted
Name: Timothy Greenfield
Title: President

SNELL, INC.

By: Signature redacted
Name: Timothy Greenfield
Title: President

GRASS VALLEY INTERMEDIATE LLC

By:

Name: Timothy Greenfield
Title: President

GRASS VALLEY HOLDCO INC.

Name: Timothy Greenfield
Title: President

GRASS VALLEY JAPAN ACQUISITION G.K., by
GRASS VALLEY DUTCH HOLDCO B.V., as
Representative Member, by Intertrust (Netherlands)
B.V. in its capacity as attorney in fact for GRASS
VALLEY DUTCH HOLDCO B.V.

By: Signature redacted

Name: Mark Roerink
Title: Authorized Signatory

By: Signature redacted

Name: Gert Jan Bietberg
Title: Authorized Signatory

QUANTEL, INC.

By:

Name: Timothy Greenfield
Title: President

SNELL, INC.

By:

Name: Timothy Greenfield
Title: President

GRASS VALLEY CANADA ULC

By: Signature redacted
Name: Timothy Greenfield
Title: President & Director

GRASS VALLEY CANADA PARTNER ULC

By: Signature redacted
Name: Timothy Greenfield
Title: President & Director

GRASS VALLEY CANADA, by its general
partner GRASS VALLEY CANADA PARTNER
ULC

By: Signature redacted
Name: Timothy Greenfield
Title: President & Director

GRASS VALLEY (UK) LIMITED

By: Signature redacted
Name: Timothy Greenfield
Title: Director

GRASS VALLEY BROADCAST SOLUTIONS
LIMITED

By: Signature redacted
Name: Timothy Greenfield
Title: Director

SOFTTEL LIMITED

By: Signature redacted
Name: Timothy Greenfield
Title: Director

QUANTEL HOLDINGS (2010) LIMITED

Signature redacted

By:

Name: Timothy Greenfield
Title: Director

QUANTEL GROUP LIMITED

Signature redacted

By:

Name: Timothy Greenfield
Title: Director

QUANTEL LIMITED

Signature redacted

By:

Name: Timothy Greenfield
Title: Director

QUANTEL EUROPE LIMITED

Signature redacted

By:

Name: Timothy Greenfield
Title: Director

SNELL CORPORATION LIMITED

Signature redacted

By:

Name: Timothy Greenfield
Title: Director

PRO-BEL HOLDINGS LIMITED

Signature redacted

By:

Name: Timothy Greenfield
Title: Director

PRO-BEL GROUP LIMITED

Signature redacted

By: _____

Name: Timothy Greenfield
Title: Director

PRO-BEL LIMITED

Signature redacted

By: _____

Name: Timothy Greenfield
Title: Director

GRASS VALLEY LIMITED

Signature redacted

By: _____

Name: Timothy Greenfield
Title: Director

GRASS VALLEY K.K.

By: _____

Name: Katsushi Takeuchi
Title: Representative Director

GVBB NETHERLANDS B.V.

Signature redacted

By: _____

Name: Timothy Greenfield
Title: Authorized Signatory

IN WITNESS WHEREOF, each Grantor has caused this Agreement to be executed and delivered by its officer thereunto duly authorized, as of the date first above written.

GRANTORS:

GRASS VALLEY K.K.

By: Signature redacted
Name: Katsushi Takeuchi
Title: Representative Director

SCHEDULE I

LEGAL NAME; JURISDICTION OF ORGANIZATION; TYPE OF ORGANIZATION;
ORGANIZATIONAL IDENTIFICATION NUMBER

Legal Name	Jurisdiction of Organization	Type of Organization	Organizational Identification Number
Grass Valley Intermediate LLC	Delaware	Limited Liability Company	7851189
Grass Valley Holdco Inc.	Delaware	Corporation	7851191
Grass Valley USA, LLC	Delaware	Limited Liability Company	4886533
Grass Valley Merger Sub LLC	Delaware	Limited Liability Company	3111400
Quantel, Inc.	Delaware	Corporation	2156958
Snell, Inc.	Delaware	Corporation	3439860
Grass Valley Canada ULC	Alberta, Canada	Unlimited Liability Corporation	2022531459
Grass Valley Canada Acquisition ULC	Alberta, Canada	Unlimited Liability Corporation	2022555581
Grass Valley Canada Partner ULC	Alberta, Canada	Unlimited Liability Corporation	2016957215
Grass Valley Canada	Ontario, Canada	General Partnership	250647336
Grass Valley U.K. Acquisition Limited	England & Wales	Limited	12546998
Grass Valley (UK) Limited	England & Wales	Limited	01023834
Grass Valley Broadcast Solutions Limited	England & Wales	Limited	02017053

Legal Name	Jurisdiction of Organization	Type of Organization	Organizational Identification Number
Softel Limited	England & Wales	Limited	01726537
Quantel Holdings (2010) Limited	England & Wales	Limited	04004913
Quantel Group Limited	England & Wales	Limited	01666566
Quantel Limited	England & Wales	Limited	01130271
Quantel Europe Limited	England & Wales	Limited	03307773
Snell Corporation Limited	England & Wales	Limited	06592512
Pro-Bel Holdings Limited	England & Wales	Limited	04808255
Pro-Bel Group Limited	England & Wales	Limited	01316843
Pro-Bel Limited	England & Wales	Limited	03487653
Grass Valley Limited	England & Wales	Limited	01160119
Grass Valley Japan Acquisition G.K.	Japan	GK	Unavailable
Grass Valley K.K.	Japan	KK	1400-01 004607
Grass Valley Dutch Holdco B.V.	Netherlands	BV	77640225
Grass Valley Dutch Acquisition B.V	Netherlands	BV	77643119
GVBB Netherlands B.V.	Netherlands	BV	51453274
Grass Valley Nederland B.V.	Netherlands	BV	20097776

SCHEDULE II

INTELLECTUAL PROPERTY AND MATERIAL LICENSES CONSTITUTING COLLATERAL; TRADE NAMES

A. COPYRIGHTS

1. Registered Copyrights

None.

2. Copyright Applications

None.

3. Material Copyright Licenses

- i. Non-Exclusive OEM Agreement dated July 18, 2012 between Acronis International GmbH and Grass Valley USA, LLC
- ii. Addendum to ADP Workforce Now Comprehensive Benefits Agreement between ADP, Inc. and Technicolor USA, Inc. dated October 21, 2010
- iii. Master Services Agreement, dated as of September 24, 2015, by and between ADP Canada Co. and Grass Valley Canada, as amended
- iv. Supply Agreement dated November 22, 2005 between AJA Video Systems, Inc. and Grass Valley, Inc.
- v. Preferred Supplier Framework Purchase Agreement, dated March 27, 2014, by and between AJA Video Systems, Inc. and Grass Valley, Inc.
- vi. Quicktime 7 Software Distribution Agreement dated May 2, 2011 between Apple Inc. and Grass Valley USA, LLC
- vii. Prores License Agreement, dated December 14, 2016, by and between Grass Valley USA, LLC and Apple Inc.
- viii. Avid DNxHD Unified License Agreement dated July 26, 2012 between Avid Technology, Inc. and Grass Valley USA, LLC
- ix. Software Development Kit License Agreement dated October 5, 2010 between Avid Technology, Inc. and Grass Valley USA, LLC, as amended
- x. Supplier Purchase Agreement dated November 2, 2012 between BSQUARE Corp. and Grass Valley USA, LLC

- xi. H.264 Decoder IP Core License Agreement dated September 29, 2010 between CoreEL Technologies Pvt. Ltd. and Technicolor USA, Inc.
- xii. H.264 and MPEG-2 Decoder IP License Agreement dated 2012, by and between CoreEL Technologies Pvt. Ltd. and Miranda Technologies Partnership
- xiii. Master Lease Agreement, dated as of October 17, 1995, by and between Thomson Consumer Electronics, Inc. and Data Sales Co., Inc. for Lease of Data Processing Equipment
- xiv. Technology Lease Program Addendum Number 1 between Data Sales Co., Inc. and Grass Valley USA, LLC dated January 1, 2011
- xv. System License Agreement (TC TECH-M1-SYS-SW-AGR1528675), dated as of July 4, 2018, by and between Dolby Laboratories Licensing Corporation and Dolby International AB and Belden Inc.
- xvi. Addendum to System License Agreement dated as of July 4, 2018 (AGR1533954), dated as of July 4, 2018, by and between Dolby Laboratories Licensing Corporation and Dolby International AB and Belden Inc., for Dolby Audio Professional
- xvii. Addendum to System License Agreement dated as of July 4, 2018 (TECH-M1-SYSP-AGR1541095), dated as of April 30, 2019, by and between Dolby Laboratories Licensing Corporation and Dolby International AB and Belden Inc., for the Dolby Vision Content
- xviii. Solutions Addendum to the System License Agreement, dated as of July 4, 2018 (TECH-M1-SYS-SW-AGR1528676), dated as of July 13, 2018, by and between Dolby Laboratories Licensing Corporation and Dolby International AB and Belden Inc., for the Dolby Codec Program
- xix. Software Development Kit Licensing and Distribution Agreement, dated January 23, 2017, by and between DTS, Inc. and Grass Valley USA, LLC
- xx. License Agreement for DNxHD Encoder and Decoder Intellectual Property Customization dated July 1, 2011 between IBEX Technology Co. LTD. and Grass Valley USA, LLC, as amended
- xxi. License Agreement for MPEG-2 Decoder Intellectual Property dated April 14, 2009 between IBEX Technology Co. LTD. and Grass Valley USA, LLC
- xxii. License Agreement for MPEG-2 Decoder Intellectual Property Customization dated November 10, 2010 between IBEX Technology Co. LTD. and Technicolor USA, Inc., as amended
- xxiii. License Agreement for MPEG-2 Long Encoder Intellectual Property dated July 26, 2010 between IBEX Technology Co. LTD. and Technicolor USA, Inc., as amended
- xxiv. License Agreement for ProRes Codec Intellectual Property Customization, dated September 2, 2015, by and between IBEX Technology Co. LTD. and Grass Valley USA, LLC
- xxv. License Agreement for AVC-1 Decoder Intellectual Property Customization, dated December 16, 2015, by and between IBEX Technology Co. LTD. and Grass Valley USA, LLC

- xxvi. License Agreement for H.264 Decoder Intellectual Property Customization, dated December 16, 2015, by and between IBEX Technology Co. LTD. and Grass Valley USA, LLC
- xxvii. License Agreement for XAVC4K Intra/AVC-Intra Class 4K Codec Intellectual Property Customization, dated December 16, 2015, by and between IBEX Technology Co. LTD. and Grass Valley USA, LLC
- xxviii. Addendum, dated as of July 30, 2015, to the Agreement for the Design and Supply of Converters, signed December 8, 2011, by and between InSync Technology Limited and Snell Limited
- xxix. Agreement for the use by Snell Advanced Media of InSync Technology IP in the manufacture of HDBASP modules, dated as of April 13, 2016, by and between InSync Technology Limited and Snell Ltd., as amended
- xxx. Design Agreement relating to IQLDK30 (Logo Inserter and Keyer), dated as of January 20, 2016, by and between InSync Technology Limited and Quantel Limited
- xxxi. Modular Conversion Supply Agreement, dated as of February 2, 2015, between InSync Technology Limited and Snell Limited, as supplemented
- xxxii. Agreement for the Design and Supply of Converters, dated as of December 8, 2011, by and between InSync Technology Limited and Snell Limited
- xxxiii. Agreement for the Design and Supply of Converters, dated as of December 12, 2019, by and between InSync Technology Limited and Grass Valley Limited
- xxxiv. Awesomium Commercial License Agreement – V5 dated April 18, 2012 between Khrona LLC and Grass Valley USA, LLC
- xxxv. Preferred Supplier Framework Purchase Agreement dated February 24, 2009 between Klotz Digital AG and Thomson Inc. d/b/a Grass Valley USA, LLC
- xxxvi. Preferred Supplier Framework Purchase Agreement between L3 Communications Corporation and Thomson Inc. dba Grass Valley dated May 24, 2010
- xxxvii. License Agreement dated January 1, 2011 between MainConcept, LLC and Grass Valley USA, LLC, as amended
- xxxviii. License Agreement, dated January 2, 2012, by and between MainConcept, LLC, Miranda Technologies and Miranda Technologies Limited.
- xxxix. License Agreement, dated October 1, 2016, between MainConcept GmbH and Snell Advanced Media
 - xl. MPEG-1, MPEG-2 Encoding Technology License Agreement dated June 10, 2005 between Microsoft Corporation and Canopus Company Ltd.
 - xli. Microsoft Corporation License and Distribution Agreement dated October 24, 1996 between Microsoft Corporation and Canopus Co., Ltd.
 - xl.ii. Microsoft Operating System Component License and Distribution Agreement for Windows Media Player 9 Series dated July 7, 2004 between Canopus Co. Ltd. and Microsoft Corporation
 - xl.iii. Perpetual License Transfer Form dated September 1, 2011 between Grass Valley USA, LLC and Microsoft Corp.

- xliv. Perpetual License Transfer Form, dated as of September 1, 2011, by and between Thomson, Inc. and Grass Valley USA, LLC
- xlv. Microsoft OEM Customer License Agreement for Embedded Systems, dated as of December 1, 2013, by and between Snell Limited and Microsoft Ireland Operations Limited
- xlvi. MXF-SDK-Binary License Agreement – Windows Version dated October 28, 2004 between Media, Objects and Gadgets – Soluções de Software & Hardware, S.A. and Thomson Broadcast & Media Solutions and Affiliates
- xlvii. Software Development Kit License Agreement, dated January 14, 2011, by and between Media, Objects and Gadgets – Soluções de Software e Hardware, S.A., and Miranda Technologies Partnership, as amended
- xlviii. Addendum to Software Development Kit License Agreement, dated May 2013, by and between MOG Solutions and Miranda Technologies Partnership
- xlix. Master Services Agreement between Movero Technology, Inc. and Grass Valley USA, LLC dated January 1, 2011 as extended by the Statement of Work for Managed Mobility Services between Movero Inc. and Grass Valley USA, LLC dated January 1, 2013
 - 1. Oracle Java Binary License and Redistribution Agreement between Grass Valley USA LLC and Oracle America, Inc. dated May 24, 2017, as amended
 - li. Prepaid Licenses Schedule to Java Binary License and Redistribution Agreement between Grass Valley USA LLC and Oracle America, Inc. dated May 24, 2017
 - lii. Contract for the POET Software Developer Network Program, dated March 20, 2000, by and between POET SOFTWARE GmbH and Quantel Ltd.
 - liii. Multinational Software Product License Agreement, dated as of September 25, 1999, by and between Grass Valley (US) Inc. and QAD Inc.
 - liv. Support Advantage Program Amendment to Software License Agreement, dated as of September 25, 1999, by and between QAD Inc. and Thomson Broadcast & Media Solutions, Inc.
 - lv. Quantum OEM Agreement dated May 6, 2009 between Quantum Corp. and Thomson Inc. d/b/a Grass Valley
 - lvi. salesforce.com Master Subscription Agreement, dated as of September 12, 2006, by and between Salesforce.com and Technicolor, Inc.
 - lvii. License and Option to Purchase Agreement, dated March 20, 2019, by and between Grass Valley USA, LLC and Snoozy, Inc.
 - lviii. AVCHD Format and Logo License Agreement Amending Agreement dated February 16, 2012 between Sony Corporation and Grass Valley USA, LLC
 - lix. XAVC License Agreement, dated April 15, 2013, by and between Grass Valley USA, LLC and Sony Corporation
 - lx. LVS and Profile Business Transfer Agreement dated September 5, 2001 between Sony/Tektronix Corp. and Grass Valley Group, Inc.

- lxi. License Agreement for Format Specifications dated July 13, 2009 between Sony Corporation and Thomson Inc. d/b/a Grass Valley USA, LLC
- lxii. Agreement (for purchase of MSQ-201) dated July 29, 2009 between Sony Corporation and Thomson Inc. d/b/a GV
- lxiii. License Agreement dated January 1, 2005 between Sony Corporation and Grass Valley, Inc.
- lxiv. License Agreement dated March 21, 2007 between Sony Corporation and Grass Valley, Inc.
- lxv. Software License and Hosting Agreement, dated as of September 9, 2009, by and between Tenrox Inc. and Miranda Technologies, Inc.
- lxvi. Adoption Agreement dated June 29, 2011 between Wind River Systems, Inc. and Grass Valley USA, LLC
- lxvii. Core License Agreement, dated September 13, 2017, by and between Xilinx, Inc. and Grass Valley USA, LLC
- lxviii. Master Inbound Design License Agreement, dated as of February 18, 2019, by and between Grass Valley USA LLC and Xilinx, Inc.
- lxix. Agilis Orion / Acropolis Annual Software License Agreement between Agilis Software, LLC and Grass Valley USA, LLC dated December 7, 2012
- lxx. Software License Agreement, dated as of June 16, 2011, by and between Miranda Technologies, Inc., Altera Corporation, Altera International Limited, Altera Japan, Limited and Altera European Trading Co. Ltd.
- lxxi. Master Services Agreement between Analytics8, LLC and Grass Valley USA, LLC dated September 23, 2013
- lxxii. Technology License and Service Agreement dated July 22, 2013 between Axon Digital Design BV and Grass Valley USA, LLC
- lxxiii. Bottomline Technologies, Inc. Software License Agreement between Bottomline Technologies (de), Inc. and Grass Valley USA, LLC dated March 29, 2012
- lxxiv. DivX Master Software Agreement dated March 1, 2009 between DivX, Inc. and Thomson Canopus Co., Ltd.
- lxxv. Omitek Contracts (license to manufacture and IP licenses)
- lxxvi. Agreement dated October 25, 2012 between Prismtech Corporation and Grass Valley USA, LLC

B. PATENTS

1. Registered Patents

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
¹ SHARED PHOTODIODE RESET IN A 5 TRANSISTOR - FOUR SHARED PIXEL	Grass Valley Canada	PCT	PCT/CA2018/050636	05/30/2018		
SHARED PHOTODIODE RESET IN A 5 TRANSISTOR - FOUR SHARED PIXEL	Grass Valley Canada	United States	15/991116	05/29/2018	10,531,034	01/07/2020
SHARED PHOTODIODE RESET IN A 5 TRANSISTOR - FOUR SHARED PIXEL	Grass Valley Canada	EP PCT	18809391.8	05/30/2018		
SHARED PHOTODIODE RESET IN A 5 TRANSISTOR - FOUR SHARED PIXEL	Grass Valley Canada	CA PCT	3065343	05/30/2018		
SYSTEM AND METHOD FOR MAPPED SPLICING OF A THREE-DIMENSIONAL LOOK-UP TABLE FOR IMAGE FORMAT CONVERSION	Grass Valley Canada	United States	15/955237	04/17/2018	10,600,148	03/24/2020
SYSTEM AND METHOD FOR MAPPED SPLICING OF A THREE-DIMENSIONAL LOOK-UP TABLE FOR IMAGE FORMAT CONVERSION	Grass Valley Canada	United States	16/825/541	03/20/2020		
SYSTEM AND METHOD FOR MAPPED SPLICING OF A THREE-DIMENSIONAL LOOK-UP TABLE FOR IMAGE FORMAT CONVERSION	Grass Valley Canada	Canada	3,002,279	04/19/2018		

¹ The record owner was changed to GVBB Holdings S.A.R.L. in the ordinary course of business.

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
SYSTEM AND METHOD FOR DYNAMICALLY ACCESSING MEDIA ASSETS	Grass Valley Limited	United States	16/569,323	09/12/2019		
SYSTEM AND METHOD FOR DYNAMICALLY ACCESSING MEDIA ASSETS	Grass Valley Limited	PCT	PCT/GB2019/052572	09/13/2019		
SYSTEM AND METHOD FOR AI DRIVEN ORCHESTRATION AUTOMATION OF LIVE PRODUCTION & CHANNEL PLAYOUT	Grass Valley Canada	United States	16/837,648	04/01/2020		
SYSTEM AND METHOD FOR AI DRIVEN ORCHESTRATION AUTOMATION OF LIVE PRODUCTION & CHANNEL PLAYOUT	Grass Valley Canada	PCT	PCT/CA2020/050448	04/03/2020		
SYSTEM AND METHOD OF IDENTIFYING EQUIVALENTS FOR TASK COMPLETION	Grass Valley Canada	United States	16/837,411	04/01/2020		
SYSTEM AND METHOD FOR AI DRIVEN ORCHESTRATION AUTOMATION OF LIVE PRODUCTION & CHANNEL PLAYOUT	Grass Valley Canada	PCT	PCT/CA2020/050453	04/03/2020		
SYSTEM AND METHOD OF SYNCHRONIZING VIDEO AND AUDIO CLIPS WITH AUDIO DATA	Grass Valley Canada	United States	16/878356	04/19/2020		
SYSTEM AND METHOD OF SYNCHRONIZING VIDEO AND AUDIO CLIPS WITH AUDIO DATA	Grass Valley Canada	PCT	Not yet available	04/22/2020		

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
APPARATUS AND METHOD FOR ADAPTIVELY REDUCING NOISE IN A NOISY INPUT IMAGE SIGNAL	Grass Valley Canada	United States	09/603,364	06/26/2000	6,633,683	10/14/2003
METHOD AND APPARATUS FOR ENHANCING DIGITAL VIDEO EFFECTS (DVE)	Grass Valley Canada	US PCT	12/450538	09/29/2009	8,914,725	12/16/2014
METHOD AND APPARATUS FOR ENHANCING DIGITAL VIDEO EFFECTS (DVE)	Grass Valley Canada	United States	14/539603	11/12/2014	10088988	10/02/2018
METHOD AND APPARATUS FOR ENHANCING DIGITAL VIDEO EFFECTS (DVE)	Grass Valley Canada	United States	16/146044	09/28/2018		
EDITING APPARATUS AND EDITING METHOD	Grass Valley Canada	US PCT	12/450797	10/13/2009	9,875,772	01/23/2018
EDITING APPARATUS AND EDITING METHOD	Grass Valley Canada	United States	15/835286	12/07/2017	10311914	06/04/2019
EDITING APPARATUS AND EDITING METHOD	Grass Valley Canada	United States	16/425430	05/29/2019	10,636,450	04/28/2020
EDITING APPARATUS AND EDITING METHOD	Grass Valley Canada	United States	16/859719	04/27/2020		
APPARATUS WITH ANIMATION DATA REPRODUCTION FUNCTION AND ANIMATION DATA REPRODUCING METHOD	Grass Valley K.K.	Japan	2005-147976	05/25/2005	4566821	08/13/2010
(EVOLUTION PTY LIMITED) BROADCAST CONTROL	Grass Valley Canada	European Patent	04725240.8	04/02/2004	1634440	10/30/2013
BROADCAST CONTROL	Grass Valley Canada	United States	10/551806	02/08/2007	9,098,193	08/04/2015
(EVOLUTION PTY LIMITED) BROADCAST CONTROL	Grass Valley Canada	Australia	2010221788	09/15/2010	2010221788	11/21/2013

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
(EVOLUTION PTY LIMITED) BROADCAST CONTROL	Grass Valley Canada	UK	04725240.8	04/02/2004	1634440	10/30/2013
(EVOLUTION PTY LIMITED) BROADCAST CONTROL	Grass Valley Canada	Germany	04725240.8	04/02/2004	602004043683. 6	10/30/2013
BROADCAST CONTROL	Grass Valley Canada	United States	14/742565	06/17/2015	10013154	07/03/2018
BROADCAST CONTROL	Grass Valley Canada	United States	16/018619	06/26/2018		
KEYBOARD FOR CONTROL DESK	Grass Valley Limited	United States	29/227812	04/15/2005	D562,322	02/19/2008
KEYBOARD FOR CONTROL DESK	Grass Valley Limited	United States	29/298954	12/17/2007	D573,989	07/29/2008
KEYBOARD FOR CONTROL DESK	Grass Valley Limited	United States	29/298955	12/17/2007	D573,990	07/29/2008
CONTROL PANEL	Grass Valley Limited	United States	29/227809	04/15/2005	D565,046	03/25/2008
DISPLAY WITH INPUT MECHANISMS	Grass Valley Limited	United States	29/227810	04/15/2005	D562,318	02/19/2008
ELECTRONICS HOUSING	Grass Valley Limited	United States	29/227837	04/15/2005	D564,984	03/25/2008
METHODS OF STREAMING MEDIA FILE DATA AND MEDIA FILE SERVERS	Grass Valley Limited	United States	16/159100	10/12/2018		
METHODS OF STREAMING MEDIA FILE DATA AND MEDIA FILE SERVERS	Grass Valley Limited	CA PCT	3,021,132	04/13/2017		
METHODS OF STREAMING MEDIA FILE DATA AND MEDIA FILE SERVERS	Grass Valley Limited	UK	1606596.3	04/15/2016		
METHODS OF STREAMING MEDIA FILE DATA AND MEDIA FILE SERVERS	Grass Valley Limited	EP PCT	17726011.4	04/13/2017	3443750	

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
METHODS OF STORING MEDIA FILES AND RETURNING FILE DATA FOR MEDIA FILES AND MEDIA FILE SYSTEMS	Grass Valley Limited	United States	16/159150	10/12/2018		
METHODS OF STORING MEDIA FILES AND RETURNING FILE DATA FOR MEDIA FILES AND MEDIA FILE SYSTEMS	Grass Valley Limited	CA PCT	3,021,133	04/13/2017		
METHODS OF STORING MEDIA FILES AND RETURNING FILE DATA FOR MEDIA FILES AND MEDIA FILE SYSTEMS	Grass Valley Limited	UK	1606597.1	04/16/2016		
METHODS OF STORING MEDIA FILES AND RETURNING FILE DATA FOR MEDIA FILES AND MEDIA FILE SYSTEMS	Grass Valley Limited	EP PCT	17726012.2	04/13/2017	3443744	
MEDIA FILE SYSTEMS AND METHODS OF STORING MEDIA FILES IN A MEDIA FILE SYSTEM	Grass Valley Limited	United States	16/159063	10/12/2018		
MEDIA FILE SYSTEMS AND METHODS OF STORING MEDIA FILES IN A MEDIA FILE SYSTEM	Grass Valley Limited	CA PCT	3,021,130	04/13/2017		
MEDIA FILE SYSTEMS AND METHODS OF STORING MEDIA FILES IN A MEDIA FILE SYSTEM	Grass Valley Limited	UK	1606595.5	04/15/2016		
MEDIA FILE SYSTEMS AND METHODS OF STORING MEDIA FILES IN A MEDIA FILE SYSTEM	Grass Valley Limited	EP PCT	17725719.3	04/13/2017	3443481	
IMPROVEMENTS RELATING TO FILE SYSTEMS	Grass Valley Limited	UK	1105976.3	04/07/2011	2489932	04/08/2020

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
IMPROVEMENTS RELATING TO FILE SYSTEMS	Grass Valley Limited	EP PCT	12719430.6	03/20/2012	2695089	
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FROM A FILE SYSTEM	Grass Valley Limited	US PCT	14/110227	12/17/2013		
IMPROVEMENTS RELATING TO FILE SYSTEMS	Grass Valley Limited	JP PCT	2014-503210	03/20/2012		
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	UK	1201994.9	02/03/2012	2499040	06/19/2019
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	US PCT	14/375713	07/30/2014		
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	EP PCT	13706672.6	01/24/2013	2810446	07/04/2018
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	JP PCT	2014-555302	01/24/2013		
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	Germany	13706672.6	01/24/2013	60 2013 039 669.8	07/04/2018
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	France	13706672.6	01/24/2013	2810446	07/04/2018
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	UK	13706672.6	01/24/2013	2810446	07/04/2018
VIDEO PROCESSING METHOD AND APPARATUS FOR USE WITH A	Grass Valley Limited	United States	14/989568	01/06/2016	10154240	12/11/2018

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
SEQUENCE OF STEREOSCOPIC IMAGES						
VIDEO PROCESSING METHOD AND APPARATUS FOR USE WITH A SEQUENCE OF STEREOSCOPIC IMAGES	Grass Valley Limited	United States	16/215421	12/10/2018		
VIDEO PROCESSING METHOD AND APPARATUS FOR USE WITH A SEQUENCE OF STEREOSCOPIC IMAGES	Grass Valley Limited	UK	1108037.1	05/13/2011	2490886	06/06/2017
VIDEO PROCESSING METHOD AND APPARATUS FOR USE WITH A SEQUENCE OF STEREOSCOPIC IMAGES	Grass Valley Limited	UK	1702621.2	05/13/2011	2546641	11/28/2017
REFINING MOTION VECTORS IN VIDEO MOTION ESTIMATION	Grass Valley Limited	United States	15/903385	02/23/2018		
VIDEO PROCESSING	Grass Valley Limited	UK	1308581.6	05/13/2013	2514120	05/27/2020
VIDEO PROCESSING USING A ONE-DIMENSIONAL CONTROL FUNCTION TO CONTROL PROCESSING TIME AND ERROR	Grass Valley Limited	United States	15/970358	05/03/2018	10,609,328	03/31/2020
VIDEO PROCESSING USING A ONE-DIMENSIONAL CONTROL FUNCTION TO CONTROL PROCESSING TIME AND ERROR	Grass Valley Limited	United States	16/834075	03/30/2020		
METHOD AND APPARATUS FOR MANAGING AUDIO VISUAL, AUDIO OR VISUAL CONTENT	Grass Valley Limited	UK	1402775.9	02/17/2014		
METHOD AND APPARATUS OF MANAGING VISUAL CONTENT	Grass Valley Limited	United States	15/459860	03/15/2017	10219033	02/26/2019

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
METHOD AND APPARATUS FOR MANAGING AUDIO VISUAL, AUDIO OR VISUAL CONTENT	Grass Valley Limited	European Patent	15155097.7	02/13/2015		
METHOD AND APPARATUS FOR MANAGING AUDIO VISUAL, AUDIO OR VISUAL CONTENT	Grass Valley Limited	India	406/DEL/2015	02/12/2015		
METHOD AND APPARATUS FOR MANAGING AUDIO VISUAL, AUDIO OR VISUAL CONTENT	Grass Valley Limited	China	201510082228. 4	02/15/2015	201510082228. 4	09/17/2019
METHOD AND APPARATUS OF MANAGING VISUAL CONTENT	Grass Valley Limited	United States	16/283491	02/22/2019		
METHOD AND APPARATUS FOR MANAGING AUDIO VISUAL, AUDIO OR VISUAL CONTENT	Grass Valley Limited	China	201910383640. 8	05/09/2019		
HASH-BASED MEDIA SEARCH	Grass Valley Limited	UK	1411192.6	06/24/2014		
HASH-BASED MEDIA SEARCH	Grass Valley Limited	US PCT	15/321570	12/22/2016		
HASH-BASED MEDIA SEARCH	Grass Valley Limited	EP PCT	15736013.2	06/23/2015	3161722	
HASH-BASED MEDIA SEARCH	Grass Valley Limited	CN PCT	201580031931. 0	06/23/2015		
HASH-BASED MEDIA SEARCH	Grass Valley Limited	IN PCT	201617043361	06/23/2015		
COMPARING VIDEO SEQUENCES USING FINGERPRINTS	Grass Valley Limited	United States	15/685369	08/24/2017	10395121	08/27/2019
COMPARING VIDEO SEQUENCES USING FINGERPRINTS	Grass Valley Limited	UK	1614435.4	08/24/2016		
COMPARING VIDEO SEQUENCES USING FINGERPRINTS	Grass Valley Limited	European Patent	17185979.6	08/11/2017	3287946	

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
COMPARING VIDEO SEQUENCES USING FINGERPRINTS	Grass Valley Limited	United States	16/549994	08/23/2019		
MONITORING AUDIO-VISUAL CONTENT WITH CAPTIONS	Grass Valley Limited	United States	15/489095	04/17/2017	10,091,543	10/02/2018
MONITORING AUDIO-VISUAL CONTENT WITH CAPTIONS	Grass Valley Limited	UK	1606743.1	04/18/2016		
MONITORING AUDIO-VISUAL CONTENT WITH CAPTIONS	Grass Valley Limited	European Patent	17166214.1	04/12/2017	3240294	
MONITORING AUDIO-VISUAL CONTENT WITH CAPTIONS	Grass Valley Limited	China	201710249498.9	04/17/2017		
MONITORING AUDIO-VISUAL CONTENT WITH CAPTIONS	Grass Valley Limited	India	201714013180	04/12/2017		
GENERATION OF VIDEO HASH	Grass Valley Limited	United States	15/981322	05/16/2018		
GENERATION OF AUDIO OR VIDEO HASH	Grass Valley Limited	UK	1707940.1	05/17/2017		
GENERATION OF VISUAL HASH	Grass Valley Limited	European Patent	18173007.8	05/17/2018	3404926	
IMAGE PROCESSING	Grass Valley Limited	UK	1610664.3	06/17/2016		
IMAGE PROCESSING	Grass Valley Limited	CA PCT	3027677	06/16/2017		
IMAGE PROCESSING	Grass Valley Limited	US PCT	16/310762	12/17/2018		
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	United States	15/899036	02/19/2018	10,614,550	04/07/2020
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	United States	16/840,848	04/06/2020		
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	UK	1702627.9	02/17/2017		

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	European Patent	18157494.8	02/19/2018	3364369	12/18/2019
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	UK	18157494.8	02/19/2018	3364369	12/18/2019
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	Germany	18157494.8	02/19/2018	3364369	12/18/2019
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	European Patent	19159628.7	02/19/2018	3547249	
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	United States	15/899236	02/19/2018		
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	UK	1702632.9	02/17/2017		
DECODING A BAYER-MASK OR LIKE CODED IMAGE	Grass Valley Limited	European Patent	18157493.0	02/19/2018	3364368	04/22/2020
DETERMINING A QUALITY MEASURE FOR A PROCESSED VIDEO SIGNAL	Grass Valley Limited	US PCT	15/753895	02/20/2018		
DETERMINING A QUALITY MEASURE FOR A PROCESSED VIDEO SIGNAL	Grass Valley Limited	EP PCT	16759842.4	08/25/2016	3329672	05/06/2020
METHODS OF STORING ESSENCE DATE IN MEDIA FILE SYSTEMS	Grass Valley Limited	European Patent	17190487.3	09/11/2017	3293647	
MOTION ESTIMATION IN VIDEO	Grass Valley Limited	UK	1811818.2	07/19/2018		
METHOD AND APPARATUS FOR PROCESSING A SWITCHED AUDIO SIGNAL FROM A CROSSPOINT ROUTER	Grass Valley Limited	United States	14/539840	11/12/2014	9,510,092	11/29/2016
ADJUSTING OCCUPANCIES OF A SET OF BUFFERS	Grass Valley Limited	UK	1321827.6	12/10/2013		

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
ADJUSTING OCCUPANCIES OF A SET OF BUFFERS	Grass Valley Limited	United States	14/521598	10/23/2014	9,824,717	11/21/2017
PROCESSING OF IMAGES TO REPRESENT A TRANSITION IN VIEWPOINT	Grass Valley Limited	EP PCT	09785387.3	07/23/2009	2304690	
PROCESSING OF IMAGES TO REPRESENT A TRANSITION IN VIEWPOINT	Grass Valley Limited	US PCT	13/055509	06/09/2011	8515205	08/20/2013
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	UK	1201993.1	02/03/2012	2499039	06/19/2019
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	EP PCT	13702822.1	01/24/2013	2812813	07/04/2018
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	Germany	13702822.1	01/24/2013	60 2013 039 664.7	07/04/2018
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	France	13702822.1	01/24/2013	2812813	07/04/2018
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	UK	13702822.1	01/24/2013	2812813	07/04/2018
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR A MEDIA FILE	Grass Valley Limited	US PCT	14/375708	07/30/2014	9,836,465	12/05/2017
THE METHOD AND SYSTEM WHICH PROVIDE THE FILE DATA OF A MEDIA FILE	Grass Valley Limited	JP PCT	2014-555301	01/24/2013		
LOGO DETECTION BY EDGE MATCHING	Grass Valley Limited	India	1153/DEL/201 5	04/24/2015		

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
LOGO DETECTION BY EDGE MATCHING	Grass Valley Limited	United States	14/710314	05/12/2015	9,536,171	01/03/2017
LOGO DETECTION BY EDGE MATCHING	Grass Valley Limited	UK	1408461.0	05/13/2014		
LOGO DETECTION BY EDGE MATCHING	Grass Valley Limited	European Patent	15164930.8	04/23/2015	2945100	
DIGITAL IMAGE PROCESSING	Grass Valley Limited	Germany	09746121.4	05/15/2009	2274906	08/16/2017
DIGITAL IMAGE PROCESSING	Grass Valley Limited	European Patent	12157975.9	05/15/2009	2464106	07/10/2019
DIGITAL IMAGE PROCESSING	Grass Valley Limited	Germany	12157975.9	05/15/2009	2464106	07/10/2019
DIGITAL IMAGE PROCESSING	Grass Valley Limited	UK	12157975.9	05/15/2009	2464106	07/10/2019
DIGITAL IMAGE PROCESSING	Grass Valley Limited	EP PCT	09746121.4	05/15/2009	2274906	08/16/2017
DIGITAL IMAGE PROCESSING	Grass Valley Limited	France	09746121.4	05/15/2009	2274906	08/16/2017
DIGITAL IMAGE PROCESSING	Grass Valley Limited	UK	09746121.4	05/15/2009	2274906	08/16/2017
DIGITAL IMAGE PROCESSING FOR CONVERTING IMAGES FROM ONE SAMPLING STRUCTURE TO ANOTHER	Grass Valley Limited	US PCT	12/992192	02/07/2011	8477242	07/02/2013
IMAGE PROCESS WITH SPATIAL PERIODICITY MEASURE	Grass Valley Limited	UK	1217114.6	09/25/2012		
IMAGE PROCESS WITH SPATIAL PERIODICITY MEASURE	Grass Valley Limited	United States	14/036054	09/25/2013	9082044	07/14/2015
IMAGE PROCESS WITH SPATIAL PERIODICITY MEASURE	Grass Valley Limited	United States	14/736440	06/11/2015	9311714	04/12/2016
MANAGEMENT OF BROADCAST AUDIO LOUDNESS	Grass Valley Limited	UK	1220426.9	11/13/2012	2510323	02/26/2020

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
MANAGEMENT OF BROADCAST AUDIO LOUDNESS	Grass Valley Limited	United States	14/078640	11/13/2013	9344052	05/17/2016
MANAGEMENT OF BROADCAST AUDIO LOUDNESS	Grass Valley Limited	United States	15/636840	06/29/2017	10027303	07/17/2018
DETERMINING ASPECT RATIO FOR DISPLAY OF VIDEO	Grass Valley Limited	United States	13/742191	01/15/2013	8908093	12/09/2014
DETERMINING ASPECT RATIO FOR DISPLAY OF VIDEO	Grass Valley Limited	UK	1300733.1	01/15/2013	2500296	10/02/2018
IDENTIFYING POINTS OF INTEREST IN AN IMAGE	Grass Valley Limited	UK	1203431.0	02/28/2012	2499799	06/26/2019
IDENTIFYING POINTS OF INTEREST IN AN IMAGE	Grass Valley Limited	United States	14/928298	10/30/2015	9977992	05/22/2018
VIDEO SEQUENCE PROCESSING	Grass Valley Limited	UK	1206065.3	04/04/2012	2502047	06/05/2019
METHOD AND APPARATUS FOR ANALYSING AN ARRAY OF PIXEL-TO-PIXEL DISSIMILARITY VALUES BY COMBINING OUTPUTS OF PARTIAL.....	Grass Valley Limited	United States	13/832764	03/15/2013	9,532,053	12/27/2016
VIDEO SEQUENCE PROCESSING	Grass Valley Limited	UK	1905665.4	04/23/2019		
INTERPOLATION OF IMAGES	Grass Valley Limited	UK	1213158.7	07/24/2012	2505872	07/24/2019
OFFSET INTERPOLATION OF A SEQUENCE OF IMAGES TO OBTAIN A NEW IMAGE	Grass Valley Limited	United States	13/948887	07/23/2013	8,860,880	10/14/2014
INTERPOLATION OF IMAGES	Grass Valley Limited	UK	1908268.4	06/10/2019	2574332	05/20/2020
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR MEDIA FILES	Grass Valley Limited	UK	1113621.5	08/05/2011	2495268	09/04/2019

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR MEDIA FILES	Grass Valley Limited	EP PCT	12753792.6	07/26/2012	2740276	11/25/2015
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR MEDIA FILES	Grass Valley Limited	Germany	12753792.6	07/26/2012	60 2012 012 679.5	11/25/2015
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR MEDIA FILES	Grass Valley Limited	France	12753792.6	07/26/2012	2740276	11/25/2015
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR MEDIA FILES	Grass Valley Limited	UK	12753792.6	07/26/2012	2740276	11/25/2015
METHODS AND SYSTEMS FOR PROVIDING FILE DATA FOR MEDIA FILES	Grass Valley Limited	US PCT	14/236842	02/03/2014	10019448	07/10/2018
METHOD AND APPARATUS FOR MODIFYING A VIDEO STREAM	Grass Valley Limited	UK	1222397.0	12/12/2012	2509056	06/19/2019
METHOD AND APPARATUS FOR MODIFYING A VIDEO STREAM TO ENCODE METADATA	Grass Valley Limited	United States	14/103068	12/11/2013	9330428	05/03/2016
METHOD AND APPARATUS FOR MODIFYING A VIDEO STREAM TO ENCODE METADATA	Grass Valley Limited	United States	15/091704	04/06/2016	9852489	12/26/2017
VIDEO SEQUENCE PROCESSING	Grass Valley Limited	UK	1306340.9	04/08/2013	2513112	01/08/2020
VIDEO SEQUENCE PROCESSING OF PIXEL-TO-PIXEL DISSIMILARITY VALUES	Grass Valley Limited	United States	14/245326	04/04/2014	9877022	01/23/2018
IMAGE PROCESSING WITH SEGMENTATION USING	Grass Valley Limited	United States	14/289179	05/28/2014	9648339	05/09/2017

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
DIRECTIONALLY-ACCUMULATED DIFFERENCE-IMAGE PIXEL VALUES						
METHODS FOR GENERATING FILE RELATIONSHIP DATA AND MEDIA FILE SYSTEMS THAT GENERATE FILE RELATIONSHIP DATA	Grass Valley Limited	UK	1215838.2	09/05/2012		
METHODS OF DISTRIBUTING MEDIA FILES, AND FILE DISTRIBUTION SYSTEMS FOR DISTRIBUTING MEDIA FILES	Grass Valley Limited	UK	1606593.0	04/15/2016		
DE-INTERLACING VIDEO	Grass Valley Limited	United States	12/100626	04/10/2008	8,421,918	04/16/2013
IMPROVED COMPRESSION TECHNIQUES	Grass Valley Limited	JP PCT	2003-563216	01/27/2003		
METHOD OF DERIVING AN AUDIO- VISUAL SIGNATURE	Grass Valley Limited	UK	0803178.3	02/21/2008	2457694	08/28/2012
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA	Grass Valley Limited	EP PCT	09712777.3	02/20/2009	2257943	09/26/2012
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA	Grass Valley Limited	Germany	09712777.3	02/20/2009	60 2009 010 009.2	09/26/2012
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA	Grass Valley Limited	France	09712777.3	02/20/2009	2257943	09/26/2012
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A	Grass Valley Limited	US PCT	12/918572	09/09/2010	8,682,651	03/25/2014

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA						
METHOD OF COMPARING AUDIO DATA	Grass Valley Limited	UK	1205756.8	03/30/2012	2487499	01/29/2013
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA	Grass Valley Limited	European Patent	12156702.8	02/20/2009	2458584	12/13/2017
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA	Grass Valley Limited	Germany	12156702.8	02/20/2009	60 2009 049 926.2	12/13/2017
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA	Grass Valley Limited	France	12156702.8	02/20/2009	2458584	12/13/2017
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA	Grass Valley Limited	UK	12156702.8	02/20/2009	2458584	12/13/2017
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA	Grass Valley Limited	European Patent	13182706.5	02/20/2009		
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA BACKGROUND	Grass Valley Limited	United States	14/190325	02/26/2014	9,536,545	01/03/2017
AUDIO VISUAL SIGNATURE, METHOD OF DERIVING A	Grass Valley Limited	CN PCT	200980112996. 2	02/20/2009	102084416	06/04/2014

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SIGNATURE, AND METHOD OF COMPARING AUDIO-VISUAL DATA						
RE-TIMING SAMPLED DATA	Grass Valley Limited	UK	1309558.3	05/29/2013		
RE-TIMING SAMPLED DATA	Grass Valley Limited	United States	14/290241	05/29/2014	9397774	07/19/2016
ENHANCING PERCEIVED SHARPNESS OF IMAGES	Grass Valley Limited	UK	1312440.9	07/11/2013	2516090	03/25/2020
ENHANCING PERCEIVED SHARPNESS OF IMAGES	Grass Valley Limited	United States	14/328459	07/10/2014	9401010	07/26/2016
VIDEO PROCESSING	Grass Valley Limited	European Patent	05252115.0	04/04/2005	1585339	
SYSTEM AND METHOD FOR VIDEO PROCESSING	Grass Valley Limited	United States	11/097149	04/04/2005	7,711,048	05/04/2010
DETECTING A BORDER REGION IN AN IMAGE	Grass Valley Limited	European Patent	09157034.1	03/31/2009	2107521	11/07/2018
DETECTING A BORDER REGION IN AN IMAGE	Grass Valley Limited	United States	12/417411	04/02/2009	8331689	12/11/2012
DETECTING A BORDER REGION IN AN IMAGE	Grass Valley Limited	UK	09157034.1	03/31/2009	2107521	11/07/2018
DETECTING A BORDER REGION IN AN IMAGE	Grass Valley Limited	Germany	09157034.1	03/31/2009	602009055455. 7	11/07/2018
DETECTING A BORDER REGION IN AN IMAGE	Grass Valley Limited	France	09157034.1	03/31/2009	2107521	11/07/2018
REGIONAL FILM CADENCE DETECTION	Grass Valley Limited	European Patent	10155061.4	03/01/2010	2227003	11/30/2016
REGIONAL FILM CADENCE DETECTION	Grass Valley Limited	United States	12/717486	03/04/2010	8,964,837	02/24/2015
REGIONAL FILM CADENCE DETECTION	Grass Valley Limited	Germany	10155061.4	03/01/2010	60 2010 038 371.7	11/30/2016
REGIONAL FILM CADENCE DETECTION	Grass Valley Limited	France	10155061.4	03/01/2010	2227003	11/30/2016

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REGIONAL FILM CADENCE DETECTION	Grass Valley Limited	UK	10155061.4	03/01/2010	2227003	11/30/2016
IMAGE PROCESSING	Grass Valley Limited	EP PCT	06700687.4	01/16/2006	1836678	05/23/2012
IMAGE PROCESSING	Grass Valley Limited	US PCT	11/795248	11/21/2008	8,421,916	04/16/2013
IMAGE PROCESSING	Grass Valley Limited	Germany	06700687.4	01/16/2006	602006029634. 7	05/23/2012
IMAGE PROCESSING	Grass Valley Limited	France	06700687.4	01/16/2006	1836678	05/23/2012
IMAGE PROCESSING	Grass Valley Limited	UK	06700687.4	01/16/2006	1836678	05/23/2012
IMAGE PROCESSING	Grass Valley Limited	UK	0600850.2	01/16/2006	2422264	11/30/2010
IMAGE ANALYSIS	Grass Valley Limited	EP PCT	07732500.9	04/20/2007	2011080	06/06/2018
IMAGE ANALYSIS	Grass Valley Limited	Germany	07732500.9	04/20/2007	60 2007 005 041.6	06/06/2018
IMAGE ANALYSIS	Grass Valley Limited	UK	07732500.9	04/20/2007	2011080	06/06/2018
METHOD AND APPARATUS FOR MODIFYING A MOVING IMAGE SEQUENCE	Grass Valley Limited	US PCT	12/279283	10/29/2008	8,442,318	05/14/2013
METHOD AND APPARATUS FOR MODIFYING A MOVING IMAGE SEQUENCE	Grass Valley Limited	UK	07712725.6	02/13/2007	1984893	04/11/2018
METHOD AND APPARATUS FOR MODIFYING A MOVING IMAGE SEQUENCE	Grass Valley Limited	France	07712725.6	02/13/2007	1984893	04/11/2018
METHOD AND APPARATUS FOR MODIFYING A MOVING IMAGE SEQUENCE	Grass Valley Limited	Germany	07712725.6	02/13/2007	60 2007 054 518.8	04/11/2018

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METHOD AND APPARATUS FOR MODIFYING A MOVING IMAGE SEQUENCE	Grass Valley Limited	EP PCT	07712725.6	02/13/2007	1984893	04/11/2018
SYSTEM AND METHOD FOR IMPROVED COMPOSITE DECODING	Grass Valley Limited	US PCT	10/539724	03/02/2006	7872689	01/18/2011
SYSTEM AND METHOD FOR IMPROVED COMPOSITE DECODING	Grass Valley Limited	United States	12/957062	11/30/2010	8279350	10/02/2012
SPORT ACTION CODING	Grass Valley Limited	United States	11/674240	02/13/2007	8,290,042	10/16/2012
COLOUR ERROR CORRECTION	Grass Valley Limited	European Patent	06254293.1	08/16/2006	1755347	07/15/2015
METHOD AND APPARATUS FOR ANALYSING IMAGE DATA	Grass Valley Limited	UK	0514479.5	07/14/2005	2434496	10/02/2007
METHOD AND APPARATUS FOR ANALYZING IMAGE DATA	Grass Valley Limited	United States	11/457211	07/13/2006	7,660,462	02/09/2010
METHOD AND APPARATUS FOR ANALYSING IMAGE DATA	Grass Valley Limited	Japan	2006-193460	07/14/2006	4939860	03/02/2012
PICTURE ATTRIBUTE ALLOCATION	Grass Valley Limited	EP PCT	07789045.7	07/20/2007	2044570	09/19/2018
MOTION VECTOR INTERPOLATION	Grass Valley Limited	Germany	07789045.7	07/20/2007	60 2007 056 207.4	09/19/2018
PICTURE ATTRIBUTE ALLOCATION	Grass Valley Limited	France	07789045.7	07/20/2007	2044570	09/19/2018
MOTION VECTOR INTERPOLATION	Grass Valley Limited	UK	07789045.7	07/20/2007	2044570	09/19/2018
PICTURE ATTRIBUTE ALLOCATION	Grass Valley Limited	US PCT	12/307528	08/26/2009	8462170	06/11/2013
METHOD AND APPARATUS FOR INTERPOLATING AN IMAGE	Grass Valley Limited	Germany	602007027019	09/18/2007	2064671	11/28/2012
METHOD AND APPARATUS FOR INTERPOLATING AN IMAGE	Grass Valley Limited	France	07804331.2	09/18/2007	2064671	11/28/2012

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
METHOD AND APPARATUS FOR INTERPOLATING AN IMAGE	Grass Valley Limited	UK	07804331.2	09/18/2007	2064671	11/28/2012
METHOD AND APPARATUS FOR INTERPOLATING AN IMAGE	Grass Valley Limited	EP PCT	07804331.2	09/18/2007	2064671	11/28/2012
METHOD AND APPARATUS FOR INTERPOLATING AN IMAGE	Grass Valley Limited	US PCT	12/375543	05/19/2009	8358878	01/22/2013
DATA PROCESSING	Grass Valley Limited	UK	0607662.4	04/18/2006	2428160	04/21/2009
A/V EQUIPMENT CONTROL OVER A NETWORK	Grass Valley Limited	United States	11/404507	04/14/2006	8,407,328	03/26/2013
IMAGE ANALYSIS FOR DETECTING LOSS OF AN IMAGE IN A SET OF IMAGES	Grass Valley Limited	European Patent	06254546.2	08/31/2006	1762978	10/23/2013
METHOD OF AND APPARATUS FOR IMAGE ANALYSIS	Grass Valley Limited	United States	11/470341	09/06/2006	8,238,691	08/07/2012
COLOUR DETECTION	Grass Valley Limited	European Patent	07251695.8	04/23/2007	1848196	01/25/2017
COLOUR DETECTION	Grass Valley Limited	UK	07251695.8	04/23/2007	1848196	01/25/2017
IMAGE SEGMENTATION	Grass Valley Limited	EP PCT	05808356.9	11/25/2005	1815421	06/04/2008
VIDEO SIGNAL PROCESSING	Grass Valley Limited	US PCT	10/220437	09/03/2002	7,009,656	03/07/2006
RE-SIZING IMAGE SEQUENCES (Seam Carving)	Grass Valley Limited	US PCT	12/743129	08/10/2010	8526764	09/03/2013
RE-SIZING IMAGE SEQUENCES (Seam Carving)	Grass Valley Limited	EP PCT	08849130.3	11/17/2008	2215597	06/13/2012
RE-SIZING IMAGE SEQUENCES	Grass Valley Limited	European Patent	10171301.4	11/17/2008	2239705	07/11/2012
VIDEO PROCESSING	Grass Valley Limited	UK	0420042.4	09/09/2004	2418092	05/11/2010

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SYSTEM AND METHOD FOR VIDEO PROCESSING	Grass Valley Limited	United States	11/222235	09/09/2005	7,752,248	07/06/2010
VIDEO FRAMING CONTROL IN WHICH OPERATOR FRAMING OF NARROW VIEW IMAGE CONTROLS AUTOMATIC FRAMING OF WIDE VIEW IMAGE	Grass Valley Limited	United States	13/292559	11/09/2011	8,587,679	11/19/2013
DIGITAL AUDIO PROCESSING	Grass Valley Limited	European Patent	08162264.9	08/12/2008	2026331	07/28/2010
DIGITAL AUDIO PROCESSING	Grass Valley Limited	UK	08162264.9	08/12/2008	2026331	07/28/2010
DIGITAL AUDIO PROCESSING	Grass Valley Limited	United States	12/190853	08/13/2008	8,825,186	09/02/2014
MOTION IMAGE RENDERING SYSTEM	Grass Valley Limited	United States	13/867298	04/22/2013	8773586	07/08/2014
MOTION IMAGE RENDERING SYSTEM	Grass Valley Limited	UK	0822413.1	12/09/2008	2466044	05/21/2014
MOTION IMAGE RENDERING SYSTEMS AND METHODS	Grass Valley Limited	United States	12/633949	12/09/2009	8432487	04/30/2013
MOTION IMAGE RENDERING SYSTEM	Grass Valley Limited	UK	1317546.8	12/09/2008	2503833	04/30/2014
MOTION IMAGE RENDERING SYSTEM	Grass Valley Limited	UK	1317544.3	12/09/2008	2503832	06/17/2014
ROUTER AND METHOD OF ROUTING WITH REDUNDANCY (Redundand Router)	Grass Valley Limited	UK	0906212.6	04/09/2009	2469333	09/16/2014
ROUTER AND METHOD OF ROUTING WITH REDUNDANCY	Grass Valley Limited	United States	12/756705	04/08/2010	8631172	01/14/2014
DETERMINING A REGIONAL SHOT CHANGE PARAMETER	Grass Valley Limited	UK	0909063.0	05/27/2009	2470570	06/17/2014

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BIT RATE CONTROL FOR VIDEO DATA COMPRESSION	Grass Valley Limited	US PCT	09/890221	11/16/2001	6,865,224	03/08/2005
DETECTION OF NON-UNIFORM SPATIAL SCALING OF AN IMAGE (Non-uniform stretch detection)	Grass Valley Limited	UK	0910037.1	06/11/2009	2470942	06/17/2014
DETECTION OF NON-UNIFORM SPATIAL SCALING OF AN IMAGE (Non-uniform stretch detection)	Grass Valley Limited	United States	12/786154	05/24/2010	8855443	10/07/2014
CORRECTING DEFECTS IN AN IMAGE	Grass Valley Limited	European Patent	10172833.5	08/13/2010	2302582	10/16/2013
CORRECTING DEFECTS IN AN IMAGE	Grass Valley Limited	United States	12/858251	08/17/2010	8515204	08/20/2013
DEFINING IMAGE FEATURES AND USING FEATURES TO MONITOR IMAGE TRANSFORMATIONS	Grass Valley Limited	European Patent	10186095.5	10/01/2010	2317459	03/13/2013
DEFINING IMAGE FEATURES AND USING FEATURES TO MONITOR IMAGE TRANSFORMATIONS	Grass Valley Limited	United States	12/899200	10/06/2010	8351705	01/08/2013
CHANGING THE TEMPORAL SAMPLE RATE OF A MOTION IMAGE SEQUENCE	Grass Valley Limited	US PCT	13/516550	07/06/2012	8810726	08/19/2014
CHANGING THE TEMPORAL SAMPLE RATE OF A MOTION IMAGE SEQUENCE	Grass Valley Limited	EP PCT	10803131.1	12/20/2010	2514197	03/12/2014
CHANGING THE TEMPORAL SAMPLE RATE OF A MOTION IMAGE SEQUENCE	Grass Valley Limited	UK	10803131.1	12/20/2010	2514197	03/12/2014
DISTRIBUTED DATA ALLOCATION SYSTEM	Grass Valley Limited	UK	0617526.9	09/05/2006	2444083	06/29/2011
MOTION ESTIMATION WITH VARIABLE SPATIAL RESOLUTION	Grass Valley Limited	United States	13/095978	04/28/2011	9270870	02/23/2016

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MOTION ESTIMATION	Grass Valley Limited	UK	1007254.4	04/30/2010	2479933	04/26/2016
METHODS AND APPARATUS FOR RESAMPLING A SPATIALLY SAMPLED ATTRIBUTE OF AN IMAGE	Grass Valley Limited	UK	1011603.6	07/09/2010	2481857	01/10/2017
METHODS AND APPARATUS FOR RESAMPLING A SPATIALLY SAMPLED ATTRIBUTE OF AN IMAGE	Grass Valley Limited	US PCT	13/809205	02/06/2013	9047683	06/02/2015
VIDEO PROCESSING METHOD AND APPARATUS FOR USE WITH A SEQUENCE OF STEREOSCOPIC IMAGES	Grass Valley Limited	United States	13/469189	05/11/2012	9264688	02/16/2016
OBJECTIVE PICTURE QUALITY MEASUREMENT	Grass Valley Limited	United States	13/030592	02/18/2011	8553988	10/08/2013
OBJECTIVE PICTURE QUALITY MEASUREMENT	Grass Valley Limited	UK	1002865.2	02/19/2010	2477956	10/07/2014
ANALYSIS OF STEREOSCOPIC IMAGES (L/Rswap detection by occlusion)	Grass Valley Limited	United States	13/051700	03/18/2011	9214052	12/15/2015
ANALYSIS OF STEREOSCOPIC IMAGES	Grass Valley Limited	UK	1004539.1	03/18/2010	2478776	07/21/2015
REPAIRING SCRATCH IMPAIRMENTS TO AN IMAGE	Grass Valley Limited	United States	13/083446	04/08/2011	9131126	09/08/2015
SPATIAL VIDEO PROCESSING	Grass Valley Limited	United States	09/826392	04/04/2001	6,950,560	09/27/2005
VIDEO SIGNAL PROCESSING WITH TWO STAGE MOTION COMPENSATION	Grass Valley Limited	US PCT	10/221482	01/08/2003	7,202,909	04/10/2007

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VIDEO SIGNAL PROCESSING	Grass Valley Limited	US PCT	10/257149	02/24/2003	7,027,104	04/11/2006
MULTI-ZONAL VIDEO EDITING SYSTEM	Grass Valley Limited	UK	0502332.0	02/04/2005	2422973	03/30/2011
DETECTING STEREOSCOPIC IMAGES	Grass Valley Limited	United States	13/473116	05/16/2012	8861837	10/14/2014
DETECTING STEREOSCOPIC IMAGES	Grass Valley Limited	UK	1108201.3	05/17/2011	2491102	07/25/2017
IMAGE ANALYSIS (SIMPLIFIED BLOCK SIZE MEASUREMENT)	Grass Valley Limited	United States	13/324260	12/13/2011	8743968	06/03/2014
ADAPTIVE SIGNAL PROCESSING	Grass Valley Limited	United States	13/411096	03/02/2012	9002918	04/07/2015
ADAPTIVE SIGNAL PROCESSING	Grass Valley Limited	UK	1103739.7	03/04/2011	2488599	10/13/2017
ANALYSIS OF STEREOSCOPIC IMAGES (L/R swap detection by spatial disparity)	Grass Valley Limited	United States	13/415962	03/09/2012	8526716	09/03/2013
ANALYSIS OF STEREOSCOPIC IMAGES (L/R swap detection by spatial disparity)	Grass Valley Limited	UK	1104159.7	03/11/2011	2489202	05/31/2016
ANALYSIS OF STEREOSCOPIC IMAGES (L/R swap detection by spatial disparity)	Grass Valley Limited	UK	1605898.4	03/11/2011	2534504	11/29/2016
RE-SAMPLING METHOD AND APPARATUS	Grass Valley Limited	United States	13/652225	10/15/2012	8781259	07/15/2014
RE-SAMPLING METHOD AND APPARATUS	Grass Valley Limited	UK	1117806.8	10/14/2011	2495553	12/05/2017
SYSTEM AND METHOD FOR VIDEO PROCESSING BY IMAGE SEGMENTATION	Grass Valley Limited	US PCT	10/527911	11/07/2005	7,840,068	11/23/2010
VIDEO SIGNAL PROCESSING	Grass Valley Limited	US PCT	10/516068	11/29/2004	7,425,993	09/16/2008

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
APPARATUS AND PROCESS FOR RE-TIMING VIDEO CUTS	Grass Valley Limited	United States	10/817436	04/05/2004	8,401,069	03/19/2013
SYSTEM AND METHOD FOR VIDEO PROCESSING	Grass Valley Limited	United States	11/091951	03/29/2005	7,903,172	03/08/2011
FREQUENCY COMPARATOR	Grass Valley Limited	UK	0426049.3	11/26/2004	2420667	01/08/2008
VIDEO STORAGE DEVICE, AND METHOD OF CONTROLLING A VIDEO STORAGE DEVICE AND VIDEO MIXER	Grass Valley Limited	United States	11/091345	03/29/2005	7,511,767	03/31/2009
VIDEO STORAGE DEVICE, AND METHOD OF CONTROLLING A VIDEO STORAGE DEVICE AND VIDEO MIXER	Grass Valley Limited	United States	12/372197	02/17/2009	7,800,695	09/21/2010
METHOD OF IMAGE ANALYSIS OF AN IMAGE IN A SEQUENCE OF IMAGES TO DETERMINE A CROSS-FADE MEASURE	Grass Valley Limited	US PCT	12/162911	07/31/2008	8,150,167	04/03/2012
VIDEO EDITING SYSTEM	Grass Valley Limited	United States	09/537986	03/29/2000	7,103,260	09/05/2006
SYSTEM AND METHOD OF MEASURING DELAY BETWEEN TRANSMITTED AUDIO AND VIDEO SIGNALS	Grass Valley Limited	United States	62/883022	08/05/2019		
SYSTEM AND METHOD OF REDUCING DISTORTION DURING DOWNSAMPLING	Grass Valley Limited	United States	62/878253	07/24/2019		
SYSTEM AND METHOD OF WEB STREAMING MEDIA CONTENT	Grass Valley Limited	United States	62/864990	06/21/2019		
SYSTEM AND METHOD OF BUILDING A DISTRIBUTED	Grass Valley Limited	United States	62/890358	08/22/2019		

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
NETWORK FOR ESSENCE MANAGEMENT AND ACCESS						
AUDIO/VIDEO ROUTER	Grass Valley Canada	United States	12/986113	1/6/2011	8,359,417	1/22/2013
METHOD OF OPERATING A ROUTER	Grass Valley Canada	United States	13/746078	1/21/2013	8,996,766	3/31/2015
METHOD AND APPARATUS FOR PROVIDING AN INDICATION OF A LEVEL OF DISTORTION CREATED BY BLOCKING ARTIFACTS	Grass Valley Canada	European Patent	09726456.8	4/3/2009	2260467	7/8/2015
METHOD AND APPARATUS FOR PROVIDING AN INDICATION OF A LEVEL OF DISTORTION CREATED BY BLOCKING ARTIFACTS	Grass Valley Canada	GE	09726456.8	4/3/2009	2260467	7/8/2015
METHOD AND APPARATUS FOR PROVIDING AN INDICATION OF A LEVEL OF DISTORTION CREATED BY BLOCKING ARTIFACTS	Grass Valley USA, LLC	UK	09726456.8	4/3/2009	2260467	7/8/2015
INTERCOM TRANSCEIVER WITH FIBER OPTIC LINK	Grass Valley Canada	United States	13/801309	3/13/2013	9,143,233	9/22/2015
INTERCOM TRANSCEIVER WITH FIBER OPTIC LINK	Grass Valley Canada	European Patent	13719687.9	4/22/2013	2842302	
EXPANDABLE ROUTER	Grass Valley Canada	United States	09/661844	9/14/2000	6,680,939	1/20/2004
CHANNEL STATUS MANAGEMENT FOR MULTICHANNEL AUDIO DISTRIBUTION	Grass Valley Canada	United States	09/661845	9/14/2000	6,757,302	6/29/2004
SPATIALLY DISTRIBUTED ROUTING SWITCH	Grass Valley Canada	United States	10/364022	2/10/2003	7,277,427	10/2/2007
APPARATUS AND METHOD FOR EXTRACTING DATA VALUES FROM	Grass Valley Canada	United States	09/766014	1/18/2001	6,573,759	6/3/2003

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
A SIGNAL ENCODED WITH AES3 DATA						
ROUTER TOPOLOGY HAVING N ON I REDUNDANCY	Grass Valley Canada	United States	09/839571	4/20/2001	6,658,494	12/2/2003
SWITCHING FACILITY HAVING A CONTROL PANEL WITH RELEGENDABLE BUTTONS	Grass Valley USA, LLC	United States	12/104596	4/17/2008	9,621,426	4/11/2017
APPARATUS AND METHOD FOR ADAPTIVELY REDUCING NOISE IN A NOISY INPUT IMAGE SIGNAL	Grass Valley Canada	United States	09/603364	6/26/2000	6,633,683	10/14/2003
ROUTER FABRIC	Grass Valley Canada	United States	14/850895	09/10/2015	9,912,611	03/06/2018
ROUTER FABRIC	Grass Valley Canada	GB PCT	1701326.9	09/11/2015	2547544	11/21/2018
ROUTER FABRIC	Grass Valley Canada	United States	15/887211	02/02/2018	10,397,135	08/27/2019
ROUTER FABRIC	Grass Valley Canada	United States	16/403394	05/03/2019		
ROUTER FABRIC	Grass Valley Canada	United States	16/403430	05/03/2019		
ROUTER FABRIC	Grass Valley Canada	United States	16/412230	05/14/2019		
REAR CONNECTOR PANELS FOR HOUSINGS	Grass Valley Canada	United States	10/025860	12/26/2001	7,031,171	4/18/2006
REAR CONNECTOR PANELS FOR HOUSINGS	Grass Valley Canada	Canada	2379239	3/26/2002	2379239	5/24/2011
COMBINED MULTI-IMAGE AND ROUTER APPARATUS	Grass Valley Canada	Canada	2662887	8/30/2007	2662887	

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
METHOD AND APPARATUS FOR PROVIDING AN INDICATION OF A LEVEL OF DISTORTION CREATED BY BLOCKING ARTIFACTS	Grass Valley Canada	United States	12/062129	4/3/2008	8,086,068	12/27/2011
METHOD AND APPARATUS FOR PROVIDING AN INDICATION OF A LEVEL OF DISTORTION CREATED BY BLOCKING ARTIFACTS	Grass Valley Canada	Canada	2719890	4/3/2009	2719890	8/28/2018
METHOD AND APPARATUS FOR PROVIDING SIGNATURES OF AUDIO/VIDEO SIGNALS AND FOR MAKING USE THEREOF	Grass Valley Canada	Canada	2686869	11/30/2009	2686869	9/25/2018
METHOD AND APPARATUS FOR PROVIDING SIGNATURES OF AUDIO/VIDEO SIGNALS AND FOR MAKING USE THEREOF	Grass Valley Canada	UK	1210285.1	11/23/2010	2489133	5/7/2014
METHOD AND APPARATUS FOR PROVIDING SIGNATURES OF AUDIO/VIDEO SIGNALS AND FOR MAKING USE THEREOF	Grass Valley Canada	United States	12/627728	11/30/2009	8,860,883	10/14/2014
METHOD AND APPARATUS FOR PROVIDING SIGNATURES OF AUDIO/VIDEO SIGNALS AND FOR MAKING USE THEREOF	Grass Valley Canada	Hong Kong	13103398.7	11/23/2010	1176203	1/30/2015
METHOD AND APPARATUS FOR PROVIDING SIGNATURES OF AUDIO/VIDEO SIGNALS AND FOR MAKING USE THEREOF	Grass Valley Canada	UK	1403468.0	11/23/2010	2508115	8/27/2014
SYSTEMS AND METHODS FOR CLOUD-BASED MEDIA PLAY OUT	Grass Valley Canada	United States	14/245519	4/4/2014	9,002,991	4/7/2015
SYSTEMS AND METHODS FOR A MEDIA PLAYOUT CARD	Grass Valley Canada	United States	14/245538	4/4/2014	9,749,370	8/29/2017

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METHOD AND APPARATUS FOR PROVIDING SIGNATURES OF AUDIO/VIDEO SIGNALS AND FOR MAKING USE THEREOF	Grass Valley Canada	UK	1407414.0	11/23/2010	2511655	10/15/2014
METHOD AND APPARATUS FOR PROVIDING SIGNATURES OF AUDIO/VIDEO SIGNALS AND FOR MAKING USE THEREOF	Grass Valley Canada	United States	14/509865	10/8/2014	10,116,838	10/30/2018
INTERCOM TRANSCEIVER WITH FIBER OPTIC LINK	Grass Valley Canada	European Patent	13719687.9	4/22/2013	2842305	
INTERCOM TRANSCEIVER WITH FIBER OPTIC LINK	Grass Valley Canada	Canada	2871432	4/22/2013		
METHOD AND APPARATUS FOR PROVIDING SIGNATURES OF AUDIO/VIDEO SIGNALS AND FOR MAKING USE THEREOF	Grass Valley Canada	Hong Kong	14111683.3	11/23/2010	HK1198311	1/13/2017
SYSTEMS AND METHODS FOR MEDIA DISTRIBUTION AND MANAGEMENT	Grass Valley Canada	Canada	2908662	4/4/2014		
SYSTEMS AND METHODS FOR MEDIA DISTRIBUTION AND MANAGEMENT	Grass Valley Canada	China	201480020140.3	4/4/2014		
SYSTEMS AND METHODS FOR MEDIA DISTRIBUTION AND MANAGEMENT	Grass Valley Canada	India	10208/DELNP/2015	4/4/2014		
INTERCOM TRANSCEIVER WITH FIBER OPTIC LINK	Grass Valley Canada	United States	14/830569	8/19/2015	10,050,707	8/14/2018
SYSTEMS AND METHODS FOR MEDIA DISTRIBUTION AND MANAGEMENT	Grass Valley Canada	European Patent	16170859.9	4/4/2014	3076675	08/21/2019

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
SYSTEMS AND METHODS FOR MEDIA DISTRIBUTION AND MANAGEMENT	Grass Valley Canada	European Patent	16170861.5	4/4/2014	3089455	
SYSTEMS AND METHODS FOR AUTOMATION CONTROL	Grass Valley Canada	United States	15/687672	8/28/2017		
SYSTEMS AND METHODS FOR MEDIA DISTRIBUTION AND MANAGEMENT	Grass Valley Canada	China	201910433225.9	05/23/2019		
SYSTEMS AND METHODS FOR AUTOMATION FALLBACK	Grass Valley Canada	United States	16/442,035	6/14/2019		
SYSTEM AND METHOD FOR CONSTRUCTING FILTER GRAPH-BASED MEDIA PROCESSING PIPELINES IN A BROWSER	Grass Valley Limited	United States	62/929600	11/01/2019		
SYSTEM AND METHOD FOR CONSTRUCTING FILTER GRAPH-BASED MEDIA PROCESSING PIPELINES IN A BROWSER	Grass Valley Limited	United States	62/943058	12/03/2019		
SYSTEM AND METHOD FOR CONTROLLING DISTRIBUTION OF MEDIA CONTENT IN A DISTRIBUTED SYSTEM	Grass Valley Canada	United States	63/013375	04/21/2020		
SYSTEM AND METHOD FOR GENERATING A FACTORY LAYOUT FOR OPTIMIZING MEDIA CONTENT PRODUCTION	Grass Valley Canada	United States	63/027126	05/19/2020		
SYSTEM AND METHOD FOR SYNCHRONIZING TRANSMISSION OF MEDIA CONTENT USING TIMESTAMPS	Grass Valley Canada	United States	63/030154	05/26/2020		

Title	Record Ownership	Jurisdiction/ Type	App. No.	Filing Date	Patent No.	Issue Date
SYSTEM AND METHOD OF DYNAMIC RANDOM ACCESS RENDERING	Grass Valley Canada	United States	63/010164	04/15/2020		
SYSTEM AND METHOD FOR IMAGE FORMAT CONVERSION USING 3D LOOKUP TABLE APPROXIMATION	Grass Valley Canada	United States	63/013967	04/22/2020		
METHOD AND APPARATUS FOR ORDERING IMAGES	Grass Valley Limited	European Patent	17190120.0	08/09/2017		
CAMERA-MOUNTABLE FIBER OPTIC TRANSCEIVER SYSTEM	Grass Valley Canada	United States	10/023,452		7,327,959	

2. Material Patent Licenses

- i. DisplayPort Patent Portfolio License dated March 13, 2017 between MPEG LA, LLC and Grass Valley USA, LLC
- ii. ATSC Patent Portfolio License dated February 19, 2010 between MPEG LA, LLC and Miranda Technologies Inc.
- iii. AVC Patent Portfolio License dated January 26, 2011 between MPEG LA, LLC and Grass Valley USA, LLC and Side Letter dated April 15, 2011 which extends the license to affiliates
- iv. VC-1 Patent Portfolio License dated October 31, 2013 between MPEG LA, LLC and Mantrics S.R.L.
- v. MPEG-4 Visual Patent Portfolio License dated January 26, 2011 between MPEG LA, LLC and Grass Valley USA, LLC and Side Letter dated April 15, 2011 which extends the license to affiliates
- vi. MPEG-2 Patent Portfolio License dated January 26, 2011 between MPEG LA, LLC and Grass Valley USA, LLC and Side Letter dated April 15, 2011 which extends the license to affiliates
- vii. 1394 Patent Portfolio License dated January 26, 2011 between MPEG LA, LLC and Grass Valley USA, LLC and Side Letter dated April 15, 2011 which extends the license to affiliates

C. TRADEMARKS

1. Registered Trademarks

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
ADVC	Grass Valley K.K.	Australia	892469	10/18/2001	892469	10/18/2001
ADVC	Grass Valley K.K.	China	3555576	05/14/2003	3555576	11/28/2004
ADVC	Grass Valley K.K.	European Union	002432037	10/19/2001	002432037	08/20/2003
ADVC	Grass Valley K.K.	Japan	2001-092801	10/16/2001	4628396	12/06/2002
ADVC	Grass Valley K.K.	Korea, Republic of	4020030023321	05/23/2003	400586853	07/06/2004
ADVC	Grass Valley K.K.	United States	76/331156	10/24/2001	2690228	02/25/2003
ALCHEMIST	Grass Valley Limited	Australia	706943	01/19/2010	1346164	01/19/2010
ALCHEMIST	Grass Valley Limited	Canada	893698	10/01/1998	TMA525239	03/17/2000
ALCHEMIST	Grass Valley Limited	European Union	135442	04/01/1996	135442	06/19/1998
ALCHEMIST	Grass Valley Limited	European Union	896910	08/04/1998	896910	11/18/1998
ALCHEMIST	Grass Valley Limited	Hong Kong	1039298	08/05/1998	199914370	08/05/1998
ALCHEMIST	Grass Valley Limited	Int. Agreement & Protocol	706943	08/17/1998	706943	08/17/1998
ALCHEMIST	Grass Valley Limited	Korea, Republic of	1995898	08/07/1998	462319	01/05/2000
ALCHEMIST	Grass Valley Limited	New Zealand	296158	08/05/1998	296158	08/05/1998
ALCHEMIST	Grass Valley Limited	Russian Federation	706943	08/17/1998	706943	08/17/1998
ALCHEMIST	Grass Valley Limited	Thailand	396163	08/27/1999	Kor121391	08/27/1999
ALCHEMIST	Grass Valley Limited	United Kingdom	2174045	08/05/1998	2174045	08/05/1998
ALCHEMIST	Grass Valley Limited	United States	75/193083	11/01/1996	2270118	08/17/1999
ALCHEMIST	Grass Valley Limited	United States	78/561032	02/04/2005	3167514	11/07/2006
AMPP	Grass Valley USA, LLC	United States	88/414007	05/03/2019		
AMPP	Grass Valley USA, LLC	Canada	1993750	11/01/2019		
AMPP	Grass Valley USA, LLC	China	TBA	11/01/2019		
AMPP	Grass Valley USA, LLC	European Union	018145784	11/01/2019		

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
AMPP	Grass Valley USA, LLC	Japan	2019-140223	11/01/2019		
AMPP	Grass Valley USA, LLC	United Kingdom	UK00003441092	11/01/2019		
ARCHANGEL	Grass Valley Limited	European Union	1416866	12/09/1999	1416866	02/14/2001
ARCHANGEL	Grass Valley Limited	United Kingdom	UK00002199832	06/09/1999	UK00002199832	06/09/1999
ARCHANGEL	Grass Valley Limited	United States	75/866902	12/09/1999	2524109	01/01/2002
CANOPUS	Grass Valley K.K.	European Union	002513091	12/17/2001	002513091	05/26/2003
CANOPUS (stylized)	Grass Valley K.K.	Japan	2005083496		4940335	
CANOPUS in Katakana characters	Grass Valley K.K.	Japan	H04-46353	03/30/1992	4016850	06/20/1997
Canopus Logo (in Color)	Grass Valley K.K.	Japan	H5-3908	01/18/1993	3194337	08/30/1996
CHANNELFLEX	Grass Valley USA, LLC	United States	85/105238	08/11/2010	4148537	05/29/2012
CLEANCUT	Grass Valley Limited	European Union	1147628	04/21/1999	1147628	08/16/2000
CONTENTSHARE	Grass Valley USA, LLC	United States	75/669259	03/29/1999	2559367	04/09/2002
DENSITE	Grass Valley Canada	Canada	1276467	10/20/2005	TMA721144	8/18/2008
DVSTORM	Grass Valley K.K.	China	3555571	05/14/2003	3555571	11/28/2004
DVSTORM	Grass Valley K.K.	Korea, Republic of	4020030023316	05/23/2003	400586849	07/02/2004
EDIUS	Grass Valley USA, LLC	Australia	940535	01/17/2003	940535	09/23/2003
EDIUS	Grass Valley USA, LLC	China	3443473	01/22/2003	3443473	07/14/2004
EDIUS	Grass Valley USA, LLC	European Union	003029071	01/17/2003	003029071	11/08/2004
EDIUS	Grass Valley K.K.	India	3054071	09/11/2015	3054071	01/05/2017
EDIUS	Grass Valley USA, LLC	Korea, Republic of	4020030023323	05/23/2003	400586855	07/06/2004
EDIUS	Grass Valley USA, LLC	United States	78/206836	01/24/2003	2870579	08/03/2004
EDIUS (English & Katakana Characters)	Grass Valley USA, LLC	Japan	2003-70504	08/19/2003	4786084	07/09/2004
EDIUS MYNC	Grass Valley USA, LLC	Australia	1866448	07/07/2017	1866448	03/16/2018
EDIUS MYNC	Grass Valley USA, LLC	China	1360336	07/07/2017	1360336	07/07/2017
EDIUS MYNC	Grass Valley USA, LLC	European Union	1360336	07/07/2017	1360336	07/07/2017
EDIUS MYNC	Grass Valley USA, LLC	India	1360336	07/07/2017	3615182	07/07/2017

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
EDIUS MYNC	Grass Valley USA, LLC	Int. Agreement & Protocol	1360336	07/07/2017	1360336	07/07/2017
EDIUS MYNC	Grass Valley USA, LLC	Japan	2017-10216	02/02/2017	5982862	09/22/2017
EDIUS MYNC	Grass Valley USA, LLC	United Kingdom	1360336	07/07/2017	1360336	07/07/2017
EDIUS MYNC	Grass Valley USA, LLC	United States	87/318306	01/30/2017	5460079	05/01/2018
EQ	Grass Valley Limited	European Union	3235141	06/26/2003	3235141	04/15/2005
FIRE CODER	Grass Valley K.K.	China	7665132	09/02/2009	7665132	03/07/2011
FORMATFUSION	Grass Valley Limited	European Union	13648291	01/16/2015	13648291	05/29/2015
FORMATFUSION	Grass Valley Limited	Int. Agreement & Protocol	1263662	06/23/2015	1263662	06/23/2015
FORMATFUSION	Grass Valley Limited	United States	1263662	06/23/2015	1263662	06/23/2015
FRAME MAGIC	Grass Valley Limited	European Union	3242633	06/26/2003	3242633	03/08/2005
GLASS COCKPIT	Grass Valley Canada	Canada	1276469	10/20/2005	TMA701670	11/26/2007
GOLDEN GATE	Grass Valley Limited	Australia	792252	04/23/1999	792252	04/23/1999
GRASS VALLEY	Grass Valley USA, LLC	Canada	1284995	01/05/2006	TMA713437	05/05/2008
GRASS VALLEY	Grass Valley USA, LLC	European Union	004549804	07/19/2005	004549804	08/07/2006
GRASS VALLEY	Grass Valley USA, LLC	United States	78/794194	01/18/2006	3398466	03/18/2008
GRASS VALLEY (in Katakana Characters)	Grass Valley USA, LLC	Japan	2006-25301	03/22/2006	5009855	12/08/2006
GRASS VALLEY (Stylized)	Grass Valley USA, LLC	Japan	2008-42590	04/18/1996	4120699	03/06/1998
GRASS VALLEY GROUP	Grass Valley USA, LLC	Canada	394279	02/09/1976	TMA220717	05/27/1977
GRASS VALLEY GROUP	Grass Valley USA, LLC	United States	73/087089	05/14/1976	1061168	03/15/1977
GRASS VALLEY GROUP (Stylized)	Grass Valley USA, LLC	Japan	S51-16928	03/19/1976	1408595	02/29/1980
GRASS VALLEY in Chinese Characters	Grass Valley USA, LLC	China	5287550	04/14/2006	5287550	05/07/2019

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
GRASS VALLEY, A BELDEN BRAND	Grass Valley USA, LLC	Canada	1810171	11/18/2016	TMA1007497	10/25/2018
GV	Grass Valley USA, LLC	European Union	016634511	4/25/2017	016634511	11/10/2017
GV	Grass Valley USA, LLC	United States	86/956660	3/29/2016	5387313	1/23/2018
GV (STYLIZED)	Grass Valley USA, LLC	Canada	1802518	9/29/2016		
GV (Stylized)	Grass Valley USA, LLC	China	21172062	9/1/2016	21172062	1/14/2019
GV (STYLIZED)	Grass Valley USA, LLC	China	21172061	9/1/2016	21172061	11/7/2017
GV (STYLIZED)	Grass Valley USA, LLC	China	46527511	5/21/2020		
GV (STYLIZED)	Grass Valley USA, LLC	European Union	015793111	8/31/2016	015793111	1/26/2017
GV (STYLIZED)	Grass Valley USA, LLC	Japan	2016-94595	8/29/2016	5972225	8/10/2017
GV (Stylized)	Grass Valley USA, LLC	United States	86/956702	3/29/2016	5387314	1/23/2018
GV CONVERGENT	Grass Valley USA, LLC	Canada	1744482	09/02/2015	TMA1046830	08/02/2019
GV CONVERGENT	Grass Valley USA, LLC	China	17711458	08/20/2015	17711458	10/07/2016
GV CONVERGENT	Grass Valley USA, LLC	European Union	014501555	08/21/2015	014501555	12/18/2015
GV CONVERGENT	Grass Valley USA, LLC	India	3037507	08/20/2015		
GV CONVERGENT	Grass Valley USA, LLC	Japan	2015-79928	08/20/2015	5897220	11/18/2016
GV CONVERGENT	Grass Valley USA, LLC	United States	86/556225	03/06/2015	5065059	10/18/2016
GV DIRECTOR	Grass Valley USA, LLC	European Union	012131942	09/11/2013	012131942	02/06/2014
GV DIRECTOR	Grass Valley USA, LLC	United States	85/874745	03/13/2013	4589586	08/19/2014
GV FABRIC	Grass Valley USA, LLC	Canada	1984925	09/12/2019		
GV FABRIC	Grass Valley USA, LLC	China	TBA	09/16/2019		
GV FABRIC	Grass Valley USA, LLC	European Union	018124556	09/13/2019		
GV FABRIC	Grass Valley USA, LLC	Japan	2019-121599	09/13/2019		
GV FABRIC	Grass Valley USA, LLC	United Kingdom	UK00003428425	09/13/2019		
GV FABRIC	Grass Valley USA, LLC	United States	88/337807	03/13/2019	5946127	12/24/2019
GV GRASS VALLEY	Grass Valley USA, LLC	Canada	1788184	6/22/2016		
GV GRASS VALLEY	Grass Valley USA, LLC	China	20418212	6/24/2016	20418212	11/7/2017
GV GRASS VALLEY	Grass Valley USA, LLC	China	20418211	6/24/2016	20418211	8/14/2017

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
GV GRASS VALLEY	Grass Valley USA, LLC	China	20418210	6/24/2016	20418210	8/14/2017
GV GRASS VALLEY	Grass Valley USA, LLC	European Union	015587521	6/27/2016	015587521	12/1/2016
GV GRASS VALLEY	Grass Valley USA, LLC	Japan	2016-68490	6/23/2016	5972221	8/10/2017
GV GRASS VALLEY	Grass Valley USA, LLC	United States	86/862079	12/30/2015	5375823	1/9/2018
GV GRASS VALLEY	Grass Valley USA, LLC	Brazil	909943257	09/02/2015	909943257	12/19/2017
GV GRASS VALLEY	Grass Valley USA, LLC	Brazil	909943370	09/02/2015	909943370	12/19/2017
GV GRASS VALLEY	Grass Valley USA, LLC	Brazil	909943397	09/02/2015	909943397	12/19/2017
GRASS VALLEY, A BELDEN BRAND	Grass Valley USA, LLC	Canada	1845288	6/30/2017		
GV ION	Grass Valley Canada Partner ULC	Canada	1985084	09/13/2019		
GV ION	Grass Valley Canada Partner ULC	China	TBD	09/18/2019		
GV ION	Grass Valley Canada Partner ULC	European Union	018124385	09/16/2019		
GV ION	Grass Valley Canada Partner ULC	Japan	2019-122194	09/17/2019		
GV ION	Grass Valley Canada Partner ULC	United Kingdom	UK00003428858	09/16/2019		
GV ION	Grass Valley Canada Partner ULC	United States	88/351755	03/22/2019		
GV KORONA	Grass Valley USA, LLC	Brazil	911225641	6/23/2016	911225641	4/9/2019
GV KORONA	Grass Valley USA, LLC	Canada	1788185	6/22/2016	TMA983885	10/30/2017
GV KORONA	Grass Valley USA, LLC	China	TBA	6/22/2016	20386979	8/14/2017
GV KORONA	Grass Valley USA, LLC	European Union	015562523	6/21/2016	015562523	11/23/2016
GV KORONA	Grass Valley USA, LLC	Japan	2016-68489	6/23/2016	5888744	10/14/2016
GV KORONA	Grass Valley USA, LLC	United States	86/864262	1/4/2016	5219365	6/6/2017
GV MATRIX	Grass Valley USA, LLC	Germany	3020171097178	09/26/2017	302017109717	11/06/2017
GV MATRIX	Grass Valley USA, LLC	United Kingdom	UK00003259156	09/25/2017	UK00003259156	12/22/2017

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
GV MATRIX	Grass Valley USA, LLC	United States	87/389232	03/28/2017	5525744	07/24/2018
GV ORBIT	Grass Valley USA, LLC	Canada	1990945	10/17/2019		
GV ORBIT	Grass Valley USA, LLC	China	TBD	10/17/2019		
GV ORBIT	Grass Valley USA, LLC	European Union	018137340	10/14/2019		
GV ORBIT	Grass Valley USA, LLC	Japan	2019-133792	10/16/2019		
GV ORBIT	Grass Valley USA, LLC	United Kingdom	UK00003436237	10/14/2019		
GV ORBIT	Grass Valley USA, LLC	United States	88/390374	04/17/2019		
GV PACE	Grass Valley USA, LLC	Canada	2001103	12/12/2019		
GV PACE	Grass Valley USA, LLC	China	TBD	12/12/2019		
GV PACE	Grass Valley USA, LLC	European Union	018164572	12/11/2019		
GV PACE	Grass Valley USA, LLC	Japan	2019-155790	12/12/2019		
GV PACE	Grass Valley USA, LLC	United Kingdom	UK00003450735	12/11/2019		
GV PACE	Grass Valley USA, LLC	United States	88/530667	07/23/2019		
GV STRATUS	Grass Valley USA, LLC	Brazil	915889722	9/14/2018		
GV STRATUS	Grass Valley USA, LLC	Canada	1694889	9/22/2014	TMA947861	8/30/2016
GV STRATUS	Grass Valley USA, LLC	China	15395353	9/23/2014	15395353	6/28/2016
GV STRATUS	Grass Valley USA, LLC	China	15395352	9/23/2014	15395352	6/7/2016
GV STRATUS	Grass Valley USA, LLC	China	18624665	12/17/2015	18624665	1/28/2017
GV STRATUS	Grass Valley USA, LLC	European Union	013237185	9/9/2014	013237185	1/30/2015
GV STRATUS	Grass Valley USA, LLC	Japan	2014-79325	9/19/2014	5753049	3/27/2015
GV STRATUS	Grass Valley USA, LLC	United States	86/239040	4/1/2014	4753043	6/9/2015
Design	Grass Valley USA, LLC	Japan	51-16929	03/19/1976	1408596	02/29/1980
HYPERION	Grass Valley Limited	European Union	5373717	10/10/2006	5373717	09/27/2007
HYPERION	Grass Valley Limited	United Kingdom	2419139	04/10/2006	2419139	04/10/2006
ICONTROL	Grass Valley Canada	Canada	1276475	10/20/2005	TMA733184	1/26/2009
ICONTROL & DESIGN	Grass Valley Canada	Canada	1276479	10/20/2005	TMA733183	1/26/2009
IGNITE	Grass Valley USA, LLC	United States	85/115623	08/25/2010	4159827	06/19/2012

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
IGNITE KATALYST	Grass Valley USA, LLC	United States	85/274781	03/23/2011	4246683	11/20/2012
INTERNET OF FRAMES	Grass Valley Limited	European Union	11788528	05/02/2013	11788528	09/25/2013
INTERNET OF FRAMES	Grass Valley Limited	United States	85/947064	05/31/2013	4562553	07/08/2014
IQ	Grass Valley Limited	European Union	3177078	05/05/2003	3177078	08/22/2005
IQ	Grass Valley Limited	United States	78/322108	11/03/2003	3105866	06/20/2006
IQ MODULAR	Grass Valley Limited	Australia	792347	04/27/1999	792347	04/27/1999
IQ MODULAR	Grass Valley Limited	China	718070	04/30/1999	718070	04/30/1999
IQ MODULAR	Grass Valley Limited	European Union	1158310	04/30/1999	001158310	08/07/2000
IQ MODULAR	Grass Valley Limited	Hong Kong	522599	01/04/1999	2001B05292	01/04/1999
IQ MODULAR	Grass Valley Limited	Int. Agreement & Protocol	718070	04/30/1999	718070	04/30/1999
IQ MODULAR	Grass Valley Limited	Japan	H11-37997	04/30/1999	4690661	07/11/2003
IQ MODULAR	Grass Valley Limited	New Zealand	308516	04/26/1999	308516	02/08/2001
IQ MODULAR	Grass Valley Limited	Russian Federation	718070	04/30/1999	718070	04/30/1999
IQ MODULAR	Grass Valley Limited	Taiwan	8821440	05/07/1999	935576	03/16/2001
IQ MODULAR	Grass Valley Limited	United Kingdom	2185594	01/04/1999	2185594	01/04/1999
IQ MODULAR	Grass Valley Limited	United States	75/710901	05/19/1999	2958868	06/07/2005
IQ PLATFORM	Grass Valley Limited	United Kingdom	2265559	03/28/2001	2265559	01/11/2002
iTX	Grass Valley Broadcast Solutions Limited	Denmark	VA201302831	10/31/2013	VR201401658	8/4/2014
iTX	Grass Valley Canada	Finland	T201302286	11/1/2013	262010	9/30/2014
iTX	Grass Valley Broadcast Solutions Limited	European Union	009250978	7/15/2010	009250978	11/26/2015
K2 DYNO	Grass Valley USA, LLC	United States	77/684064	03/05/2009	3847000	09/14/2010
K2 SOLO	Grass Valley USA, LLC	United States	85/220481	01/18/2011	4177804	07/24/2012
K2 SUMMIT	Grass Valley USA, LLC	United States	77/684247	03/05/2009	3847001	09/14/2010
KAHUNA	Grass Valley Limited	China	853449	09/15/2004	853449	09/15/2004

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
KAHUNA	Grass Valley Limited	European Union	4046355	09/27/2004	4046355	06/25/2008
KAHUNA	Grass Valley Limited	Int. Agreement & Protocol	853449	09/15/2004	853449	09/15/2004
KAHUNA	Grass Valley Limited	Japan	853449	09/15/2004	853449	09/15/2004
KAHUNA	Grass Valley Limited	United Kingdom	2332288	05/16/2003	2332288	10/24/2003
KAHUNA	Grass Valley Limited	United States	76/549711	10/07/2003	3102602	06/13/2006
KALEIDO	Grass Valley Canada	Canada	1276465	10/20/2005	TMA679953	1/22/2007
KALEIDO-ALTO	Grass Valley Canada	Canada	1276474	10/20/2005	TMA679955	1/22/2007
KALEIDO-K2	Grass Valley Canada	Canada	1276472	10/20/2005	TMA679954	1/22/2007
KALEIDO-X	Grass Valley Canada	Canada	1331347	1/15/2007	TMA721736	8/22/2008
KALYPSO	Grass Valley USA, LLC	United States	75/758134	07/22/1999	2453995	05/22/2001
KARRERA	Grass Valley USA, LLC	United States	85/359102	06/29/2011	4144262	05/15/2012
KAYENNE	Grass Valley USA, LLC	United States	85/495544	12/14/2011	4186078	08/07/2012
KUDOS	Grass Valley Limited	Canada	1006889	03/18/1999	TMA537804	11/27/2000
KUDOS	Grass Valley Limited	European Union	135400	04/01/1996	135400	05/18/1999
KUDOS	Grass Valley Limited	Hong Kong	1329498	10/07/1998	199911285	10/07/1998
KUDOS	Grass Valley Limited	Int. Agreement & Protocol	706143	10/06/1998	706143	10/06/1998
KUDOS	Grass Valley Limited	Korea, Republic of	2626298	10/09/1998	462316	01/05/2000
KUDOS	Grass Valley Limited	Russian Federation	706143	10/06/1998	706143	10/06/1998
KUDOS	Grass Valley Limited	Singapore	T9810033Z	10/06/1998	T9810033Z	10/06/1998
KUDOS	Grass Valley Limited	Taiwan	87049931	10/13/1998	896925	07/16/2000
KUDOS	Grass Valley Limited	United Kingdom	2178860	10/06/1998	2178860	07/21/2000
KUDOS	Grass Valley Limited	United States	75/193058	11/01/1996	2439734	04/03/2001
KULA	Grass Valley Limited	Argentina	3496626	04/19/2016	2904434	09/08/2017
KULA	Grass Valley Limited	Brazil	910919720	04/18/2016	910919720	11/13/2018
KULA	Grass Valley Limited	Canada	1777694	04/15/2016		
KULA	Grass Valley Limited	Chile	1200480	04/18/2016	1242411	04/03/2017

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
KULA	Grass Valley Limited	European Union	14702914	10/21/2015	14702914	03/21/2016
KULA	Grass Valley Limited	Int. Agreement & Protocol	1302614	04/15/2016	1302614	04/15/2016
KULA	Grass Valley Limited	Malaysia	2016057088	04/19/2016	2016057088	03/17/2017
KULA	Grass Valley Limited	Mexico	1302614	04/15/2016		
KULA	Grass Valley USA, LLC	Mexico	2356872	05/15/2020		
KULA	Grass Valley Limited	Singapore	40201611457X	04/15/2016	40201611457X	04/15/2016
KULA	Grass Valley Limited	Thailand	1037747	04/21/2016		
KULA	Grass Valley Limited	Turkey	1302614	04/15/2016	1302614	04/15/2016
KULA	Grass Valley Limited	United Arab Emirates	253511	05/12/2016	253511	07/13/2017
KULA	Grass Valley Limited	United Kingdom	3132626	10/21/2015	3132626	03/25/2016
KULA	Grass Valley Limited	United States	79/188962	04/15/2016	5283047	09/12/2017
KULA	Grass Valley Limited	Viet Nam	1302614	04/15/2016	1302614	04/15/2016
LDX SERIES & Design	Grass Valley USA, LLC	United States	86/224197	03/18/2014	4640215	11/18/2014
MEDIA BIOMETRICS	Grass Valley Limited	United Kingdom	3122728	08/17/2015	3122728	02/26/2016
MEDIA BIOMETRICS	Grass Valley Limited	United States	86/729754	08/19/2015	5134799	01/31/2017
MEDIABALL	Grass Valley USA, LLC	Canada	1260990	06/05/2005	TMA824883	05/28/2012
MEDIABALL	Grass Valley USA, LLC	European Union	4179602	12/06/2004	4179602	08/08/2006
MIRANDA	Grass Valley Canada	Canada	1276471	10/20/2005	TMA745140	8/12/2009
MIRANDA	Grass Valley Canada	United Kingdom	3029732	11/7/2013	3029732	3/7/2014
MIRANDA	Grass Valley Canada	United States	86/107056	10/31/2013	4673874	1/20/2015
MIRANDA & DESIGN	Grass Valley Canada	Canada	1276473	10/20/2005	TMA745141	8/12/2009
MIRANDA & Design	Grass Valley Canada	European Union	012289435	11/7/2013	012289435	4/1/2014
MIRANDA & DESIGN	Grass Valley Canada	United States	86/107227	10/31/2013	4673875	1/20/2015
MORPHEUS	Grass Valley USA, LLC	European Union	4179586	12/06/2004	4179586	08/08/2006
MORPHEUS	Grass Valley Limited	United States	78/634275	05/20/2005	3243667	05/22/2007
MYNC	Grass Valley USA, LLC	Australia	1360338	07/07/2017	1866450	07/07/2017
MYNC	Grass Valley USA, LLC	China	1360338	07/07/2017	1360338	07/07/2017

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
MYNC	Grass Valley USA, LLC	European Union	1360338	07/07/2017	1360338	07/07/2017
MYNC	Grass Valley USA, LLC	India	1360338	07/07/2017	3615775	07/07/2017
MYNC	Grass Valley USA, LLC	Int. Agreement & Protocol	1360338	07/07/2017	1360338	07/07/2017
MYNC	Grass Valley USA, LLC	Japan	2017-10215	02/02/2017	6042957	05/11/2018
MYNC	Grass Valley USA, LLC	United Kingdom	1360338	07/07/2017	1360338	07/07/2017
MYNC	Grass Valley USA, LLC	United States	87/318304	01/30/2017	5520428	07/17/2018
NETCENTRAL	Grass Valley USA, LLC	United States	75/913125	02/07/2000	2479445	08/21/2001
New Q Logo	Grass Valley Limited	European Union	1748565	07/10/2000	1748565	09/10/2001
NEW Q LOGO (Series)	Grass Valley Limited	United Kingdom	2233153	05/19/2000	2233153	11/24/2000
NEWSBOX	Grass Valley Limited	United Kingdom	1576562	06/27/1994	1576562	11/17/1995
NVISION	Grass Valley USA, LLC	Australia	731002	4/1/1997	731002	4/1/1997
NVISION	Grass Valley USA, LLC	European Union	000502021	4/3/1997	000502021	10/22/2002
NVISION	Grass Valley USA, LLC	United States	77/129574	3/13/2007	3343433	11/27/2007
NVISION	Grass Valley USA, LLC	United States	75/975100	2/24/1995	2089449	8/19/1997
PABLO RIO	Grass Valley Limited	United States	86/383630	09/03/2014	4727085	04/28/2015
PAINTBOX	Grass Valley Limited	Australia	410330	06/19/1984	410330	05/13/1987
PAINTBOX	Grass Valley Limited	Austria	44701994	09/05/1994	156006	12/27/1994
PAINTBOX	Grass Valley Limited	European Union	176297	04/01/1996	176297	11/27/1998
PAINTBOX	Grass Valley Limited	Germany	2914027	06/06/1994	2914027	04/20/1999
PAINTBOX	Grass Valley Limited	United Kingdom	1166014	12/07/1981	1166014	12/07/1981
PAINTBOX	Grass Valley Limited	United Kingdom	1222657	07/12/1984	1222657	07/12/1984
PAINTBOX	Grass Valley Limited	United Kingdom	1351635	07/21/1988	1351635	07/23/1993
PAINTBOX (with katakana)	Grass Valley Limited	Japan	S61-46675	05/07/1986	2132406	04/28/1989
PH.C & Design	Grass Valley Limited	European Union	135525	04/01/1996	135525	06/19/1998
PH.C & Design	Grass Valley Limited	Hong Kong	1352098	10/12/1998	1999B16893	10/12/1998
PH.C & Design	Grass Valley Limited	Japan	H10-68493	08/12/1998	4374458	04/07/2000

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
PH.C & Design	Grass Valley Limited	Korea, Republic of	2652098	10/13/1998	462318	01/05/2000
PH.C & Design	Grass Valley Limited	New Zealand	299649	10/12/1998	299649	10/12/1998
PH.C & Design	Grass Valley Limited	Taiwan	87050918	10/20/1998	907331	10/01/2000
PICOLINK	Grass Valley Canada	Canada	1276478	10/20/2005	TMA679956	1/22/2007
QCARE	Grass Valley Limited	European Union	3234978	06/26/2003	3234978	11/03/2004
QUANTEL	Grass Valley Limited	Australia	557193	06/05/1991	557193	02/28/1997
QUANTEL	Grass Valley Limited	Austria	25771991	05/29/1991	137387	08/30/1991
QUANTEL	Grass Valley Limited	Benelux	764544	05/31/1991	497320	05/31/1991
QUANTEL	Grass Valley Limited	Canada	0705217	05/20/1992	TMA472637	03/13/1997
QUANTEL	Grass Valley Limited	China	1159270	01/22/1997	1159270	03/14/1998
QUANTEL	Grass Valley Limited	Denmark	VA199103988	06/06/1991	VR199404463	07/08/1994
QUANTEL	Grass Valley Limited	European Union	174573	04/01/1996	174573	11/27/1998
QUANTEL	Grass Valley Limited	France	1668532	05/30/1991	1668532	05/30/1991
QUANTEL	Grass Valley Limited	Germany	2011056	05/29/1991	2011056	05/29/1991
QUANTEL	Grass Valley Limited	Hong Kong	199616173	12/24/1996	200501268	12/08/2005
QUANTEL	Grass Valley Limited	Hong Kong	300088380	10/03/2003	300088380	11/22/2005
QUANTEL	Grass Valley Limited	Italy	624032	05/31/1991	1355185	06/16/1994
QUANTEL	Grass Valley Limited	Korea, Republic of	19970002960	01/23/1997	0410968	07/20/1998
QUANTEL	Grass Valley Limited	New Zealand	210608	06/04/1991	210608	06/04/1991
QUANTEL	Grass Valley Limited	Norway	19957917	12/19/1995	185679	10/09/1997
QUANTEL	Grass Valley Limited	Singapore	T97000261	01/03/1997	T97000261	01/03/1997
QUANTEL	Grass Valley Limited	Spain	M1641669	06/10/1991	M1641669	06/10/1996
QUANTEL	Grass Valley Limited	Sweden	260993	06/04/1991	260993	09/30/1994
QUANTEL	Grass Valley Limited	Taiwan	85065940	12/26/1996	893003	06/06/2000
QUANTEL	Grass Valley Limited	Turkey	2000009158	05/15/2000	2000009158	05/15/2000
QUANTEL	Grass Valley Limited	United Kingdom	1051637	09/04/1975	1051637	09/04/1975
QUANTEL	Grass Valley Limited	United Kingdom	1535651	05/14/1993	1535651	05/16/1997

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
QUANTEL	Grass Valley Limited	United Kingdom	2120334	01/09/1997	2120334	04/24/1998
ROLLCALL	Grass Valley Limited	Canada	893015	10/09/1998	TMA531194	08/15/2000
ROLLCALL	Grass Valley Limited	China	698815	07/29/1998	698815	07/29/1998
ROLLCALL	Grass Valley Limited	European Union	889766	07/28/1998	889766	12/15/1999
ROLLCALL	Grass Valley Limited	Hong Kong	1019698	07/30/1998	199913752	07/30/1998
ROLLCALL	Grass Valley Limited	Int. Agreement & Protocol	698815	07/29/1998	698815	07/29/1998
ROLLCALL	Grass Valley Limited	Korea, Republic of	1964598	08/03/1998	462321	01/05/2000
ROLLCALL	Grass Valley Limited	New Zealand	295804	07/29/1998	295804	07/29/1998
ROLLCALL	Grass Valley Limited	Russian Federation	698815	07/29/1998	698815	07/29/1998
ROLLCALL	Grass Valley Limited	Singapore	T9807615C	07/29/1998	T9807615C	07/29/1998
ROLLCALL	Grass Valley Limited	Taiwan	8745944	09/17/1998	911540	11/01/2000
ROLLCALL	Grass Valley Limited	Thailand	385038	04/09/1999	125310	04/09/1999
ROLLCALL	Grass Valley Limited	United Kingdom	1564387	03/04/1994	1564387	10/10/1995
ROLLCALL	Grass Valley Limited	United States	75/667563	03/25/1999	2401469	11/07/2000
SAM & Device	Grass Valley Limited	Argentina	3475348	02/01/2016	2846751	11/03/2016
SAM & Device	Grass Valley Limited	European Union	1292021	09/21/2015	1292021	09/21/2015
SAM & Device	Grass Valley Limited	Int. Agreement & Protocol	1292021	09/21/2015	1292021	09/21/2015
SAM & Device	Grass Valley Limited	Japan	1292021	09/21/2015	1292021	09/21/2015
SAM & Device	Grass Valley Limited	Malaysia	2015065917	09/23/2015	2015065917	05/30/2017
SAM & Device	Grass Valley Limited	New Zealand	1292021	09/21/2015	1292021	08/06/2015
SAM & Device	Grass Valley Limited	Russian Federation	1292021	09/21/2015	1292021	09/21/2015
SAM & Device	Grass Valley Limited	Singapore	40201604647Q	09/21/2015	402016046470Q	09/21/2015
SAM & Device	Grass Valley Limited	Turkey	1292021	09/21/2015	1292021	09/21/2015
SAM & Device	Grass Valley Limited	United Kingdom	3127546	09/17/2015	3127546	04/08/2016
SAM KULA	Grass Valley Limited	China	20059790	05/24/2016	20059790	07/14/2017
SHAKEOUT	Grass Valley Limited	European Union	1153071	04/27/1999	1153071	08/16/2000

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
SNELL	Grass Valley Limited	European Union	8270316	04/30/2009	008270316	11/22/2009
SNELL	Grass Valley Limited	United Kingdom	UK00002513518	04/09/2009	UK00002513518	04/09/2009
SNELL	Grass Valley Limited	United States	77/844447	10/08/2009	3979996	06/21/2011
SNELL & Device	Grass Valley Limited	European Union	008269888	04/30/2009	008269888	11/22/2009
SNELL & Device (Series) (B&W & Color)	Grass Valley Limited	United Kingdom	UK00002513509	04/09/2009	UK00002513509	04/09/2009
SNELL & WILCOX	Grass Valley Limited	Australia	767382	07/13/1998	767382	07/13/1998
SNELL & WILCOX	Grass Valley Limited	China	699621	07/10/1998	699621	07/10/1998
SNELL & WILCOX	Grass Valley Limited	European Union	135467	04/01/1996	135467	06/19/1998
SNELL & WILCOX	Grass Valley Limited	Int. Agreement & Protocol	699621	07/10/1998	699621	07/10/1998
SNELL & WILCOX	Grass Valley Limited	Russian Federation	699621	07/10/1998	699621	07/10/1998
SNELL & WILCOX	Grass Valley Limited	United Kingdom	2171511	07/08/1998	2171511	12/29/1998
SNELL ADVANCED MEDIA	Grass Valley Limited	Argentina	3466924	12/23/2015	2859061	12/26/2016
SNELL ADVANCED MEDIA	Grass Valley Limited	Australia	1293395	09/21/2015	1761059	09/21/2015
SNELL ADVANCED MEDIA	Grass Valley Limited	Brazil	910348235	12/01/2015	910348235	02/06/2028
SNELL ADVANCED MEDIA	Grass Valley Limited	European Union	1293395	09/21/2015	1293395	09/21/2015
SNELL ADVANCED MEDIA	Grass Valley Limited	Hong Kong	303544885	09/22/2015	303544885	09/22/2015
SNELL ADVANCED MEDIA	Grass Valley Limited	Int. Agreement & Protocol	1293395	09/21/2015	1293395	09/21/2015
SNELL ADVANCED MEDIA	Grass Valley Limited	Japan	1293395	09/21/2015	1293395	09/21/2015
SNELL ADVANCED MEDIA	Grass Valley Limited	Korea, Republic of	1293395	09/21/2015	1293395	09/21/2015

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
SNELL ADVANCED MEDIA	Grass Valley Limited	Malaysia	2015065916	09/23/2015	2015065916	05/25/2017
SNELL ADVANCED MEDIA	Grass Valley Limited	Mexico	1293395	09/21/2015	1293395	09/21/2015
SNELL ADVANCED MEDIA	Grass Valley Limited	New Zealand	1293395	09/21/2015	1293395	08/02/2016
SNELL ADVANCED MEDIA	Grass Valley Limited	Russian Federation	1293395	09/21/2015	1293395	09/21/2015
SNELL ADVANCED MEDIA	Grass Valley Limited	Singapore	40201605391X	09/21/2015	40201605391X	09/21/2015
SNELL ADVANCED MEDIA	Grass Valley Limited	Turkey	1293395	09/21/2015	1293395	09/21/2015
SNELL ADVANCED MEDIA	Grass Valley Limited	United Kingdom	3127550	09/17/2015	3127550	04/08/2016
SNELL ADVANCED MEDIA	Grass Valley Limited	United States	79/185074	09/21/2015	5253067	08/01/2017
SOFTEL & Design	Grass Valley USA, LLC	European Union	012086229	8/23/2013	012086229	1/16/2014
SOFTEL & Design	Grass Valley USA, LLC	Russian Federation	2013729837	8/29/2013	535968	3/3/2015
SQ	Grass Valley USA, LLC	European Union	3235124	06/26/2003	3235124	01/03/2005
sQ	Grass Valley USA, LLC	United States	78/367619	02/13/2004	3211780	02/20/2007
STORM 3G	Grass Valley K.K.	France	103762403	08/26/2010	103762403	08/26/2010
STORM 3G	Grass Valley K.K.	Germany	302011012288.1	02/28/2011	302011012288	07/06/2011
STORM 3G	Grass Valley K.K.	United States	85/253013	02/28/2011	5821965	07/30/2019
STORM 3G ELITE	Grass Valley K.K.	France	103762401	08/26/2010	103762401	08/26/2010
STORM 3G ELITE	Grass Valley K.K.	Germany	3020110119317	02/28/2011	302011011931	07/11/2011
STORM 3G ELITE	Grass Valley K.K.	Japan	2011-14216	02/28/2011	5439703	09/16/2011
STORM 3G ELITE	Grass Valley K.K.	United States	85/253024	02/28/2011	5821966	07/30/2019
STORM EXPRESS	Grass Valley K.K.	France	103762402	08/26/2010	103762402	08/26/2010
STORM PRO	Grass Valley K.K.	France	103762400	08/26/2010	103762400	08/26/2010

Trademark	Record Owner	Jurisdiction	Application No.	Filing Date	Registration No.	Reg. Date
STORM PRO	Grass Valley K.K.	Germany	302011011932.5	02/28/2011	302011011932	07/11/2011
STORM PRO	Grass Valley K.K.	Japan	2011-14217	02/28/2011	5439704	09/16/2011
STORM PRO	Grass Valley K.K.	United States	85/253035	02/28/2011	5821967	07/30/2019
STRATUS	Grass Valley USA, LLC	Canada	1526579	05/06/2011	TMA879588	06/06/2014
STRATUS	Grass Valley USA, LLC	European Union	00996041106	05/11/2011	009960411	06/01/2012
STRATUS	Grass Valley USA, LLC	France	3784450	11/22/2010	3784450	11/22/2010
TRINIX	Grass Valley USA, LLC	United States	76/185969	12/22/2000	2759522	09/02/2003
TRITON	Grass Valley USA, LLC	United States	75/940641	03/09/2000	2799589	12/30/2003
XRE	Grass Valley USA, LLC	European Union	016378358	02/17/2017	016378358	06/13/2017
XRE	Grass Valley USA, LLC	Japan	2017-19008	02/17/2017	5946112	05/12/2017
XRE	Grass Valley USA, LLC	United Kingdom	3213373	02/17/2017	UK00003213373	05/12/2017
XRE	Grass Valley USA, LLC	United States	87/157237	08/31/2016	5360876	12/19/2017

2. Material Trademark Licenses

- i. Oracle Java Trademark License Agreement, by and between Grass Valley USA LLC and Oracle America, Inc., dated May 24, 2017, as amended

D. OTHER INTELLECTUAL PROPERTY

E. TRADE NAMES

Grantor	Trade Names Presently Used
Grass Valley Canada	Quebec Fictitious Name Filings: <ul style="list-style-type: none"> Grass Valley, une marque de Belden Grass Valley, a Belden Brand

	<ul style="list-style-type: none">• Grass Valley
Grass Valley Limited	SAM

SCHEDULE III
LOCATIONS OF GRANTORS

Grantor	Location	Description
Grass Valley Intermediate LLC	6400 W. Boynton Beach Blvd. Suite 740486 Boynton Beach, FL 33474	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Grass Valley Holdco Inc.	6400 W. Boynton Beach Blvd. Suite 740486 Boynton Beach, FL 33474	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Grass Valley Merger Sub LLC	6400 W. Boynton Beach Blvd. Suite 740486 Boynton Beach, FL 33474	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Grass Valley USA, LLC	125 Crown Point Court Grass Valley, CA 95945	Chief Executive Office / Chief Place of Business
	1 N. Brentwood Blvd. Suite 1500 St. Louis, MO 63105	Location contains Records concerning Accounts
	125 Crown Point Court, Grass Valley, CA 95945 1600 NE Compton Drive Hillsboro, OR 97006 1536 Cole Blvd Building 4 Lakewood, CO 80401	Location contains Inventory/Equipment
Quantel, Inc.	2255 North Ontario Street Suite #210 Burbank, CA 91504	Chief Executive Office / Chief Place of Business
	Babirak Carr P.C. Milton Babirak 47539 Coldspring Place Sterling, VA 20165	Location contains Records concerning Accounts
Snell, Inc.	3001 N. San Fernando Blvd. Burbank, CA 91504	Chief Executive Office / Chief Place of Business

Grantor	Location	Description
	2255 North Ontario Street Suite #210 Burbank, CA 91504	Location contains Records concerning Accounts
Grass Valley Canada ULC	McCarthy Tétrault LLP Ann Walker 4000, 421-7 Avenue SW Calgary, Alberta, Canada T2P 4K9	Location contains Records concerning Accounts
Grass Valley Canada ULC	3499 Douglas-B-Floreani, Montreal, Quebec, H4P2C6.	Chief Executive Office / Chief Place of Business
Grass Valley Canada Acquisition ULC	525 – 8th Avenue S.W. 46th Floor Eighth Avenue Place East Calgary, Alberta T2P 1G1 Canada	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Grass Valley Canada Partner ULC	4000, 421 – 7 Avenue S.W. Calgary, Alberta Canada, T2P 4K9	Chief Executive Office / Chief Place of Business
	McCarthy Tetrault LLP Deborah Kay 3300, 421-7 Avenue SW Calgary, Alberta, Canada T2P 4K	Location contains Records concerning Accounts
	3499 Douglas B. Floreani, Montreal, Quebec Canada H4S 2 C6	Location contains Records concerning Accounts
	3499 Douglas B. Floreani, Montreal, Quebec Canada H4S 2 C6	Chief Executive Office
	66 Wellington Street West No. 5300 Toronto, Ontario Canada, M5K 1E6	Chief Place of Business
	McCarthy Tetrault LLP Deborah Kay 3300, 421-7 Avenue SW Calgary, Alberta, Canada T2P 4K	Location contains Records concerning Accounts

Grantor	Location	Description
Grass Valley Canada	3499 Douglas B. Floreani Montreal, Quebec Canada H4S 2C6 Hitek 9475 Trans Canada St-Laurent Quebec Canada H4S 1V3 Connect 4 79A Brunswick Blvd Dollard Des Ormeaux Quebec, Canada H9B 2J5	Location contains Inventory/Equipment
Grass Valley U.K. Acquisition Limited	27 Old Gloucester Street London WC1N 3AX United Kingdom	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Grass Valley (UK) Limited	Pembroke House Pegasus Business Park Beverley Road Castle Donington Derbyshire DE74 2HN London	Chief Executive Office / Chief Place of Business
	Baker & McKenzie LLP Natalie Graham 100 New Bridge Street London EC4V 6JA	Location contains Records concerning Accounts
Grass Valley Broadcast Solutions Limited	Pembroke House Pegasus Business Park Beverley Road Castle Donington Derbyshire DE74 2HN	Chief Executive Office
	31 Turnpike Road Newbury Berkshire RG14 2NX U.K.	Chief Place of Business
	Baker & McKenzie LLP Natalie Graham 100 New Bridge Street London EC4V 6JA	Location contains Records concerning Accounts
	First Floor, Unit 1A Pegasus Business Park Castle Donington, Derby DE74 2TU	Location contains Inventory/Equipment

Grantor	Location	Description
Softel Limited	Pembroke House Pegasus Business Park Beverley Road Castle Donington Derbyshire DE74 2HN	Chief Executive Office / Chief Place of Business
	Baker & McKenzie LLP Natalie Graham 100 New Bridge Street London EC4V 6JA	Location contains Records concerning Accounts
Quantel Holdings (2010) Limited	31 Turnpike Road, Newbury Berkshire RG14 2NX U.K.	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Quantel Group Limited	31 Turnpike Road, Newbury Berkshire RG14 2NX U.K.	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Quantel Limited	31 Turnpike Road, Newbury Berkshire RG14 2NX U.K.	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Quantel Europe Limited	31 Turnpike Road, Newbury Berkshire RG14 2NX U.K.	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Snell Corporation Limited	31 Turnpike Road, Newbury Berkshire RG14 2NX U.K.	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Pro-Bel Holdings Limited	31 Turnpike Road, Newbury Berkshire RG14 2NX U.K.	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Pro-Bel Group Limited	31 Turnpike Road, Newbury Berkshire RG14 2NX U.K.	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts

Grantor	Location	Description
Pro-Bel Limited	31 Turnpike Road, Newbury Berkshire RG14 2NX U.K.	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Grass Valley Limited	31 Turnpike Road, Newbury Berkshire RG14 2NX U.K.	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts / Location contains Inventory/Equipment
Grass Valley Japan Acquisition G.K.	Kobe 1-1-3 Higashikawasaki-cho, Chuo-ku, Kobe-shi, Hyogo 650-0044, Japan	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Grass Valley K.K.	Kobe 1-1-3 Higashikawasaki-cho, Chuo-ku, Kobe-shi, Hyogo 650-0044, Japan	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
	2F Daini-Yanagiya Bldg, 1- 12-8 Nihonbashi, Chuo-ku, Tokyo 103-0027, Japan	Chief Place of Business

Grantor	Location	Description
	<p>Shin Shin Co., Ltd. Kakegawa Center 206, Koyo, Kakegawa-shi, Shizuoka 436-0090, Japan</p> <p>Shin-Shin Tech 7550-1, Yasudatajiri-Kogyodanchi, Kashiwazaki-shi, Niigata-ken, 945-1352 Japan</p> <p>Grass Valley K.K. 19F Kobe Crystal Tower 1-1-3 Higashi Kawasaki-cho, Chuo-ku, Kobe, 650-0044 Japan</p> <p>Grass Valley K.K. Tokyo 2F Dainiyanagiya-Building 1-12-8, Nihonbashi, Chuo-ku, Tokyo, 103-0027 Japan</p>	<p>Location contains Inventory/Equipment</p>
Grass Valley Dutch Holdco B.V.	Prins Bernhardplein 200 1097 JB Amsterdam, Netherlands	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Grass Valley Dutch Acquisition B.V	Prins Bernhardplein 200 1097 JB Amsterdam, Netherlands	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
GVBB Netherlands B.V.	Edisonstraat 9, 5928 PG Venlo, The Netherlands	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts
Grass Valley Nederland B.V.	Bergschot 69, 4817 PA Breda, The Netherlands	Chief Executive Office / Chief Place of Business / Location contains Records concerning Accounts

Grantor	Location	Description
	<p>Grass Valley Nederland Bergschot 69 4817 PA Breda, Netherlands</p> <p>Intertrans Looierij 9 4762 AM Zevenbergen Nederland</p> <p>Jabil Hungary H-3580 Tiszaujvaros Huszar Andor Utco 1 Hungary</p>	<p>Location contains Inventory/Equipment</p>

SCHEDULE IV

DEPOSIT ACCOUNTS, SECURITIES ACCOUNTS AND COMMODITIES ACCOUNTS

Grantor	Name and Address of Institution Maintaining Account	Account Number	Purpose of Account
Grass Valley Dutch Acquisition B.V.	J.P. Morgan Bank Luxembourg S.A., Amsterdam Branch, Strawinskylaan 1135, 1077 XX Amsterdam, Netherlands	Account details redacted	Zero Balance
Grass Valley Dutch Holdco B.V.	J.P. Morgan Bank Luxembourg S.A., Amsterdam Branch, Strawinskylaan 1135, 1077 XX Amsterdam, Netherlands	Account details redacted	Zero Balance
Grass Valley Dutch Holdco B.V.	J.P. Morgan Bank Luxembourg S.A., Amsterdam Branch, Strawinskylaan 1135, 1077 XX Amsterdam, Netherlands	Account details redacted	Zero Balance
Grass Valley Canada Acquisition, ULC	J P Morgan Toronto	Account details redacted	Zero Balance
Grass Valley Canada Acquisition, ULC	J P Morgan Toronto	Account details redacted	Zero Balance
Grass Valley Intermediate LLC	JPMorgan Chase Bank, N.A., USA Branch, 270 Park Avenue, New York, NY 10017	Account details redacted	Zero Balance
Grass Valley Holdco Inc.	JPMorgan Chase Bank, N.A., USA Branch, 270 Park Avenue, New York, NY 10017	Account details redacted	Zero Balance
Grass Valley USA, LLC	Citibank, N.A., 399 Park Avenue, New York, NY 10022	Account details redacted	Disbursement
Grass Valley USA, LLC	JPMorgan Chase Bank, N.A., New York Branch, 270 Park Avenue, New York, NY 10017	Account details redacted	Collection

Grantor	Name and Address of Institution Maintaining Account	Account Number	Purpose of Account
Quantel, Inc.	JPMorgan Chase Bank, N.A., New York Branch, 270 Park Avenue, New York, NY 10017	Account details redacted	Cash
Snell, Inc.	JPMorgan Chase Bank, N.A., New York Branch, 270 Park Avenue, New York, NY 10017	Account details redacted	Cash
Grass Valley Canada	Citibank, N.A., University Place, Suite 1900, 123 Front Street, Toronto, ON M5J 2M3	Account details redacted	Disbursement
Grass Valley Canada	Citibank, N.A., 399 Park Avenue, New York, NY 10022	Account details redacted	Disbursement
Grass Valley Canada	JPMorgan Chase Bank, N.A., Toronto Branch, 66 Wellington Street West, Suite 45, Toronto, ON M5K 1E7	Account details redacted	Collection
Grass Valley U.K. Acquisition Limited	JPMorgan Chase Bank, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Zero Balance
Grass Valley U.K. Acquisition Limited	JPMorgan Chase Bank, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Zero Balance
Grass Valley (UK) Limited	Citibank, N.A., 25 Canada Square, Canary Wharf, London E14 5LB, United Kingdom	Account details redacted	Disbursement
Grass Valley (UK) Limited	Citibank, N.A., 25 Canada Square, Canary Wharf, London E14 5LB, United Kingdom	Account details redacted	Disbursement

Grantor	Name and Address of Institution Maintaining Account	Account Number	Purpose of Account
Grass Valley (UK) Limited	Citibank, N.A., 25 Canada Square, Canary Wharf, London E14 5LB, United Kingdom	Account details redacted	Disbursement
Grass Valley Broadcast Solutions Limited	Citibank, N.A., 25 Canada Square, Canary Wharf, London E14 5LB, United Kingdom	Account details redacted	Collection
Grass Valley Broadcast Solutions Limited	Citibank, N.A., 25 Canada Square, Canary Wharf, London E14 5LB, United Kingdom	Account details redacted	Collection
Grass Valley Broadcast Solutions Limited	Citibank, N.A., 25 Canada Square, Canary Wharf, London E14 5LB, United Kingdom	Account details redacted	Disbursement
Grass Valley Broadcast Solutions Limited	Citibank, N.A., 25 Canada Square, Canary Wharf, London E14 5LB, United Kingdom	Account details redacted	Disbursement
Softel Limited	Citibank, N.A., 25 Canada Square, Canary Wharf, London E14 5LB, United Kingdom	Account details redacted	Disbursement
Quantel Holdings (2010) Limited	JPMorgan Chase, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Disbursement
Snell Corporation Limited	JPMorgan Chase Bank, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Disbursement

Grantor	Name and Address of Institution Maintaining Account	Account Number	Purpose of Account
Grass Valley Limited	JPMorgan Chase Bank, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Collection
Grass Valley Limited	JPMorgan Chase Bank, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Collection
Grass Valley Limited	JPMorgan Chase Bank, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Collection
Grass Valley Limited	JPMorgan Chase Bank, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Disbursement
Grass Valley Limited	JPMorgan Chase Bank, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Disbursement
Grass Valley Limited	JPMorgan Chase Bank, N.A., London Branch, 25 Bank Street, Canary Wharf, London E14 5JP, United Kingdom	Account details redacted	Disbursement
Grass Valley K.K.	Citibank, N.A., Citibank Tower, Floor 50 3, Hong Kong	Account details redacted	Disbursement
Grass Valley K.K.	Citibank, N.A., Otemachi Park Building, 1-1-1 Otemachi, Chiyoda-ku, Tokyo 100-8132	Account details redacted	Disbursement

Grantor	Name and Address of Institution Maintaining Account	Account Number	Purpose of Account
Grass Valley K.K.	Citibank, N.A., Otemachi Park Building, 1-1-1 Otemachi, Chiyoda-ku, Tokyo 100-8132	Account details redacted	Disbursement
GVBB Netherlands B.V.	Citibank Europe PLC NL Branch, Schiphol Boulevard 257, 1118 BH Schiphol, Netherlands	Account details redacted	Disbursement
Grass Valley Nederland B.V.	Citibank Europe PLC NL Branch, Schiphol Boulevard 257, 1118 BH Schiphol, Netherlands	Account details redacted	Disbursement
Grass Valley Nederland B.V.	Citibank Europe PLC NL Branch, Schiphol Boulevard 257, 1118 BH Schiphol, Netherlands	Account details redacted	Disbursement
Grass Valley Nederland B.V.	Citibank, N.A., 25 Canada Square, Canary Wharf, London E14 5LB, United Kingdom	Account details redacted	Collection
Grass Valley Nederland B.V.	J.P. Morgan Bank Luxembourg S.A., Amsterdam Branch, Strawinskylaan 1135, 1077 XX Amsterdam, Netherlands	Account details redacted	Collection
Grass Valley Nederland B.V.	J.P. Morgan Bank Luxembourg S.A., Amsterdam Branch, Strawinskylaan 1135, 1077 XX Amsterdam, Netherlands	Account details redacted	Collection

SCHEDULE V

UCC FINANCING STATEMENTS

UCC Financing Statements have been filed in the jurisdictions below against the Grantors:

Name of Grantor	Secretary of State
Grass Valley Intermediate LLC	Delaware
Grass Valley Holdco Inc.	Delaware
Grass Valley USA, LLC	Delaware
Grass Valley Merger Sub LLC	Delaware
Quantel, Inc.	Delaware
Snell, Inc.	Delaware
Grass Valley Canada ULC	District of Columbia
Grass Valley Canada Acquisition ULC	District of Columbia
Grass Valley Canada Partner ULC	District of Columbia
Grass Valley Canada	District of Columbia
Grass Valley U.K. Acquisition Limited	District of Columbia
Grass Valley (UK) Limited	District of Columbia
Grass Valley Broadcast Solutions Limited	District of Columbia
Softel Limited	District of Columbia
Quantel Holdings (2010) Limited	District of Columbia
Quantel Group Limited	District of Columbia
Quantel Limited	District of Columbia
Quantel Europe Limited	District of Columbia
Snell Corporation Limited	District of Columbia
Pro-Bel Holdings Limited	District of Columbia
Pro-Bel Group Limited	District of Columbia
Pro-Bel Limited	District of Columbia
Grass Valley Limited	District of Columbia
Grass Valley Japan Acquisition G.K.	District of Columbia
Grass Valley K.K.	District of Columbia
Grass Valley Dutch Holdco B.V.	District of Columbia
Grass Valley Dutch Acquisition B.V.	District of Columbia
GVBB Netherlands B.V.	District of Columbia
Grass Valley Nederland B.V.	District of Columbia

SCHEDULE VI

COMMERCIAL TORT CLAIMS

None.

SCHEDULE VII

PLEDGED DEBT

Grantor	Name of Maker	Description	Original Principal Amount
Grass Valley Dutch Holdco B.V.	Grass Valley Japan Acquisition G.K.	Intercompany Note	\$4,096,708

SCHEDULE VIII
PLEDGED SHARES

Grantor	Pledged Issuer	Number of Shares	Percentage of Outstanding Shares	Class	Certificate Number
Grass Valley Intermediate LLC	Grass Valley Holdco Inc.	1,000	100%	Common	1
Grass Valley Holdco Inc.	Grass Valley Dutch Holdco B.V.	N/A	100%	N/A	N/A
Grass Valley Holdco Inc.	Grass Valley USA, LLC	N/A	100%	N/A	N/A
Grass Valley Holdco Inc.	Quantel, Inc.	4,016	100%	Common	4
Grass Valley Holdco Inc.	Snell, Inc.	30,000	100%	Common	3
Grass Valley Dutch Holdco B.V.	Grass Valley Australia Pty Limited	9,130,385	100%	Ordinary	12
Grass Valley Dutch Holdco B.V.	Grass Valley Brasil Aquisição de Media LTDA	N/A	100%	N/A	N/A
Grass Valley Dutch Holdco B.V.	Grass Valley Dutch Acquisition B.V.	1	100%	1	N/A
Grass Valley Dutch Holdco B.V.	Grass Valley France Acquisition SAS	N/A	100%	N/A	N/A
Grass Valley Dutch Holdco B.V.	Grass Valley Italia S.R.L.	N/A	100%	N/A	N/A
Grass Valley Dutch Holdco B.V.	Grass Valley Japan Acquisition G.K.	N/A	100%	N/A	N/A
Grass Valley Dutch Holdco B.V.	Grass Valley Singapore Pte. Ltd.	1,000,001	100%	Ordinary	6

Grantor	Pledged Issuer	Number of Shares	Percentage of Outstanding Shares	Class	Certificate Number
Grass Valley Dutch Holdco B.V.	Grass Valley Spain, S.A.	32,0001	100%	Ordinary	2
Grass Valley Dutch Holdco B.V.	Grass Valley U.K. Acquisition Limited	3,847,303	100%	Ordinary	1 and 2
Grass Valley Dutch Holdco B.V.	Grass Valley Mexico, S. DE R.L. DE C.V.	3,000	100%	N/A	N/A
Grass Valley Dutch Holdco B.V.	GVBB Holdings Sarl	1,323,286	100%	N/A	N/A
Grass Valley Dutch Holdco B.V.	GVBB Netherlands B.V.	100	100%	N/A	N/A
Grass Valley Dutch Holdco B.V.	Miranda Technologies Asia Limited	2	100%	Ordinary	6
Grass Valley Dutch Holdco B.V.	Miranda Technologies France SAS	100,000	100%	N/A	N/A
Grass Valley Dutch Holdco B.V.	Limited Liability Company Grass Valley RUS	N/A	99%	N/A	N/A
Grass Valley Dutch Holdco B.V.	Grass Valley Argentina S.R.L.	95,000	95%	N/A	N/A
Grass Valley U.K. Acquisition Limited	Quantel Holdings (2010) Ltd.	4,800,145	100%	Ordinary Shares	519
Grass Valley U.K. Acquisition Limited	Quantel Holdings (2010) Limited.	1,822,503	100%	Ordinary Shares	518
Grass Valley Dutch Holdco B.V.	Grass Valley Nederland B.V.	100	100%	N/A	N/A
Grass Valley Dutch Holdco B.V.	Grass Valley Canada ULC	100	100%	Common	C-1
Grass Valley Japan Acquisition G.K.	Grass Valley K.K.	91,800	100%	N/A	1

Grantor	Pledged Issuer	Number of Shares	Percentage of Outstanding Shares	Class	Certificate Number
Quantel Holdings (2010) Limited	Quantel Group Limited	101,350	100%	Ordinary Shares	21 (101,250) and 22 (100)
Grass Valley U.K. Acquisition Limited	Grass Valley Broadcast Solutions Limited	50,006	100%	Ordinary Shares	1
Grass Valley Canada ULC	Grass Valley Canada Partner ULC	10	100%	Common	C-5
Grass Valley Canada ULC	Grass Valley Canada	99.9999	99.9999%	General Partnership Units	UC-1
Grass Valley Canada Partner ULC	Grass Valley Canada	0.0001	0.0001%	General Partnership Units	UC-2
GVBB Netherlands B.V.	Grass Valley Argentina S.R.L.	5,000	5%	NA	N/A
GVBB Netherlands B.V.	Limited Liability Company Grass Valley RUS	N/A	1%	N/A	N/A
Quantel Group Limited	Quantel Europe Ltd.	2	100%	Ordinary Shares	1
Quantel Group Limited	Quantel GmbH	26,600	100%	N/A	N/A
Quantel Group Limited	Quantel Limited (UK)	83,980	100%	Ordinary Shares	2 (83,880), 3 (100)
Quantel Group Limited	Quantel Limited (HK)	100,000	100%	Ordinary Shares	2 (1) 3 (99,998) 4 (1)
Quantel Group Limited	Snell Advanced Media Pty Ltd.	125,002	100%	N/A	N/A

Grantor	Pledged Issuer	Number of Shares	Percentage of Outstanding Shares	Class	Certificate Number
Quantel Group Limited	Snell Advanced Media India Private Limited	9,900	99%	N/A	1 (9,900)
Quantel Holdings (2010) Limited	Snell Corporation Limited	625,700	100%	A Ordinary Shares	Share Certificates not Numbered
		1,719,547		B Ordinary Shares	
		133,865		C Ordinary Shares	
		24,534		D1 Ordinary Shares	
		153,585		D2 Ordinary Shares	
		97,879		D3 Ordinary Shares	
		251,727		F Ordinary Shares	
		42,926,144		G Ordinary Shares	
		377,296		H Ordinary Shares	
Quantel Europe Limited	Snell Advanced Media India Private Limited	100	1%	N/A	2 (100)

Grantor	Pledged Issuer	Number of Shares	Percentage of Outstanding Shares	Class	Certificate Number
Grass Valley Broadcast Solutions Limited	Miranda Technologies Malaysia BHD SDN	500,000	100%	Ordinary	7
Grass Valley Broadcast Solutions Limited	Miranda Technologies Singapore Pte. Ltd.	2	100%	Ordinary	5
Grass Valley Broadcast Solutions Limited	Softel Limited	129,585	100%	Ordinary Shares	A-100
Snell Corporation Limited	Grass Valley Limited	503,278,738	100%	Ordinary Shares	Un-numbered (8,075), 287 (503,270,661)
Snell Corporation Limited	Pro-Bel Holdings Ltd.	370,370	100%	Ordinary Shares	29
Grass Valley Limited	Grass Valley Germany Gmbh	25,600	100%	N/A	N/A
Grass Valley Limited	Mantrics S.r.l.	10,000	100%	N/A	N/A
Grass Valley Limited	Snell Advanced Media Sarl	14,735	100%	N/A	N/A
Grass Valley Limited	Snell Asia Pacific Ltd.	2	100%	Ordinary Shares	6 (1)
Pro-Bel Holdings Ltd.	Pro-Bel Group Ltd.	5,188,685	100%	Ordinary Shares	2
Pro-Bel Group Ltd.	Pro-Bel Ltd.	10,880,000	100%	Ordinary Shares	1
Grass Valley France SAS	Grass Valley (UK) Limited	2,150,000	100%	Ordinary Shares	A-100

EXHIBIT A

PLEDGE AMENDMENT

This Pledge Amendment, dated _____, 20__, is delivered pursuant to Section 4 of the Security Agreement referred to below. The undersigned hereby agrees that this Pledge Amendment may be attached to the Pledge and Security Agreement, dated as of July 2, 2020, as it may heretofore have been or hereafter may be amended, restated, supplemented, modified or otherwise changed from time to time (the "Security Agreement") and that the Promissory Notes, Instruments or shares listed on this Pledge Amendment shall be hereby pledged and assigned to the Collateral Agent and become part of the Pledged Interests referred to in such Security Agreement and shall secure all of the Secured Obligations referred to in such Security Agreement.

Pledged Debt			
Grantor	Name of Maker	Description	Original Principal Amount
_____	_____	_____	_____
_____	_____	_____	_____

Pledged Shares					
Grantor	Name of Pledged Issuer	Number of Shares	Percentage of Outstanding Shares	Class	Certificate Number
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

[GRANTOR]

By: _____
 Name:
 Title:

MGG INVESTMENT GROUP LP,
as the Collateral Agent

By: MGG GP LLC, its general partner

By: _____
Name:
Title:

EXHIBIT B

GRANT OF SECURITY INTEREST - - [TRADEMARKS] [PATENTS] [COPYRIGHTS]

WHEREAS, _____ (the "Grantor") [has adopted, used and is using, and holds all right, title and interest in and to, the trademarks and service marks listed on the attached Schedule A, which trademarks and service marks are registered or applied for in the United States Patent and Trademark Office or the Canadian Intellectual Property Office (the "Trademarks") [holds all right, title and interest in the letter patents, design patents and utility patents listed on the attached Schedule A, which patents are issued or applied for in the United States Patent and Trademark Office or the Canadian Intellectual Property Office (the "Patents") [holds all right, title and interest in the copyrights listed on the attached Schedule A, which copyrights are registered or applied for in the United States Copyright Office or the Canadian Intellectual Property Office (the "Copyrights")];

WHEREAS, the Grantor has entered into a Pledge and Security Agreement, dated as of July 2, 2020 (as amended, restated, supplemented, modified or otherwise changed from time to time, the "Security Agreement"), in favor of MGG Investment Group LP, as the Collateral Agent for itself and certain lenders (in such capacity, together with its successors and assigns, if any, the "Grantee"); and

WHEREAS, pursuant to the Security Agreement, the Grantor has granted to the Grantee for the benefit of the Secured Parties (as defined in the Security Agreement) a continuing security interest in all right, title and interest of the Grantor in, to and under the [Trademarks, together with, among other things, the goodwill of the business symbolized by the Trademarks] [Patents] [Copyrights] and the applications and registrations thereof, and all proceeds thereof, including, without limitation, any and all causes of action which may exist by reason of infringement thereof and any and all damages arising from past, present and future violations thereof (the "Collateral"), to secure the payment, performance and observance of the Secured Obligations (as defined in the Security Agreement);

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor does hereby pledge, convey, sell, assign, transfer and set over unto the Grantee and grants to the Grantee for the benefit of the Grantee and the Secured Parties a continuing security interest in the Collateral to secure the prompt payment, performance and observance of the Secured Obligations.

The Grantor does hereby further acknowledge and affirm that the rights and remedies of the Grantee with respect to the Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein.

IN WITNESS WHEREOF, the Grantor has caused this Grant of Security Interest to be duly executed by its officer thereunto duly authorized as of _____, 20____.

[GRANTOR]

By:_____

Name:

Title:

SCHEDULE A TO GRANT OF SECURITY INTEREST

[Trademarks and Trademark Applications]

[Patent and Patent Applications]

[Copyright and Copyright Applications]

Owned by _____

EXHIBIT C

FORM OF SECURITY AGREEMENT SUPPLEMENT

[Date of Security Agreement Supplement]

MGG Investment Group LP, as Collateral Agent
One Penn Plaza, Suite 5320
New York, New York 10119

Ladies and Gentlemen:

Reference hereby is made to (a) the Financing Agreement, dated as of July 2, 2020 (such agreement, as amended, restated, supplemented, modified or otherwise changed from time to time, including any replacement agreement therefor, being hereinafter referred to as the "Financing Agreement") by and among Grass Valley Intermediate LLC, a Delaware limited liability company (the "Parent"), Grass Valley Holdco Inc., a Delaware corporation (the "US Borrower") (the US Borrower to be merged with and into Grass Valley USA, LLC, a Delaware limited liability company, with the US Borrower as the surviving entity (the foregoing merger, the "US Merger"), Grass Valley U.K. Acquisition Limited, a private limited company organized under the laws of England and Wales (the "U.K. Borrower"), Grass Valley Canada Acquisition ULC, an unlimited liability corporation organized under the laws of the Province of Alberta (the "Initial Canadian Borrower") (the Initial Canadian Borrower to be amalgamated with and into Grass Valley Canada ULC, an unlimited liability corporation organized under the laws of the Province of Alberta, with Grass Valley Canada ULC as the resulting entity (the "Canadian Borrower") (the foregoing amalgamation, the "Canadian Merger") and Grass Valley Dutch Holdco B.V., a private limited liability company incorporated under the laws of the Netherlands and registered with the Dutch trade register under number 77640225 ("Dutch Holdco") and Grass Valley Dutch Acquisition B.V., a private limited liability company incorporated under the laws of the Netherlands and registered with the Dutch trade register under number 77643119 (the "Dutch MergerCo"; and together with Dutch Holdco, collectively, the "Initial Dutch Borrowers") (the Dutch MergerCo to be merged with and into Grass Valley Nederland B.V., a private limited liability company incorporated under the laws of the Netherlands and registered with the Dutch trade register under number 20097776, with Grass Valley Nederland B.V. as the surviving entity (and together with Dutch Holdco, each a "Dutch Borrower" and collectively, the "Dutch Borrowers") (the foregoing merger, the "Dutch Merger") (together with the US Borrower, the U.K. Borrower, the Initial Canadian Borrower and the Canadian Borrower, each a "Borrower" and collectively, the "Borrowers"), each subsidiary of the Parent listed as a "Guarantor" on the signature pages thereto (together with the Parent and each other Person that executes a joinder agreement and becomes a "Guarantor" thereunder, each a "Guarantor" and collectively, the "Guarantors", and together with the Borrowers, each a "Grantor" and collectively, the "Grantors"), the lenders from time to time party thereto (each a "Lender" and collectively, the "Lenders"), MGG Investment Group LP, a Delaware limited partnership ("MGG"), in its capacity as collateral agent for the Lenders (in such capacity, together with its successors and assigns in such capacity, the "Collateral Agent") and MGG, as administrative agent for the Lenders (in such capacity, together

with its successors and assigns in such capacity, the "Administrative Agent" and together with the Collateral Agent, each an "Agent" and collectively, the "Agents") and (b) the Pledge and Security Agreement, dated as of July 2, 2020 (as amended, restated, supplemented or otherwise modified from time to time, the "Security Agreement"), made by the Grantors from time to time party thereto in favor of the Collateral Agent. Capitalized terms defined in the Financing Agreement or the Security Agreement and not otherwise defined herein are used herein as defined in the Financing Agreement or the Security Agreement.

SECTION 1. Grant of Security. The undersigned hereby grants to the Collateral Agent, for the ratable benefit of each Secured Party, a security interest in, all of its right, title and interest in and to all of the Collateral (as defined in the Security Agreement) of the undersigned, whether now owned or hereafter acquired by the undersigned, wherever located and whether now or hereafter existing or arising, including, without limitation, the property and assets of the undersigned set forth on the attached supplemental schedules to the Schedules to the Security Agreement.

SECTION 2. Security for Obligations. The grant of a security interest in the Collateral by the undersigned under this Security Agreement Supplement and the Security Agreement secures the payment of all Secured Obligations of the undersigned now or hereafter existing under or in respect of the Loan Documents, whether direct or indirect, absolute or contingent, and whether for principal, reimbursement obligations, interest, premiums, penalties, fees, indemnifications, contract causes of action, costs, expenses or otherwise. Without limiting the generality of the foregoing, each of this Security Agreement Supplement and the Security Agreement secures the payment of all amounts that constitute part of the Secured Obligations and that would be owed by the undersigned to the Collateral Agent or any Secured Party under the Loan Documents but for the fact that such Secured Obligations are unenforceable or not allowable due to the existence of a bankruptcy, reorganization or similar proceeding involving a Grantor.

SECTION 3. Supplements to Security Agreement Schedules. The undersigned has attached hereto supplemental Schedules I through VIII to Schedules I through VIII, respectively, to the Security Agreement, and the undersigned hereby certifies, as of the date first above written, that such supplemental Schedules have been prepared by the undersigned in substantially the form of the equivalent Schedules to the Security Agreement, and such supplemental Schedules include all of the information required to be scheduled to the Security Agreement and do not omit to state any information material thereto.

SECTION 4. Representations and Warranties. The undersigned hereby makes each representation and warranty set forth in Section 5 of the Security Agreement (as supplemented by the attached supplemental Schedules) to the same extent as each other Grantor.

SECTION 5. Obligations Under the Security Agreement. The undersigned hereby agrees, as of the date first above written, to be bound as a Grantor by all of the terms and provisions of the Security Agreement to the same extent as each of the other Grantors. The undersigned further agrees, as of the date first above written, that each reference in the Security Agreement to an "Additional Grantor" or a "Grantor" shall also mean and be a reference to the undersigned.

SECTION 6. Governing Law. This Security Agreement Supplement shall be governed by, and construed in accordance with, the laws of the State of New York.

SECTION 7. Loan Document. In addition to and without limitation of any of the foregoing, this Security Agreement Supplement shall be deemed to be a Loan Document and shall otherwise be subject to all of terms and conditions contained in Sections 12.10 and 12.11 of the Financing Agreement, *mutatis mutandi*.

Very truly yours,

[NAME OF ADDITIONAL LOAN PARTY]

By: _____

Name:

Title:

Acknowledged and Agreed:

MGG INVESTMENT GROUP LP,
as Collateral Agent

By: MGG GP LLC, its general partner

By: _____

Name:

Title:

EXHIBIT D

FORM OF IRREVOCABLE PROXY

(Interests of [] (the "Issuer"))

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [] a [] (the "Grantor"), hereby irrevocably (to the fullest extent permitted by law) appoints and constitutes MGG Investment Group LP, a Delaware limited partnership, in its capacity as Collateral Agent for the Secured Parties (in such capacity, the "Proxy Holder") under the Financing Agreement, dated as of July 2, 2020 (as amended, restated, supplemented or otherwise modified from time to time, the "Financing Agreement"), to which the Proxy Holder, the Grantor, certain affiliates of the Grantor and the Lenders are a party, the attorney and proxy of the Grantor with full power of substitution and resubstitution, to the full extent of the Grantor's rights with respect to all of the Pledged Interests (as defined in the Security Agreement, defined below) which constitute the Equity Interests of the Issuer (the "Interests") owned by the Grantor. Upon the execution hereof, all prior proxies given by the Grantor with respect to any of the Interests are hereby revoked, and no subsequent proxies will be given with respect to any of the Interests.

This proxy is irrevocable, is coupled with an interest, and is granted pursuant to that certain Pledge and Security Agreement, dated as of July 2, 2020, by and among the Grantor, certain affiliates of the Grantor and Proxy Holder (as amended, restated, supplemented or otherwise modified from time to time, the "Security Agreement") for the benefit of Proxy Holder in consideration of the credit extended pursuant to the Financing Agreement. Capitalized terms used herein but not otherwise defined in this Irrevocable Proxy have the meanings ascribed to such terms in the Security Agreement.

The Proxy Holder named above will be empowered and may exercise this Irrevocable Proxy to vote the Interests at any and all times after the occurrence and during the continuation of an Event of Default, including, but not limited to, at any meeting of the [members/board] of the Issuer, however called, and at any adjournment thereof, or in any written action by consent of the [members/board] of the Issuer. This Irrevocable Proxy shall remain in effect with respect to the Interests until the Termination Date, and will continue to be effective or automatically reinstated, as the case may be, if at any time payment, in whole or in part, of any of the Secured Obligations is rescinded or must otherwise be restored or returned by Proxy Holder as a preference, fraudulent conveyance, or otherwise under any bankruptcy, insolvency, or similar law, all as though such payment had not been made (provided, that in the event payment of all or any part of the Secured Obligations is rescinded or must be restored or returned, all reasonable out-of-pocket costs and expenses (including, without limitation, reasonable attorneys' fees and disbursements) incurred by Proxy Holder in defending and enforcing such reinstatement shall be deemed to be included as a part of the Secured Obligations), notwithstanding any time limitations set forth in the [operating agreement/by-laws] and other organization documents of the Issuer or the [Limited Liability Company Act/Corporations Act] of the State of [].

Any obligation of the Grantor hereunder shall be binding upon the heirs, successors, and assigns of the Grantor (including, without limitation, any transferee of any of the Interests).

[Signature Page Follows]

IN WITNESS WHEREOF, the Grantor has executed this Irrevocable Proxy as
of this ____ day of _____, 20__.

[_____]

By _____

Print Name _____

Title _____

EXHIBIT E
FORM OF REGISTRATION PAGE

[Issuer]

[Stock/Membership/Partnership] Ledger as of _____, ____*

Name	Certificate No.	Number of Interests

Acknowledged By:

[Issuer]

By _____
Print Name _____
Title _____

*To Remain Blank - Not Completed at Closing