

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM391772

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	SECURITY INTEREST		
CONVEYING PARTY DATA			
Name	Formerly	Execution Date	Entity Type
VIXS SYSTEMS INC.		11/14/2008	a company existing under the Business Corporations Act (Ontario): CANADA
RECEIVING PARTY DATA			
Name:	Comerica Bank		
Street Address:	200 Bay Street, Suite 2210		
Internal Address:	South Tower, Royal Bank Plaza, P.O Box 61		
City:	Toronto, Ontario		
State/Country:	CANADA		
Postal Code:	M5J 2J2		
Entity Type:	a Texas banking association and authorized foreign bank under the Bank Act: TEXAS		
PROPERTY NUMBERS Total: 4			
Property Type	Number	Word Mark	
Registration Number:	4666907	XCODE	
Registration Number:	4352769	VIXS	
Registration Number:	4265197	XCONNEX	
Registration Number:	4261675	SMART XCODE	
CORRESPONDENCE DATA			
Fax Number:	7349302494		
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>			
Phone:	7349302488		
Email:	ipfilings@bodmanlaw.com		
Correspondent Name:	Susan M. Kornfield - Bodman PLC		
Address Line 1:	201 South Division, Suite 400		
Address Line 4:	Ann Arbor, MICHIGAN 48104		
NAME OF SUBMITTER:	Susan M. Kornfield		
SIGNATURE:	/Susan M. Kornfield/		
DATE SIGNED:	07/15/2016		

OP \$115.00 4666907

Total Attachments: 25

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement (this "Agreement") is made as of November 14, 2008, by and between VIXS SYSTEMS INC., a company existing under the *Business Corporations Act* (Ontario) ("Grantor"), and COMERICA BANK, a Texas banking association and authorized foreign bank under the *Bank Act* (Canada) ("Secured Party").

RECITALS

A. Secured Party has agreed to make certain advances of money and to extend certain financial accommodations (the "Financial Accommodations") to Grantor in the amounts and manner set forth in that certain Loan Agreement (as amended from time to time, the "Loan Agreement"), dated as of November 14, 2008, by and between Secured Party and Grantor. All capitalized terms used herein without definition shall have the meanings ascribed to them in the Loan Agreement.

B. Secured Party is willing to make the Financial Accommodations to Grantor, but only upon the condition, among others, that Grantor shall grant to Secured Party a security interest in all of Grantor's right title, and interest in, to and under all of the Collateral whether presently existing or hereafter acquired.

NOW, THEREFORE, THE PARTIES HERETO AGREE AS FOLLOWS:

1. Grant of Security Interest. To secure all of the Obligations, Grantor hereby grants a security interest and mortgage to Secured Party, as security, in and to Grantor's entire right, title and interest in, to and under the following (all of which shall collectively be called the "Collateral"):

(a) Any and all copyrights, domestic and foreign (whether registered or unregistered), now owned or existing or hereafter adopted or acquired, all registrations and recordings thereof, and all applications in connection therewith, including without limitation all registrations, recordings and applications in the Canadian Copyright Office or United States Copyright office or in any similar office in any other country, and all reissues, extensions or renewals thereof and those set forth on Exhibit A attached hereto (collectively, the "Copyrights");

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

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

(d) Any and all patents, patent applications and intellectual or industrial property underlying such patents or patent applications, including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the "Patents");

(e) Any and all trademarks and trade names, registered and unregistered of the Grantor or predecessor of the Grantor including, without limitation those set forth on Exhibit C attached hereto and including without limitation (collectively, the "Trademarks"):

- (i) all designs, logos, indicia, trade names, corporate names, company names, business names, trade styles, service marks, logos and other source or business identifiers;
- (ii) all fictitious characters;
- (iii) all prints and labels on which any of the foregoing have appeared or appear or shall appear;

- (iv) all registrations and applications that have been or shall be made or filed in the Canadian Intellectual Property Office or United States Patent and Trademark Office or any similar office in any other country or political subdivision thereof and all records thereof and all reissues, extensions, or renewals thereof;
- (v) all goodwill associated with or symbolized by any of the foregoing; and
- (vi) all common law and other rights in the above;
- (f) Any and all claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;
- (g) Any and all licenses or other rights to use any of the Copyrights, Patents or Trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights;
- (h) Any and all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents; and
- (i) Any and all proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

2. Authorization and Request. Grantor authorizes and requests that the Register of Copyrights and the Commissioner of Patents and Trademarks record this security agreement.

3. Covenants and Warranties. Grantor represents, warrants, covenants and agrees as follows:

- (a) Performance of this Agreement does not conflict with or result in a breach of any material agreement to which Grantor is party or by which Grantor is bound;
- (b) Grantor shall comply with the registration, notice and other requirements of Section 6.7 of the Loan Agreement.
- (c) This Agreement creates, and in the case of after acquired Collateral, this Agreement will create at the time Grantor first has rights in such after acquired Collateral, in favor of Secured Party a valid and perfected first priority security interest in the Collateral in the United States securing the payment and performance of the obligations evidenced by the Loan Agreement upon making the filings referred to in clause (l) below;
- (d) To its knowledge, except for, and upon, the filing with the United States Patent and Trademark Office with respect to the Patents and Trademarks and the Register of Copyrights with respect to the Copyrights and with the Secretary of State of the District of Columbia with respect to all of the Collateral necessary to perfect the security interests created hereunder, and except as has been already made or obtained, no authorization, approval or other action by, and no notice to or filing with, any United States governmental authority or United States regulatory body is required either (i) for the grant by Grantor of the security interest granted hereby or for the execution, delivery or performance of this Agreement by Grantor in the United States or (ii) for the perfection in the United States or the exercise by Secured Party of its rights and remedies hereunder;
- (e) All information heretofore, herein or hereafter supplied to Secured Party by or on behalf of Grantor with respect to the Collateral is accurate and complete in all material respects;
- (f) Grantor shall not enter into any agreement that would materially impair or conflict with Grantor's obligations hereunder without Secured Party's prior written consent, which consent shall not be unreasonably withheld. Grantor shall not permit the inclusion in any material contract to which it becomes a party of any provisions that could or might in any way prevent the creation of a security interest in Grantor's rights and interests in any property included within the definition of the Collateral acquired under such contracts; and

(g) Upon any executive officer of Grantor obtaining actual knowledge thereof, Grantor will promptly notify Secured Party in writing of any event that materially adversely affects the value of any Collateral, the ability of Grantor to dispose of any Collateral or the rights and remedies of Secured Party in relation thereto, including the levy of any legal process against any of the Collateral.

4. Secured Party's Rights. Secured Party shall have the right, but not the obligation, to take, at Grantor's sole expense, any actions that Grantor is required under this Agreement to take but which Grantor fails to take, after thirty (30) days notice to Grantor. Grantor shall reimburse and indemnify Secured Party for all reasonable costs and reasonable expenses incurred in the reasonable exercise of its rights under this Section 4.

5. Inspection and Audit Rights. Grantor shall comply with the inspection and audit rights provided Secured Party under Section 6.7(6) of the Loan Agreement.

6. Further Assurances; Attorney in Fact.

(a) On a continuing basis, Grantor will make, execute, acknowledge and deliver, and file and record in the proper filing and recording places in the United States, all such instruments, including appropriate financing and continuation statements and collateral agreements and filings with the United States Patent and Trademark Office and the Register of Copyrights, and take all such action as may reasonably be deemed necessary or advisable, or as requested by Secured Party, to perfect Secured Party's security interest in all Copyrights, Patents and Trademarks and otherwise to carry out the intent and purposes of this Agreement, or for assuring and confirming to Secured Party the grant or perfection of a security interest in all Collateral.

(b) Grantor hereby irrevocably appoints Secured Party as Grantor's attorney-in-fact, with full authority in the place and stead of Grantor and in the name of Grantor, from time to time in Secured Party's discretion, to take any action and to execute any instrument which Secured Party may deem necessary or advisable to accomplish the purposes of this Agreement, including (i) to modify, in its sole discretion, this Agreement without first obtaining Grantor's approval of or signature to such modification by amending Exhibit A, Exhibit B and Exhibit C, thereof, as appropriate, to include reference to any right, title or interest in any Copyrights, Patents or Trademarks acquired by Grantor after the execution hereof or to delete any reference to any right, title or interest in any Copyrights, Patents or Trademarks in which Grantor no longer has or claims any right, title or interest, (ii) to file, in its sole discretion, one or more financing or continuation statements and amendments thereto, relative to any of the Collateral without the signature of Grantor where permitted by law and (iii) effective only upon the occurrence and during the continuance of an Event of Default, to transfer the Collateral into the name of Secured Party or a third party to the extent permitted under the California Uniform Commercial Code.

7. Events of Default. The occurrence of any of the following shall constitute an "Event of Default" under the Agreement:

(a) An Event of Default occurs under the Loan Agreement; or

(b) Grantor breaches any warranty or agreement made by Grantor in this Agreement and, as to any breach that is capable of cure, Grantor fails to cure such breach within ten (10) days of the occurrence of such breach.

8. Remedies. Upon the occurrence and continuance of an Event of Default, Secured Party shall have the right to exercise all the remedies of a secured party under the California Uniform Commercial Code, including without limitation the right to require Grantor to assemble the Collateral and any tangible property in which Secured Party has a security interest and to make it available to Secured Party at a place designated by Secured Party. Secured Party shall have a nonexclusive, royalty free license to use the Copyrights, Patents and Trademarks to the extent reasonably necessary to permit Secured Party to exercise its rights and remedies upon the occurrence of an Event of Default. Grantor will pay any expenses (including reasonable attorneys' fees) incurred by Secured Party in connection with the exercise of any of Secured Party's rights hereunder, including without limitation any expense incurred in disposing of the Collateral. All of Secured Party's rights and remedies with respect to the Collateral shall be cumulative.

9. Indemnity. Grantor agrees to defend, indemnify and hold harmless Secured Party and its officers, employees, and agents against: (a) all obligations, demands, claims, and liabilities claimed or asserted by any other party in connection with the transactions contemplated by this Agreement, and (b) all losses or expenses in any way suffered, incurred, or paid by Secured Party as a result of or in any way arising out of, following or consequential to transactions between Secured Party and Grantor, whether under this Agreement or otherwise (including without limitation reasonable attorneys' fees and reasonable expenses), except for losses arising from or out of Secured Party's gross negligence or willful misconduct.

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

11. Attorneys' Fees. If any action relating to this Agreement is brought by either party hereto against the other party, the prevailing party shall be entitled to recover reasonable attorneys' fees, costs and disbursements.

12. Amendments. This Agreement may be amended only by a written instrument signed by both parties hereto.

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

14. California Law and Jurisdiction; Jury Waiver. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of California, without regard to principles of conflicts of law. Jurisdiction shall lie in the State of California. THE UNDERSIGNED ACKNOWLEDGE THAT THE RIGHT TO TRIAL BY JURY IS A CONSTITUTIONAL ONE, BUT THAT IT MAY BE WAIVED UNDER CERTAIN CIRCUMSTANCES. TO THE EXTENT PERMITTED BY LAW, EACH PARTY, AFTER CONSULTING (OR HAVING HAD THE OPPORTUNITY TO CONSULT) WITH COUNSEL OF ITS CHOICE, KNOWINGLY AND VOLUNTARILY, AND FOR THE MUTUAL BENEFIT OF ALL PARTIES, WAIVES ANY RIGHT TO TRIAL BY JURY IN THE EVENT OF LITIGATION ARISING OUT OF OR RELATED TO THIS AGREEMENT OR ANY OTHER DOCUMENT, INSTRUMENT OR AGREEMENT BETWEEN THE UNDERSIGNED PARTIES.

15. REFERENCE PROVISION.

15.1 In the event the Jury Trial Waiver set forth above is not enforceable, the parties elect to proceed under this Judicial Reference Provision.

15.2 With the exception of the items specified in clause 15.3, below, any controversy, dispute or claim (each, a "Claim") between the parties arising out of or relating to this Agreement or any other document, instrument or agreement between the undersigned parties (collectively in this Section, the "Loan Documents"), will be resolved by a reference proceeding in California in accordance with the provisions of Sections 638 et seq. of the California Code of Civil Procedure ("CCP"), or their successor sections, which shall constitute the exclusive remedy for the resolution of any Claim, including whether the Claim is subject to the reference proceeding. Except as otherwise provided in the Loan Documents, venue for the reference proceeding will be in the Superior Court in the County where the real property involved in the action, if any, is located or in a County where venue is otherwise appropriate under applicable law (the "Court").

15.3 The matters that shall not be subject to a reference are the following: (i) nonjudicial foreclosure of any security interests in real or personal property, (ii) exercise of selfhelp remedies (including, without limitation, set-off), (iii) appointment of a receiver and (iv) temporary, provisional or ancillary remedies (including, without limitation, writs of attachment, writs of possession, temporary restraining orders or preliminary injunctions). This Agreement does not limit the right of any party to exercise or oppose any of the rights and remedies described in clauses (i) and (ii) or to seek or oppose from a court of competent jurisdiction any of the items described in clauses (iii) and (iv). The exercise of, or opposition to, any of those items does not waive the right of any party to a reference pursuant to this Agreement.

15.4 The referee shall be a retired Judge or Justice selected by mutual written agreement of the parties. If the parties do not agree within ten (10) days of a written request to do so by any party, then, upon request of any party, the referee shall be selected by the Presiding Judge of the Court (or his or her representative). A request for appointment of a referee may be heard on an ex parte or expedited basis, and the parties agree that irreparable harm would result if ex parte relief is not granted.

15.5 The parties agree that time is of the essence in conducting the reference proceedings. Accordingly, the referee shall be requested, subject to change in the time periods specified herein for good cause shown, to (i) set the matter for a status and trial-setting conference within fifteen (15) days after the date of selection of the referee, (ii) if practicable, try all issues of law or fact within one hundred twenty (120) days after the date of the conference and (iii) report a statement of decision within twenty (20) days after the matter has been submitted for decision.

15.6 The referee will have power to expand or limit the amount and duration of discovery. The referee may set or extend discovery deadlines or cutoffs for good cause, including a party's failure to provide requested discovery for any reason whatsoever. Unless otherwise ordered based upon good cause shown, no party shall be entitled to "priority" in conducting discovery, depositions may be taken by either party upon seven (7) days written notice, and all other discovery shall be responded to within fifteen (15) days after service. All disputes relating to discovery which cannot be resolved by the parties shall be submitted to the referee whose decision shall be final and binding.

15.7 Except as expressly set forth in this Agreement, the referee shall determine the manner in which the reference proceeding is conducted including the time and place of hearings, the order of presentation of evidence, and all other questions that arise with respect to the course of the reference proceeding. All proceedings and hearings conducted before the referee, except for trial, shall be conducted without a court reporter, except that when any party so requests, a court reporter will be used at any hearing conducted before the referee, and the referee will be provided a courtesy copy of the transcript. The party making such a request shall have the obligation to arrange for and pay the court reporter. Subject to the referee's power to award costs to the prevailing party, the parties will equally share the cost of the referee and the court reporter at trial.

15.8 The referee shall be required to determine all issues in accordance with existing case law and the statutory laws of the State of California. The rules of evidence applicable to proceedings at law in the State of California will be applicable to the reference proceeding. The referee shall be empowered to enter equitable as well as legal relief, enter equitable orders that will be binding on the parties and rule on any motion which would be authorized in a court proceeding, including without limitation motions for summary judgment or summary adjudication. The referee shall issue a decision at the close of the reference proceeding which disposes of all claims of the parties that are the subject of the reference. Pursuant to CCP § 644, such decision shall be entered by the Court as a judgment or an order in the same manner as if the action had been tried by the Court and any such decision will be final, binding and conclusive. The parties reserve the right to appeal from the final judgment or order or from any appealable decision or order entered by the referee. The parties reserve the right to findings of fact, conclusions of laws, a written statement of decision, and the right to move for a new trial or a different judgment, which new trial, if granted, is also to be a reference proceeding under this provision.

15.9 If the enabling legislation which provides for appointment of a referee is repealed (and no successor statute is enacted), any dispute between the parties that would otherwise be determined by reference procedure will be resolved and determined by arbitration. The arbitration will be conducted by a retired judge or Justice, in accordance with the California Arbitration Act §1280 through §1294.2 of the CCP as amended from time to time. The limitations with respect to discovery set forth above shall apply to any such arbitration proceeding.

15.10 THE PARTIES RECOGNIZE AND AGREE THAT ALL CONTROVERSIES, DISPUTES AND CLAIMS RESOLVED UNDER THIS REFERENCE PROVISION WILL BE DECIDED BY A REFEREE AND NOT BY A JURY. AFTER CONSULTING (OR HAVING HAD THE OPPORTUNITY TO CONSULT) WITH COUNSEL OF ITS, HIS OR HER OWN CHOICE, EACH PARTY KNOWINGLY AND VOLUNTARILY, AND FOR THE MUTUAL BENEFIT OF ALL PARTIES, AGREES THAT THIS REFERENCE PROVISION WILL APPLY TO ANY CONTROVERSY, DISPUTE OR CLAIM BETWEEN OR AMONG THEM

ARISING OUT OF OR IN ANY WAY RELATED TO, THIS AGREEMENT OR THE OTHER LOAN DOCUMENTS.

[Remainder of Page Intentionally Left Blank]

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

Address of Grantor:

1210 Sheppard Avenue E, Suite 800
Toronto, Ontario M2K 1E3

GRANTOR:

VIXS SYSTEMS INC.

By:  _____

Its: cfo _____

Address of Secured Party:

200 Bay Street
Suite 2210, South Tower
Royal Bank Plaza, P.O. Box 61
Toronto, Ontario, Canada M5J 2J2

SECURED PARTY:

COMERICA BANK

By: _____

Its: _____

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

GRANTOR:

Address of Grantor:

1210 Sheppard Avenue E, Suite 800
Toronto, Ontario M2K 1E3

VIXS SYSTEMS INC.

By: _____

Its: _____

SECURED PARTY:

Address of Secured Party:

200 Bay Street
Suite 2210, South Tower
Royal Bank Plaza, P.O. Box 61
Toronto, Ontario, Canada M5J 2J2

COMERICA BANK

By:  _____

Its: Vice President

EXHIBIT A

Copyrights

None.

EXHIBIT B

Patents

Title	App. No.	Filing Date	Reg. No.	Date Granted
Video processing system with video to text description generation, search system and methods for use therewith	13/467,691	5/9/12	9,317,751	4/19/16
Secure key access with one-time programmable memory and applications thereof	14/048391	10/8/13	9,317,449	4/19/16
Pattern detection module with region detection, video encoding system and method for use therewith	12/254586	10/20/08	9,313,504	4/12/16
Video processing device with register adjustment generator and methods for use therewith	13/744031	1/17/13	9,310,873	4/12/16
Video encoding system with adaptive hierarchical B-frames and method for use therewith	13/692,388	12/3/12	9,307,235	4/5/16
Carrier tracking without pilots	14/330117	7/14/14	9,306,716	4/5/16
Video encoder with intra-prediction pre-processing and methods for use therewith	14/159829	1/21/14	9,294,765	3/22/16
Video encoder with intra-prediction candidate screening and methods for use therewith	14/159805	1/21/14	9,294,764	3/22/16
Video system with viewer analysis and methods for use therewith	14/217819	3/18/14	9,282,367	3/8/16
Media source device with digital format conversion and methods for use therewith	12/394425	2/27/09	9,282,337	3/8/16
Video processor with lossy and lossless frame buffer compression and methods for use therewith	13/933329	7/2/13	9,277,218	3/1/16
Compensated oscillator	14/186661	2/21/14	9,276,584	3/1/16

Title	App. No.	Filing Date	Reg. No.	Date Granted
Multi-pass video encoder and methods for use therewith	13/034392	2/24/11	9,271,005	2/23/16
System and method for transrating based on multimedia program type	11/522141	9/15/06	9,258,605	2/9/16
Video decoder with pipeline processing and methods for use therewith	13/041680	3/7/11	9,247,261	1/26/16
Video processing device with ring oscillator for power adjustment and methods for use therewith	13/741632	1/15/13	9,239,604	1/19/16
Method and device to identify motion vector candidates using a scaled motion search	13/425522	3/21/12	9,232,230	1/5/16
Motion refinement engine with flexible direction processing and methods for use therewith	12/026505	2/5/08	9,225,996	12/29/15
Motion refinement engine with shared memory for use in video encoding and methods for use therewith	11/602942	11/21/06	9,204,149	12/1/15
Secure provisioning of integrated circuits at various states of deployment, methods thereof	13/305865	11/29/11	9,203,617	12/1/15
Channel selection in a multimedia system	13/606249	9/7/12	9,197,435	11/24/15
Automatic gain control in a communications system	13/346055	1/9/12	9,184,942	11/10/15
Transcoder with dynamic audio channel changing	13/291796	11/8/11	9,183,842	11/10/15
Video processing device for generating time-coded metadata based on a search and methods for use therewith	14/453824	8/7/14	9,124,954	9/1/15
Audio equalizer and methods for use therewith	12/868617	8/25/10	9,124,233	9/1/15

Title	App. No.	Filing Date	Reg. No.	Date Granted
Transmit/receive switch with series, doubly-floating device and switched bias voltage	13/625909	9/25/12	9,117,651	8/25/15
Configurable transcoder and methods for use therewith	13/454798	4/24/12	9,106,921	8/11/15
Encrypted memory device and methods for use therewith	13/423947	3/19/12	9,088,805	7/21/15
General video decoding device for decoding multilayer video and methods for use therewith	13/042184	3/7/11	9,088,800	7/21/15
Multi-format video decoder with filter vector processing and methods for use therewith	13/076568	3/31/11	9,088,793	7/21/15
Detection of video feature based on variance metric	13/450870	4/19/12	9,071,842	6/30/15
Container agnostic encryption device and methods for use therewith	13/423876	3/19/12	9,066,117	6/23/15
Device with privileged memory and applications thereof	14/295479	6/4/14	9,058,297	6/16/15
Dongle device with video encoding and methods for use therewith	13/212970	8/18/11	9,043,523	5/26/15
Method and system for rate control during video transcoding	11/488482	7/18/06	9,036,698	5/19/15
Video decoder with shared memory and methods for use therewith	13/170255	6/28/11	9,025,666	5/5/15
Video decoder with general video decoding device and methods for use therewith	13/041767	3/7/11	9,025,660	5/5/15
Container agnostic decryption device and methods for use therewith	13/423981	3/19/12	9,008,308	4/14/15
Detection of a packet type in a communications system	13/346060	1/9/12	9,008,195	4/14/15

Title	App. No.	Filing Date	Reg. No.	Date Granted
Balanced entropy random number generator	13/187786	7/21/11	8,971,536	3/3/15
Channel estimation in a communications system	13/299751	11/18/11	8,971,463	3/3/15
Video decoder with vector processor and methods for use therewith	13/101357	5/5/11	8,971,416	3/3/15
System and method for storage device emulation in a multimedia processing system	11/082591	3/17/05	8,949,920	2/3/15
DC removal from multicarrier signals	13/600362	8/31/12	8,938,029	1/20/15
Coprocessing module for processing ethernet data and method for use therewith	12/642500	12/18/09	8,924,504	12/30/14
Adaptable encryption device and methods for use therewith	13/591404	8/22/12	8,917,868	12/23/14
Video encoding system with region detection and adaptive encoding tools and method for use therewith	12/840144	7/20/10	8,917,765	12/23/14
Video processing system and device with encoding and decoding modes and method for use therewith	14/151101	1/9/14	8,917,757	12/23/14
Diode protection of cascoded mixed-voltage transistors	13/488518	6/5/12	8,913,362	12/16/14
Motion adaptive filter and deinterlacer and methods for use therewith	14/060108	10/22/13	8,913,186	12/16/14
Neighbor management for use in entropy encoding and methods for use therewith	11/950413	12/4/07	8,885,726	11/11/14
Stereoscopic video transcoder and methods for use therewith	13/178372	7/7/11	8,872,894	10/28/14

Title	App. No.	Filing Date	Reg. No.	Date Granted
Multi-function encoder and decoder devices, and methods thereof	12/965109	12/10/10	8,854,382	10/7/14
Video decoder with slice dependency decoding and methods for use therewith	13/042115	3/7/11	8,848,804	9/30/14
Video processing device for embedding time-coded metadata and methods for use therewith	13/297471	11/16/11	8,842,879	9/23/14
Random number generator	13/187763	7/21/11	8,832,167	9/9/14
Cyclic prefix and precursor joint estimation	13/324225	12/13/11	8,817,918	8/26/14
Processing system with register arbitration and methods for use therewith	12/907223	10/19/10	8,811,497	8/19/14
Frequency mixer with compensated DC offset correction to reduce linearity degradation	13/622014	9/18/12	8,787,503	7/22/14
Video transcoding system with drastic scene change detection and method for use therewith	12/261218	10/30/08	8,787,447	7/22/14
Device with privileged memory and applications thereof	12/490777	6/24/09	8,781,127	7/15/14
Dynamic video data compression	12/981708	12/30/10	8,781,000	7/15/14
Hierarchical video analysis-based real-time perceptual video coding	12/039391	2/28/08	8,780,988	7/15/14
Carrier tracking without pilots	13/299757	11/18/11	8,780,838	7/15/14
Coarse timing acquisition	13/324217	12/13/11	8,774,330	7/8/14
Neighbor management module for use in video encoding and methods for use therewith	11/520102	9/13/06	8,767,830	7/1/14
Adaptive edge enhancement	13/117328	5/27/11	8,761,537	6/24/14

Title	App. No.	Filing Date	Reg. No.	Date Granted
Coding adaptive deblocking filter and method for use therewith	12/039612	02/28/08	8,743,972	6/3/14
Multi-format video decoder with vector processing instructions and methods for use therewith	13/076554	3/31/11	8,743,967	6/3/14
Direct mode module with motion flag precoding and methods for use therewith	11/959429	12/18/07	8,743,952	6/3/14
Deblocking filter with mode control and methods for use therewith	12/394658	2/27/09	8,724,713	5/13/14
Video processing system and device with encoding and decoding modes and method for use therewith	11/716773	3/12/07	8,711,901	4/29/14
Enhanced histogram equalization	13/182801	7/14/11	8,698,961	4/15/14
Motion adaptive deinterlacer and methods for use therewith	13/595255	8/27/12	8,681,270	3/25/14
Processing system with electronic program guide authoring and methods for use therewith	13/183251	7/14/11	8,656,430	2/18/14
Video processing system with face detection and methods for use therewith	13/467600	5/9/12	8,655,030	2/18/14
Processing system with linked-list based prefetch buffer and methods for use therewith	12/128596	5/28/08	8,650,364	2/11/14
Pixel interpolation with edge detection based on cross-correlation	12/567128	9/25/09	8,643,777	2/4/14
Motion adaptive filter and deinterlacer and methods for use therewith	13/595243	8/27/12	8,629,937	1/14/14
Image processing system and method thereof	11/285643	11/21/05	8,624,909	1/7/14

Title	App. No.	Filing Date	Reg. No.	Date Granted
Adaptive partition subset selection module and method for use therewith	12/413055	3/27/09	8,599,921	12/3/13
Contrast control device and method therefor	12/784793	5/21/10	8,599,318	12/3/13
Secure key access with one-time programmable memory and applications thereof	12/651996	1/4/10	8,594,333	11/26/13
Clock synchronization in a modular circuit emulation system	12/764677	4/21/10	8,577,666	11/5/13
Concealing plain text in scrambled blocks	12/511042	7/28/09	8,577,024	11/5/13
Source centric sanction server and methods for use therewith	13/164146	6/20/11	8,565,420	10/22/13
Sanctioning content source and methods for use therewith	13/164475	6/20/11	8,559,629	10/15/13
Sanctioned client device and methods for use therewith	13/164428	6/20/11	8,559,628	10/15/13
Sanctioned caching server and methods for use therewith	13/164289	6/20/11	8,559,627	10/15/13
Cryptographic sanction server and methods for use therewith	13/164047	6/20/11	8,559,626	10/15/13
Method and/or apparatus for implementing a color management module	12/706199	2/16/10	8,553,154	10/8/13
Security module for securing an encrypted signal with system and method for use therewith	11/864617	9/28/07	8,548,168	10/1/13
Pattern detection module, video encoding system and method for use therewith	11/772763	7/2/07	8,548,049	10/1/13
Motion compensation module with fast intra pulse code modulation mode decisions and methods for use therewith	11/958135	12/17/07	8,477,847	7/2/13

Title	App. No.	Filing Date	Reg. No.	Date Granted
Multimedia server with channel control and methods for use therewith	13/021394	2/4/11	8,477,736	7/2/13
Radio receiver having a diversity antenna structure	10/944509	9/17/04	8,457,264	6/4/13
DRAM memory controller with built-in self test and methods for use therewith	12/868648	8/25/10	8,438,432	5/7/13
Video codec with shared interpolation filter and method for use therewith	13/404705	2/24/12	8,437,400	5/7/13
Motion search module with field and frame processing and methods for use therewith	11/502194	8/10/06	8,437,396	5/7/13
Audio-based chapter detection in multimedia stream	12/729378	3/23/10	8,422,859	4/16/13
Edge adaptive deblocking filter and methods for use therewith	12/394519	2/27/09	8,380,001	2/19/13
System for combining a plurality of video streams and method for use therewith	11/799101	4/30/07	8,379,677	2/19/13
Multimedia client/server system with adjustable data link rate and range and methods for use therewith	11/731319	3/29/07	8,379,609	2/19/13
Client module, multimedia server and methods for use therewith	11/408619	4/21/06	8,355,715	1/15/13
Video encoder with ring buffering of run-level pairs and methods for use therewith	11/959643	12/19/07	8,355,447	1/15/13
Motion search module with horizontal compression preprocessing and methods for use therewith	11/500808	8/7/06	8,355,440	1/15/13
Channel selection in a multimedia system	11/270281	11/9/05	8,291,457	10/16/12

Title	App. No.	Filing Date	Reg. No.	Date Granted
Motion refinement engine for use in video encoding in accordance with a plurality of compression standards and methods for use therewith	11/602936	11/21/06	8,290,045	10/16/12
Method and apparatus for affiliating a wireless device with a wireless local area network	10/376400	2/28/03	8,284,739	10/9/12
Adaptive edge enhancement using directional components from non-linear filtering	12/639353	12/16/09	8,284,314	10/9/13
Motion refinement engine for use in video encoding in accordance with a plurality of sub-pixel resolutions and methods for use therewith	11/708654	2/20/07	8,265,136	9/11/12
Multimedia client/server system with remote control signalling and methods for use therewith	11/600553	11/16/06	8,255,553	8/28/12
Rapidly adjustable local oscillation module and applications thereof	11/274367	11/14/05	8,249,533	8/21/12
Multimedia client/server system, client module, multimedia server, radio receiver and methods for use therewith	11/351003	2/9/06	8,249,527	8/21/12
Motion refinement engine with a plurality of cost calculation methods for use in video encoding and methods for use therewith	11/602731	11/21/06	8,218,636	7/10/12
Video codec with shared intra-prediction module and method for use therewith	11/959415	12/18/07	8,189,668	5/29/12
Method and apparatus for distributing video on demand loading	09/907114	7/17/01	8,166,510	4/24/12

Title	App. No.	Filing Date	Reg. No.	Date Granted
Video codec with shared interpolation filter and method for use therewith	11/958107	12/1707	8,165,210	4/24/12
Processing feature revocation and reinvocation	11/338218	1/24/06	8,131,995	3/6/12
Adaptive bandwidth footprint matching for multiple compressed video streams in a fixed bandwidth network	09/823646	3/30/01	8,107,524	1/31/12
USB video card and dongle device with video encoding and methods for use therewith	11/950410	12/4/07	8,028,094	9/27/11
RF transmitter and receiver front-end	10/741716	12/19/03	7,991,379	8/2/11
Multimedia client/server system with adjustable packet size and methods for use therewith	11/799100	4/30/07	7,984,177	7/19/11
Method and apparatus for synchronized channel transmission	10/376806	2/28/03	7,961,759	6/14/11
Multiple path audio video synchronization	11/384922	3/20/06	7,907,212	3/15/11
Multimedia client/server system with copy protection recovery and methods for use therewith	11/540313	9/29/06	7,900,264	3/1/11
Method and apparatus for providing graphical overlays in a multimedia system	09/946912	9/5/01	7,836,193	11/16/10
Low power radio transmitter using pulse transmissions	11/281164	11/16/05	7,835,461	11/16/10
Method and apparatus for adjusting symbol timing and/or symbol positioning of a receive burst of data within a radio receiver	11/477269	6/28/06	7,792,182	9/7/10

Title	App. No.	Filing Date	Reg. No.	Date Granted
Multimedia client/server system with secure access data sharing and methods for use therewith	11/600506	11/16/06	7,774,362	8/10/10
System and method for processing audio frames	10/461095	6/13/03	7,739,105	6/15/10
Error checking using a field of a frame	11/337333	1/23/06	7,725,807	5/25/10
Entropy decoder with pipelined processing and methods for use therewith	12/172529	7/14/08	7,714,754	5/11/10
System and method for dynamic transrating based on content	11/237435	9/28/05	7,707,485	4/27/10
System and method for multiple channel video transcoding	09/918380	7/30/01	7,675,972	3/9/10
Method and system for noise reduction in an image	10/673612	9/29/03	7,668,396	2/23/10
Video display device, video encoder, noise level estimation module and methods for use therewith	11/348119	2/6/06	7,667,776	2/23/10
Selectable quantization in an encoder	10/917005	8/12/04	7,634,526	12/15/09
Adjusting transmit power of a wireless communication device	11/140860	5/31/05	7,634,290	12/15/09
Method and apparatus for channel allocation in a wireless local area network (WLAN)	10/377217	2/28/03	7,623,540	11/24/09
Method and apparatus for managing resources in a multimedia system	09/864476	5/24/01	7,617,515	11/10/09
Reducing local oscillation leakage in a radio frequency transmitter	10/741714	12/19/03	7,613,433	11/3/09
Increased data rate transmissions of a wireless communication	11/148704	6/9/05	7,610,017	10/27/09

Title	App. No.	Filing Date	Reg. No.	Date Granted
System of intra-picture complexity preprocessing	11/053586	2/8/05	7,609,766	10/27/09
Method and system for transcoding video data	10/375166	2/24/03	7,606,305	10/20/09
Device and method for compression of a video stream	09/819147	3/27/01	7,602,847	10/13/09
Video display device, video encoder, and methods for use therewith	11/348120	2/6/06	7,589,796	9/15/09
Low power distributed transmitter	11/591405	11/1/06	7,555,059	6/30/09
Method and apparatus for remote control and monitoring of a multimedia system	09/946227	9/5/01	7,533,271	5/12/09
Method and system for transcoding video data	12/116632	5/7/08	7,480,333	1/20/09
Method and apparatus for accurately detecting validity of a received signal	10/683062	10/10/03	7,466,775	12/16/08
Dynamically adjusting data rate of wireless communications	10/174371	6/18/02	7,423,990	9/9/08
System and method for multimedia delivery in a wireless environment	11/038856	1/20/05	7,421,048	9/2/08
Method and apparatus for signal decoding in a diversity reception system with maximum ratio combining	10/376486	2/28/03	7,421,046	9/2/08
Method and apparatus for decoding baseband orthogonal frequency division multiplex signals	10/160917	6/3/02	7,418,049	8/26/08
Method and system for secure content distribution	10/830242	4/22/04	7,406,598	7/29/08
System and method for multiple channel video transcoding	09/990976	11/21/01	7,403,564	7/22/08

Title	App. No.	Filing Date	Reg. No.	Date Granted
System and method for adaptive DC offset compensation in wireless transmissions	11/086869	3/22/05	7,400,869	7/15/08
Method and system for rate control during video transcoding	09/990737	11/21/01	7,356,079	4/8/08
Method and system for transcoding video data	10/375582	2/24/03	7,327,784	2/5/08
Method and system for transmitting video content while preventing other transmissions in a contention-based network	10/134933	4/29/02	7,310,679	12/18/07
Method and apparatus for hub-based network access via a multimedia system	09/864115	5/24/01	7,301,900	11/27/07
Correlation module for use in a radio receiver	10/742499	12/19/03	7,280,588	10/9/07
Method and system for scaling images	10/673693	9/29/03	7,277,101	10/2/07
Method of using capacitive bonding in a high frequency integrated circuit	11/174824	7/5/05	7,211,465	5/1/07
Method and apparatus of multiplexing a plurality of channels in a multimedia system	09/864602	5/24/01	7,200,855	4/3/07
High frequency integrated circuit using capacitive bonding	10/041318	1/7/02	7,190,083	3/13/07
Low power distributed transmitter	10/026130	12/18/01	7,184,490	2/27/07
Method and apparatus for accurately detecting presence of a valid signal	10/103325	3/21/02	7,170,955	1/30/07
Monolithic semiconductor device for preventing external access to an encryption key	09/995308	11/27/01	7,165,180	1/16/07

Title	App. No.	Filing Date	Reg. No.	Date Granted
Raster image transformation circuit using micro-code and method	09/954146	9/18/01	7,151,861	12/19/06
System for signal mixing and method thereof	09/999540	10/31/01	7,139,330	11/21/06
Method and system for transcoding video data	10/375725	2/24/03	7,133,452	11/7/06
Method and system for encoding and decoding data in a video stream	10/376895	2/28/03	7,130,350	10/31/06
Method and system for protecting video data	10/137151	5/2/02	7,120,253	10/10/06
System for providing data to multiple devices and method thereof	09/990896	11/16/01	7,106,715	9/12/06
Method and system for bit-based data access	10/982740	11/5/04	7,054,964	5/30/06
Method and system for accessing data	09/918384	7/30/01	6,959,348	10/25/05
Fast signal detection process	10/683955	10/10/03	7,072,632	07/04/06
Method of video encoding using windows and system thereof	10/345847	1/16/03	7,408,989	8/5/08
Method and apparatus for adjusting symbol timing and/or symbol positioning of a receive burst of data within a radio receiver	10/161526	6/3/02	7,116,731	10/3/06
Method and apparatus for multimedia system	09/864524	5/24/01	7,099,951	8/29/06
Digital demodulation utilizing frequency equalization	10/122784	4/5/02	7,085,315	8/1/06
Low power radio transmitter using pulse transmissions	10/041230	1/7/02	7,095,796	8/22/06

Title	App. No.	Filing Date	Reg. No.	Date Granted
Method and apparatus for establishing non-standard data rates in a wireless communication system	10/026129	12/18/01	7,099,398	8/29/06
Method and apparatus for distributed load multiplexing of multiple encoded signals over a shared communication path	09/907053	7/17/01	7,486,732	2/3/09
Method and apparatus for selectable quantization in an encoder	09/906,908	7/17/01	7,058,677	6/6/06
Method and apparatus for controlling amount of quantization processing in an encoder	09/907,033	7/17/01	7,042,941	5/9/06

EXHIBIT C

Trademarks

Mark	App. No.	Filing Date	Reg. No.	Reg. Date
XCODE	86/290356	5/23/14	4,666,907	1/6/15
VIXS	85/652877	6/15/12	4,352,769	6/18/13
XCONNEX	85/313460	5/5/11	4,265,197	12/25/12
SMART XCODE	77/786790	7/22/09	4,261,675	12/18/12