

PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT | |
| NATURE OF CONVEYANCE: | SHORT-FORM PATENT SECURITY AGREEMENT | |
| CONVEYING PARTY DATA | | |
| Name | | Execution Date |
| MAGNUM SEMICONDUCTOR, INC. | | 10/31/2014 |
| RECEIVING PARTY DATA | | |
| Name: | CAPITAL IP INVESTMENT PARTNERS LLC, AS ADMINISTRATIVE AGENT | |
| Street Address: | 1686 UNION STREET, SUITE 205 | |
| City: | SAN FRANCISCO | |
| State/Country: | CALIFORNIA | |
| Postal Code: | 94123 | |
| PROPERTY NUMBERS Total: 59 | | |
| Property Type | Number | |
| Patent Number: | 6011870 | |
| Patent Number: | 6192075 | |
| Patent Number: | 6108047 | |
| Patent Number: | 6320905 | |
| Patent Number: | 6584156 | |
| Patent Number: | 6754618 | |
| Patent Number: | 6950605 | |
| Patent Number: | 7246220 | |
| Patent Number: | 7646968 | |
| Patent Number: | 7587131 | |
| Patent Number: | 7613615 | |
| Patent Number: | 7134039 | |
| Patent Number: | 7974523 | |
| Patent Number: | 7391468 | |
| Patent Number: | 7469067 | |
| Patent Number: | 7813621 | |
| Patent Number: | 7574580 | |
| Patent Number: | 7522214 | |
| Patent Number: | 7450184 | |
| Patent Number: | 7420626 | |
| Patent Number: | 7414671 | |
| | | PATENT |

| Property Type | Number |
|---------------------|----------|
| Patent Number: | 7864858 |
| Patent Number: | 7538824 |
| Patent Number: | 7894681 |
| Patent Number: | 8378867 |
| Patent Number: | 8487797 |
| Application Number: | 13434736 |
| Application Number: | 13454669 |
| Application Number: | 13467624 |
| Application Number: | 13485398 |
| Application Number: | 13627776 |
| Application Number: | 13660803 |
| Application Number: | 13731896 |
| Application Number: | 13743091 |
| Application Number: | 13760871 |
| Application Number: | 13800980 |
| Application Number: | 13800804 |
| Application Number: | 13836746 |
| Application Number: | 13851737 |
| Application Number: | 13856995 |
| Application Number: | 13886047 |
| Application Number: | 13889028 |
| Application Number: | 13889778 |
| Application Number: | 13937733 |
| Application Number: | 14011503 |
| Application Number: | 14037148 |
| Application Number: | 14011535 |
| Application Number: | 14025522 |
| Application Number: | 14028156 |
| Application Number: | 14071341 |
| Application Number: | 14109539 |
| Application Number: | 14133261 |
| Application Number: | 14161930 |
| Application Number: | 14201492 |
| Application Number: | 14263535 |
| Application Number: | 14309034 |
| Application Number: | 14316329 |
| Application Number: | 14326211 |
| Application Number: | 14495583 |

CORRESPONDENCE DATA**Fax Number:** (714)755-8290

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.

Email: ipdocket@lw.com**Correspondent Name:** LATHAM & WATKINS LLP**Address Line 1:** 650 TOWN CENTER DRIVE**Address Line 2:** SUITE 2000**Address Line 4:** COSTA MESA, CALIFORNIA 92626

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| ATTORNEY DOCKET NUMBER: | 055197-0001 |
|--------------------------------|-------------|

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|---------------------------|---------------|
| NAME OF SUBMITTER: | RHONDA DELEON |
|---------------------------|---------------|

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|-------------------|-----------------|
| SIGNATURE: | /Rhonda DeLeon/ |
|-------------------|-----------------|

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| DATE SIGNED: | 10/31/2014 |
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Total Attachments: 10

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SHORT-FORM PATENT SECURITY AGREEMENT

October 31, 2014

WHEREAS, MAGNUM SEMICONDUCTOR, INC. ("**Grantor**"), owns and uses in its business, and will in the future adopt and so use, various intangible assets, including the Patent Collateral (as defined below); and

WHEREAS, the Grantor has entered into a Credit Agreement dated as of October 31, 2014 with Capital IP Investment Partners LLC, as administrative agent (in such capacity, together with its successors and assigns in such capacity, the "**Secured Party**"), and other lenders from time to time party thereto, pursuant to which the lenders thereunder have agreed to extend certain credit facilities to the Grantor, subject to the terms and conditions set forth therein; and

WHEREAS, pursuant to the terms of a Pledge and Security Agreement dated as of October 31, 2014 (as amended, supplemented or otherwise modified from time to time, the "**Pledge and Security Agreement**"), between the Grantor and the Secured Party, the Grantor has created in favor of the Secured Party a security interest in, and the Secured Party has become a secured creditor with respect to, the Patent Collateral;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, subject to the terms and conditions of the Pledge and Security Agreement, to evidence further the security interest granted by the Grantor to the Secured Party pursuant to the Pledge and Security Agreement, the Grantor hereby grants to the Secured Party a security interest in all of the Grantor's right, title and interest in and to the following, in each case whether now or hereafter existing or in which the Grantor now has or hereafter acquires an interest and wherever the same may be located (the "**Patent Collateral**");

(i) all rights, title and interest (including rights acquired pursuant to a license or otherwise (but with respect to any such license, only to the extent such a grant would not, under the terms thereof, result in a breach of the terms of, or constitute a default under, such license)) in and to all patents and patent applications and rights and interests in patents and patent applications under any domestic or foreign law that are presently, or in the future may be, owned or held by the Grantor and all patents and patent applications and rights, title and interests in patents and patent applications under any domestic or foreign law that are presently, or in the future may be, owned by the Grantor in whole or in part (including, without limitation, the patents and patent applications set forth on Schedule A annexed hereto), all rights (but not obligations) corresponding thereto to sue for past, present and future infringements and all re-issues, divisions, continuations, renewals, extensions and continuations-in-part thereof; and

(ii) all proceeds, products, rents and profits of or from any and all of the foregoing Patent Collateral and, to the extent not otherwise included, all payments under insurance (whether or not the Secured Party is the loss payee thereof), or any indemnity, warranty or guaranty, payable by reason of loss or damage to or otherwise with respect to any of the foregoing Patent Collateral. For purposes of this Short-Form Patent Security Agreement, the term "**proceeds**" includes whatever is receivable or received when Patent Collateral or proceeds are sold, licensed, exchanged, collected or otherwise disposed of, whether such disposition is voluntary or involuntary.

THIS SHORT FORM PATENT SECURITY AGREEMENT AND ANY CLAIMS, CONTROVERSY, DISPUTE OR CAUSE OF ACTION (WHETHER IN CONTRACT OR TORT OR OTHERWISE) BASED UPON, ARISING OUT OF OR RELATING TO THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED HEREBY SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH THE INTERNAL LAWS OF THE STATE OF NEW YORK (INCLUDING FOR SUCH PURPOSE SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK).

The Grantor does hereby further acknowledge and affirm that the rights and remedies of the Secured Party with respect to the security interest in the Patent Collateral granted hereby are more fully set forth in the Pledge and Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. To the extent there is a conflict between the terms of this Short Form Patent Security Agreement and the Pledge and Security Agreement, the terms of the Pledge and Security Agreement shall govern.

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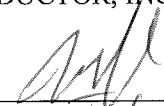
IN WITNESS WHEREOF, the Grantor has caused this Short-Form Patent Security Agreement to be duly executed and delivered by its officer thereunto duly authorized as of the date first written above.

MAGNUM SEMICONDUCTOR, INC.

By: _____

Name: _____

Title: _____


Terence Bittner
CFO

**SCHEDULE A
TO
SHORT-FORM PATENT SECURITY AGREEMENT**

Patents Issued:

U.S. Patents

| Title | Application No. Filing Date | Patent No. Issue Date |
|---|--|----------------------------------|
| Multiple stage and low-complexity motion estimation for interframe video coding | 08/896618 7/18/1997 | 6011870 1/4/2000 |
| Single-pass variable bit-rate control for digital video coding | 08/918682 8/21/1997 | 6192075 2/20/2001 |
| Variable-size spatial and temporal video scaler | 08/959314 10/28/1997 | 6108047 8/22/2000 |
| Postprocessing system for removing blocking artifacts in block-based codecs | 09/111827 7/8/1998 | 6320905 11/20/2001 |
| LSI architecture and implementation of MPEG video codec | 09/118669 7/17/1998 | 6584156 6/24/2003 |
| Fast implementation of MPEG audio coding | 09/589612 6/7/2000 | 6754618 6/22/2004 |
| Method and apparatus for recording real-time audio/video information onto recordable compact disc drives | 09/738135 12/15/2000 | 6950605 9/27/2005 |
| Architecture for hardware-assisted context switching between register groups dedicated to time-critical or non-time critical tasks without saving state | 09/917312 7/27/2001 | 7246220 7/17/2007 |
| End-user configurable digital versatile disk menus and methods for generating the same | 10/706014 11/12/2003 | 7646968 1/12/2010 |
| Audio clocking in video applications | 10/856436 5/28/2004 | 7587131 9/8/2009 |
| Circuits, systems, and methods for real-time de-shuffling of shuffled audio data | 10/871287 6/17/2004 | 7613615 11/3/2009 |
| Recovery of real-time video data after power loss | 10/894340 7/20/2004 | 7134039 11/7/2006 |
| Optimal buffering and scheduling strategy for smooth reverse in a DVD player or the like | 10/948745 9/24/2004 | 7974523 7/5/2011 |
| Telecine conversion detection for progressive scan playback | 10/948791 9/24/2004 | 7391468 6/24/2008 |
| Sequential decoding of progressive coded JPEGs | 10/980250 11/4/2004 | 7469067 12/23/2008 |

| Title | Application No. Filing Date | Patent No. Issue Date |
|---|--------------------------------|--------------------------|
| Synchronized streaming layer with presentation layer | 11/089458 3/25/2005 | 7813621 10/12/2010 |
| Intelligent caching scheme for streaming file systems | 11/089459 3/25/2005 | 7574580 8/11/2009 |
| Circuits and methods for deinterlacing video display data and systems using the same | 11/167877 6/27/2005 | 7522214 4/21/2009 |
| Circuits and methods for detecting 2:2 encoded video and systems utilizing the same | 11/167756 6/27/2005 | 7450184 11/11/2008 |
| Systems and methods for detecting a change in a sequence of interlaced data fields generated from a progressive scan source | 11/167682 6/27/2005 | 7420626 9/2/2008 |
| Systems and methods for display object edge detection and pixel data interpolation in video processing systems | 11/172323 6/30/2005 | 7414671 8/19/2008 |
| Techniques for minimizing memory bandwidth used for motion compensation | 11/175109 7/5/2005 | 7864858 1/4/2011 |
| Systems and methods for reducing noise during video deinterlacing | 11/206402 8/18/2005 | 7538824 5/26/2009 |
| Sequential decoding of progressive coded JPEGS | 12/271975 11/17/2008 | 7894681 2/22/2011 |
| Audio clocking in video applications | 12/543509 8/19/2009 | 8378867 2/19/2013 |
| Audio clocking in video applications | 12/889327 9/23/2010 | 8487797 7/16/2013 |
| APPARATUSES AND METHODS FOR PROVIDING QUANTIZED COEFFICIENTS FOR VIDEO ENCODING | 13/434736 3/29/2012 | 20130259119 10/3/2013 |

Foreign Patents:

| | Title | Application No. Application Date | Publication No. Publication Date |
|--------|--|-------------------------------------|-------------------------------------|
| Canada | METHODS AND APPARATUSES FOR PROVIDING AN ADAPTIVE REDUCED RESOLUTION UPDATE MODE | CA2861043A 1/16/2013 | CA2861043A1 7/25/2013 |
| PCT | METHODS AND APPARATUSES FOR PROVIDING AN ADAPTIVE REDUCED RESOLUTION UPDATE MODE | PCT/US2013/021 748 1/16/2013 | WO201310963 1 7/25/2013 |

| | Title | Application No. Application Date | Publication No. Publication Date |
|-----|---|-------------------------------------|-------------------------------------|
| PCT | APPARATUSES AND METHODS FOR PROVIDING QUANTIZED COEFFICIENTS FOR VIDEO ENCODING | PCT/US2013/034 622 3/29/2013 | WO201314915 4 10/3/2013 |
| PCT | APPARATUSES AND METHODS FOR BITSTREAM BITSTUFFING | WO2013US36958 A 4/17/2013 | WO201316296 7 10/31/2013 |
| PCT | APPARATUSES AND METHODS FOR ESTIMATING BITSTREAM BIT COUNTS | WO2013US40308 A 5/9/2013 | WO201317000 3 11/14/2013 |
| PCT | TRANSPORT STREAM MULTIPLEXERS AND METHODS FOR PROVIDING PACKETS ON A TRANSPORT STREAM | WO2013US42183 A 5/22/2013 | WO201318103 6 12/5/2013 |
| PCT | APPARATUSES AND METHODS FOR OPTIMIZING RATE-DISTORTION OF SYNTAX ELEMENTS | WO2013US61635 A 9/25/2013 | WO201405242 5 4/3/2014 |
| PCT | RATE-DISTORTION OPTIMIZERS AND OPTIMIZATION TECHNIQUES INCLUDING JOINT OPTIMIZATION OF MULTIPLE COLOR COMPONENTS | WO2013US66354 A 10/23/2013 | WO201406648 8 5/1/2014 |
| PCT | METHODS AND APPARATUSES FOR ADAPTIVELY FILTERING VIDEO SIGNALS | WO2013US70414 A 11/15/2013 | WO201410528 5 7/3/2014 |
| PCT | APPARATUSES AND METHODS FOR PERFORMING JOINT RATE-DISTORTION OPTIMIZATION OF PREDICTION MODE | WO2014US13768 A 1/30/2014 | WO201412374 1 8/14/2014 |
| PCT | METHOD AND APPARATUS FOR PERCEPTUAL MACROBLOCK QUANTIZATION PARAMETER DECISION TO IMPROVE SUBJECTIVE VISUAL QUALITY OF A VIDEO SIGNAL | WO2014US19115 A 2/27/2014 | WO201416394 3 10/9/2014 |
| PCT | VIDEO SYNCHRONIZATION TECHNIQUES USING PROJECTION | WO2014US19263 A 2/28/2014 | WO201415868 4 10/2/2014 |
| PCT | APPARATUSES AND METHODS FOR PROVIDING QUANTIZED COEFFICIENTS FOR VIDEO ENCODING | WO2014US21034 A 3/6/2014 | WO201414981 8 9/25/2014 |

| | Title | Application No. Application Date | Publication No. Publication Date |
|-----|---|-------------------------------------|-------------------------------------|
| PCT | APPARATUSES AND METHODS FOR POOLING MULTIPLE CHANNELS INTO A MULTI-PROGRAM TRANSPORT STREAM | WO2014US31202 A 3/19/2014 | WO201416532 2 10/9/2014 |
| PCT | APPARATUSES AND METHODS FOR STAGGERED-FIELD INTRA-REFRESH | WO2014US31188 A 3/19/2014 | WO201416056 9 10/2/2014 |

Patents Pending:

U.S. Patents

| Title | Application No. Filing Date |
|---|--------------------------------|
| APPARATUSES AND METHODS FOR BITSTREAM BITSTUFFING | 13/454669 4/24/2012 |
| APPARATUSES AND METHODS FOR ESTIMATING BITSTREAM BIT COUNTS | 13/467624 5/9/2012 |
| TRANSPORT STREAM MULTIPLEXERS AND METHODS FOR PROVIDING PACKETS ON A TRANSPORT STREAM | 13/485398 5/31/2012 |
| APPARATUSES AND METHODS FOR OPTIMIZING RATE-DISTORTION OF SYNTAX ELEMENTS | 13/627776 9/26/2012 |
| RATE-DISTORTION OPTIMIZERS AND OPTIMIZATION TECHNIQUES INCLUDING JOINT OPTIMIZATION OF MULTIPLE COLOR COMPONENTS | 13/660803 10/25/2012 |
| METHODS AND APPARATUSES FOR ADAPTIVELY FILTERING VIDEO SIGNALS | 13/731896 12/31/2012 |
| METHODS AND APPARATUSES FOR PROVIDING AN ADAPTIVE REDUCED RESOLUTION UPDATE MODE | 13/743091 1/16/2013 |
| APPARATUSES AND METHODS FOR PERFORMING JOINT RATE-DISTORTION OPTIMIZATION OF PREDICTION MODE | 13/760871 2/6/2013 |
| VIDEO SYNCHRONIZATION TECHNIQUES USING PROJECTION | 13/800980 3/13/2013 |
| METHOD AND APPARATUS FOR PERCEPTUAL MACROBLOCK QUANTIZATION PARAMETER DECISION TO IMPROVE SUBJECTIVE VISUAL QUALITY OF A VIDEO SIGNAL | 13/800804 3/13/2013 |

| Title | Application No. Filing Date |
|---|--------------------------------|
| APPARATUSES AND METHODS FOR PROVIDING QUANTIZED COEFFICIENTS FOR VIDEO ENCODING | 13/836746 3/15/2013 |
| APPARATUSES AND METHODS FOR STAGGERED- FIELD INTRA-REFRESH | 13/851737 3/27/2013 |
| APPARATUSES AND METHODS FOR POOLING MULTIPLE CHANNELS INTO A MULTI-PROGRAM TRANSPORT STREAM | 13/856995 4/4/2013 |
| METHODS AND APPARATUSES INCLUDING A STATISTICAL MULTIPLEXER WITH GLOBAL RATE CONTROL | 13/886047 5/2/2013 |
| METHODS AND APPARATUSES INCLUDING A STATISTICAL MULTIPLEXER WITH BITRATE SMOOTHING | 13/889028 5/7/2013 |
| SYSTEMS, APPARATUSES, AND METHODS FOR TRANSCODING A BISTREAM | 13/889778 5/8/2013 |
| APPARATUSES AND METHODS FOR ADJUSTING A QUANTIZATION PARAMETER TO IMPROVE SUBJECTIVE QUALITY | 13/937733 7/9/2013 |
| APPARATUSES AND METHODS FOR CABAC INITIALIZATION | 14/011503 8/27/2013 |
| APPARATUSES AND METHODS FOR REDUCING RATE AND DISTORTION COSTS DURING ENCODING BY MODULATING A LAGRANGIAN PARAMETER | 14/037148 9/25/2013 |
| METHOD AND APPARATUS FOR ADJUSTING MACROBLOCK QUANTIZATION PARAMETERS TO IMPROVE VISUAL QUALITY FOR LOSSY VIDEO ENCODING | 14/011535 8/27/2013 |
| METHODS AND APPARATUSES INCLUDING AN ENCODING SYSTEM WITH TEMPORALLY ADAPTIVE QUANTIZATION | 14/025522 9/12/2013 |
| APPARATUSES AND METHODS FOR ADJUSTING COEFFICIENTS USING DEAD ZONES | 14/028156 9/16/2013 |
| METHODS AND APPARATUSES FOR MULTI-PASS ADAPTIVE QUANTIZATION | 14/071341 11/4/2013 |
| METHOD, SYSTEM, AND COMPUTER PROGRAM PRODUCT FOR THE QUANTIZATION WEIGHT MATRIX OPTIMIZATION IN VIDEO CODING | 14/109539 12/17/2013 |
| APPARATUSES AND METHODS FOR OPTIMIZING RATE-DISTORTION COSTS IN VIDEO ENCODING | 14/133261 12/18/2013 |

| Title | | Application No. Filing Date |
|---|--|--------------------------------|
| METHODS AND APPARATUSES FOR CONTENT-ADAPTIVE QUANTIZATION PARAMETER MODULATION TO IMPROVE VIDEO QUALITY IN LOSSY VIDEO CODING | | 14/161930 1/23/2014 |
| METHOD AND APPARATUS FOR VIDEO QUANTIZATION RATE DISTORTION FUNCTION CALCULATION | | 14/201492 3/7/2014 |
| METHOD FOR TIME MULTIPLEXING OF MULTIPLE VARIABLE RATE DATA CHANNELS | | 14/263535 4/28/2014 |
| METHOD AND APPARATUS FOR OPTIMAL SELECTION OF THE LAGRANGIAN PARAMETER FOR RATE-DISTORTION OPTIMIZATION FOR REAL-TIME COMPRESSED VIDEO ENCODING | | 14/309034 6/19/2014 |
| METHOD AND APPARATUS FOR EDGE PRESERVING OR EDGE ENHANCING SPATIAL FILTER | | 14/316329 6/26/2014 |
| METHOD AND APPARATUS FOR RASTER SCAN-BASED VIDEO PROCESSING USING TEMPORAL STRIPES IN ORDER TO REDUCE DRAM MEMORY BANDWIDTH AND THERMAL POWER | | 14/326211 7/8/2014 |
| METHOD FOR MEASURING RANDOM NOISE LEVEL | | 14/495583 9/24/2014 |

Foreign Patents

| | Title | Application No. Application Date |
|-----|--|-------------------------------------|
| PCT | METHODS AND APPARATUSES INCLUDING A STATISTICAL MULTIPLEXER WITH GLOBAL RATE CONTROL | PCT/US14/32650 4/2/2014 |
| PCT | METHODS AND APPARATUSES INCLUDING A STATISTICAL MULTIPLEXER WITH BITRATE SMOOTHING | PCT/US14/32668 4/2/2014 |
| PCT | SYSTEMS, APPARATUSES, AND METHODS FOR TRANSCODING A BISTREAM | PCT/US14/32682 4/2/2014 |
| PCT | APPARATUSES AND METHODS FOR ADJUSTING A QUANTIZATION PARAMETER TO IMPROVE SUBJECTIVE QUALITY | PCT/US14/42001 6/11/2014 |
| PCT | METHOD FOR RANDOM NOISE HANDLING | P242205/US |

| | Title | Application No. Application Date |
|-----|---|-------------------------------------|
| PCT | DATA CONSISTENCY MESSAGING FOR SHARED MEMORY SYSTEMS | P239077/US |
| PCT | METHOD AND APPARATUS FOR INTER AND INTRA PICTURE PARALLEL HEVC AND H.264 DECODE | P242215 |