PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1

Stylesheet Version v1.2

EPAS ID: PAT3709898

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the NAME OF ASSIGNOR AND ASSIGNEE previously recorded on Reel 037565 Frame 0439. Assignor(s) hereby confirms the NAME OF ASSIGNOR SHOULD BE: KIP PELI P1 LP NAME OF ASSIGNEE SHOULD BE: DBD CREDIT FUNDING LLC.

CONVEYING PARTY DATA

Name	Execution Date
KIP PELI P1 LP	12/21/2015

RECEIVING PARTY DATA

Name:	DBD CREDIT FUNDING LLC
Street Address:	1345 AVENUE OF THE AMERICAS
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10105

PROPERTY NUMBERS Total: 189

Property Type	Number
Patent Number:	8902321
Patent Number:	8896719
Patent Number:	9060120
Patent Number:	9041823
Patent Number:	9049390
Patent Number:	9049367
Patent Number:	8885059
Patent Number:	9060142
Patent Number:	9041829
Patent Number:	9060124
Patent Number:	9049391
Patent Number:	9060121
Patent Number:	9055213
Patent Number:	9077893
Patent Number:	8878950
Patent Number:	9047684
Patent Number:	9041824
Patent Number:	8514491

Property Type	Number
Patent Number:	8861089
Patent Number:	8866920
Patent Number:	9191580
Patent Number:	9049411
Patent Number:	9124815
Patent Number:	9094661
Patent Number:	9055233
Patent Number:	9049381
Patent Number:	8231814
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Patent Number:	8692893
Patent Number:	9197821
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Patent Number:	9031343
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Patent Number:	9210392
Patent Number:	9143711
Patent Number:	9100635
Patent Number:	8619082
Patent Number:	8780113
Patent Number:	9123117
Patent Number:	9123118
Patent Number:	9129377
Patent Number:	9147254
Patent Number:	8866912
Patent Number:	9124864

Property Type	Number
Patent Number:	9124831
Patent Number:	9100586
Patent Number:	9106784
Patent Number:	9185276
Application Number:	61054694
Application Number:	14704909
Application Number:	61281662
Application Number:	61263339
Application Number:	61314776
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Application Number:	14705914
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Application Number:	14042275
Application Number:	14876024
Application Number:	61701044

Property Type	Number
Application Number:	61692547
Application Number:	13975159
Application Number:	61595611
Application Number:	13761040
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Application Number:	14204990
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Application Number:	14776553
Application Number:	61783441

Property Type	Number
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Application Number:	14962943
Application Number:	14880907
Application Number:	14868942
Application Number:	14933871
Application Number:	14933561
Application Number:	14883121

CORRESPONDENCE DATA

Fax Number: (206)359-7198

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.

Phone: (206) 359-8000

Email: patentprocurement@perkinscoie.com

Correspondent Name: PERKINS COIE LLP

Address Line 1: P.O. BOX 1247

Address Line 4: SEATTLE, WASHINGTON 98111-1247

ATTORNEY DOCKET NUMBER:	081300.0040
NAME OF SUBMITTER:	JACKIE CONKEY
SIGNATURE:	/JackieConkey/
DATE SIGNED:	01/25/2016

Total Attachments: 25

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Confirmation Receipt

Your assignment has been received by the USPTO.
The coversheet of the assignment is displayed below:

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST
SEQUENCE:	2

CONVEYING PARTY DATA

Name	Execution Date
PELICAN IMAGING CORPORATION	12/21/2015

RECEIVING PARTY DATA

Name:	KIP PELI P1 LP
Street Address:	1345 AVENUE OF THE AMERICAS
Internal Address:	46TH FLOOR
City:	NEW YORK
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Application Number:	14982943
Application Number:	14880907
Application Number:	14886942
Application Number:	14933871
Application Number:	14933561
Application Number:	14883121

CORRESPONDENCE DATA

Fax Number: (206)359-7198
Phone: (206) 359-8000
Email: patentprocurement@perkinscoie.com
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.
Correspondent Name: PERKINS COIE LLP
Address Line 1: P.O. BOX 1247
Address Line 2: PATENT-SEA
Address Line 4: SEATTLE, WASHINGTON 98111-1247

ATTORNEY DOCKET NUMBER:	81300.0040
NAME OF SUBMITTER:	JACKIE CONKEY
Signature:	/JackieConkey/
Date:	01/22/2016

Total Attachments: 1
source=Security_Interest_DBD Secured_Party_KIP_Debtor#page1.tif

RECEIPT INFORMATION

EPAS ID: PAT3707202
Receipt Date: 01/22/2016

Return to home page

UCC FINANCING STATEMENT

FOLLOW INSTRUCTIONS

A. NAME & PHONE OF CONTACT AT FILER (optional)
SHANNON K. ARMSTRONG (469)801-2338

B. E-MAIL CONTACT AT FILER (optional)
SARMSTRONG@PERKINSCOIE.COM

C. SEND ACKNOWLEDGMENT TO: (Name and Address)

PERKINS COIE

500 N. AKARD STREET

SUITE 3300

DALLAS, TX 75201

THE ABOVE SPACE IS FOR FILING OFFICE USE ONLY

1. **DEBTOR'S NAME:** Provide only one Debtor name (1a or 1b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 1b, leave all of item 1 blank, check here ☐ and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

1a. ORGANIZATION'S NAME			
KIP PELI P1 LP			

OR

1b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)	SUFFIX

1c. MAILING ADDRESS	CITY	STATE	POSTAL CODE	COUNTRY
1345 AVENUE OF THE AMERICAS, 46TH FLOOR	NEW YORK	TX	10105	US

2. **DEBTOR'S NAME:** Provide only one Debtor name (2a or 2b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 2b, leave all of item 2 blank, check here ☐ and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

2a. ORGANIZATION'S NAME			

OR

2b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)	SUFFIX

2c. MAILING ADDRESS	CITY	STATE	POSTAL CODE	COUNTRY

3. **SECURED PARTY'S NAME** (or NAME of ASSIGNEE of ASSIGNOR SECURED PARTY): Provide only one Secured Party name (3a or 3b)

3a. ORGANIZATION'S NAME			
DBD CREDIT FUNDING LLC			

OR

3b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)	SUFFIX

3c. MAILING ADDRESS	CITY	STATE	POSTAL CODE	COUNTRY
1345 AVENUE OF THE AMERICAS, 46TH FLOOR	NEW YORK	NY	10105	US

4. **COLLATERAL:** This financing statement covers the following collateral:
Please see Exhibit A, attached and incorporated by reference.
Collateral Description - please see attached

5. Check only if applicable and check only one box. Collateral is ☐ held in a Trust (see UCC1Ad, item 17 and instructions) ☐ being administered by a Decedent's Personal Representative

6a. Check only if applicable and check only one box:
☐ Public-Finance Transaction ☐ Manufactured-Home Transaction ☐ A Debtor is a Transmitting Utility

6b. Check only if applicable and check only one box:
☐ Agricultural Lien ☐ Non-UCC Filing

7. ALTERNATIVE DESIGNATION (if applicable): ☐ Lessee/Lessor ☐ Consignee/Consignor ☐ Seller/Buyer ☐ Bailee/Bailor ☐ Licensee/Licensor

8. OPTIONAL FILER REFERENCE DATA:

EXHIBIT A

COLLATERAL DESCRIPTION

All personal property, OF ANY KIND OR NATURE, WHEREVER LOCATED now owned or hereafter acquired by Obligor, including, without limitation, all of Obligor's interest in and to any of the following but excluding all property described in the sentence below which immediately follows item (16) below (collectively, the "**Collateral**"):

(1)   Accounts;

(2)   Inventory;

(3)   Chattel Paper;

(4)   Commercial Tort Claims;

(5)   Deposit Accounts;

(6)   Securities Accounts;

(7)   Documents;

(8)   Goods;

(9)   Instruments;

(10)   Investment Property;

(11)   Letter-of-Credit Rights;

(12)   Letters of Credit;

(13)   General Intangibles;

(14)   Equipment;

(15)   Intellectual Property (as defined in Section 1.1 of the Credit Agreement); and

(16)   Proceeds, Supporting Obligations and products of any and all of the foregoing to the extent not otherwise included.

Notwithstanding the foregoing, in no event shall Collateral include any Excluded Collateral.

Except as otherwise defined in the Credit Agreement, the following terms shall have the following meanings:

(a)   "**Excluded Collateral**" shall mean (i) any property rights or interests related to any contract, agreement or Instrument that by its terms would be violated, breached or terminated by an assignment as Collateral hereunder (other than to the extent that such terms prohibiting

Exhibit A

such assignment in any contract, agreement or instrument would be rendered ineffective pursuant to Sections 9-406, 9-407, 9-408 or 9-409 of the UCC or any successor provision or provisions), (ii) voting capital stock of any Non-U.S. Subsidiary, solely to the extent that such capital stock represents more than 65.0% of the outstanding voting capital stock of such Non-U.S. Subsidiary and (iii) any United States intent to use trademark applications for which an amendment to allege use has not been submitted to and accepted by the United States Patent and Trademark Office and after such acceptance, such intent to use trademark application shall be included as Collateral hereunder.

(b)   **"Non-U.S. Subsidiary"** means a Subsidiary organized in a jurisdiction other than a jurisdiction located within the United States.

(c)   "UCC" means the Uniform Commercial Code as in effect in the State of Delaware on the date hereof and as amended hereafter, except as such term may be used in connection with the perfection of a security interest in the Collateral, in which case, the applicable jurisdiction with respect to the affected Collateral shall apply.

The categories and classes of Collateral listed in item (1) through item (16) (other than item (15), shall have the meanings as set forth in the UCC. The categories and classes of Collateral listed in item (15) shall have the meanings as set forth in item (15).

The definitions of terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include," "includes" and "including" shall be deemed to be followed by the phrase "without limitation." The word **"will"** shall be construed to have the same meaning and effect as the word "shall." Unless the context requires otherwise (a) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented, restated, or otherwise modified (subject to any restrictions on such amendments, supplements, restatements or modifications set forth herein); (b) any reference herein to any Person shall be construed to include such Person's successors and assigns; (c) the words **"herein,"** **"hereof"** and **"hereunder,"** and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof; (d) all references herein to Sections, Exhibits and Schedules shall be construed to refer to Sections of, and Exhibits and Schedules to this Agreement; and (e) the words **"asset"** and **"property"** shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including cash, securities, accounts and contract rights.

Capitalized terms used herein but not otherwise defined, shall have the meanings ascribed to them in the Credit Agreement.

Patents

Patent /Application No.	Country/ Jurisdiction	Filing Date (mm-dd-yyyy)	Title of Patent and First Named Inventor	First Named Inventor
8,902,321	United States of America	5/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heterogeneous Imagers	Kartik Venkataraman
ZL 200980117890.1	China	5/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heteregeneous Imagers	Kartik Venkataraman
201310438869X	China	5/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heteregeneous Imagers	Kartik Venkataraman
8,896,719	United States of America	7/30/2014	Systems and Methods for Parallax Measurement Using Camera Arrays Incorporating 3 x 3 Camera Configurations	Kartik Venkataraman
9,060,142	United States of America	9/2/2014	Capturing and Processing of Images Captured by Camera Arrays Including Heterogeneous Optics	Kartik Venkataraman
9,041,829	United States of America	9/2/2014	Capturing and Processing of High Dynamic Range Images Using Camera Arrays	Kartik Venkataraman
9,049,367	United States of America	8/13/2014	Systems and Methods for Synthesizing Higher Resolution Images Using Images Captured by Camera Arrays	Kartik Venkataraman
9,060,120	United States of America	7/30/2014	Systems and Methods for Generating Depth Maps Using Images Captured by Camera Arrays	Kartik Venkataraman
14/704909	United States of America	5/5/2015	Systems and Methods for Generating Depth Maps Using Light Focused on an Image Sensor by a Lens Element Array	Kartik Venkataraman
9,060,121	United States of America	9/25/2014	Capturing and Processing of Images Captured by Camera Arrays Including Cameras Dedicated to Sampling Luma and Cameras Dedicated to Sampling Chroma	Kartik Venkataraman
9,060,124	United States of America	9/2/2014	Capturing and Processing of Images Using Non-Monolithic Camera Arrays	Kartik Venkataraman
9,055,213	United States of America	9/25/2014	Systems and Methods for Measuring Depth Using Images Captured by Monolithic Camera Arrays Including at Least One Bayer Camera	Kartik Venkataraman
9,041,823	United States of America	7/30/2014	Systems and Methods for Performing Post Capture Refocus Using Images Captured by Camera Arrays	Kartik Venkataraman
9,077,893	United States of America	9/25/2014	Capturing and Processing of Images Captured by Non-Grid Camera Arrays	Kartik Venkataraman
8,885,059	United States of America	8/13/2014	Systems and Methods for Measuring Depth Using Images Captured by Camera Arrays	Kartik Venkataraman

Patent /Application No.	Country/ Jurisdiction	Filing Date (mm-dd-yyyy)	Title of Patent and First Named Inventor	First Named Inventor
9,049,391	United States of America	9/2/2014	Capturing and Processing of Near-IR Images Including Occlusions Using Camera Arrays Incorporating Near-IR Light Sources	Kartik Venkataraman
9,049,390	United States of America	7/30/2014	Capturing and Processing of Images Captured by Arrays Including Polychromatic Cameras	Kartik Venkataraman
097631949	European Patent Office	5/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heteregeneous Imagers	Kartik Venkataraman
2011510681	Japan	5/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heteregeneous Imagers	Kartik Venkataraman
2014264372	Japan	5/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heteregeneous Imagers	Kartik Venkataraman
1020107028308	Republic of Korea	5/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heteregeneous Imagers	Kartik Venkataraman
PCT/US2009/044687	PCT	5/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heteregeneous Imagers	Kartik Venkataraman
166239	Singapore	5/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heteregeneous Imagers	Kartik Venkataraman
8,878,950	United States of America	12/14/2010	Systems and Methods for Synthesizing High Resolution Images Using Super-Resolution Processsses	Dan Lelescu
2011343863	Australia	12/14/2011	Systems and Methods for Synthesizing High Resolution Images Using Super-Resolution Processes	Dan Lelescu
2821965	Canada	12/14/2011	System and Methods for Synthesizing High Resolution Images Using Super-Resolution Processes	Dan Lelescu
14/519,659	United States of America	10/21/2014	Systems and Methods for Synthesizing High Resolution Images Using Images Captured by an Array of Independently Controllable Imagers	Dan Lelescu
9047684	United States of America	10/21/2014	Systems and Methods for Synthesizing High Resolution Images Using a Set of Geometrically Registered Images	Dan Lelescu
9,041,824	United States of America	10/21/2014	Systems and Methods for Dynamic Refocusing of High Resolution Images Generated Using Images Captured by a Plurality of Imagers	Dan Lelescu
118483080	European Patent Office	12/14/2011	System and Methods for Synthesizing High Resolution Images Using Super-Resolution Processes	Dan Lelescu

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PCT/US11/64921	PCT	12/14/2011	System and Methods for Synthesizing High Resolution Images Using Super-Resolution Processes	Dan Lelescu
191151	Singapore	12/14/2011	System and Methods for Synthesizing High Resolution Images Using Super-Resolution Processes	Dan Lelescu
8,514,491	United States of America	11/22/2010	Capturing and Processing of Images Using Monolithic Camera Array with Heterogeneous Imagers	Jacques Duparre
8,861,089	United States of America	7/22/2013	Capturing and Processing of Images Using Monolithic Camera Array with Heterogeneous Imagers	Jacques Duparre
14/475,481	United States of America	9/2/2014	Capturing and Processing of Images Including Occlusions Captured by Heterogeneous Camera Arrays	Jacques Duparre
108323304	European Patent Office	11/22/2010	Capturing and Processing of Images Using Monolithic Camera Array with Heterogeneous Imagers	Kartik Venkataraman
PCT/US10/057661	PCT	11/22/2010	Capturing and Processing of Images Using Monolithic Camera Array with Heterogeneous Imagers	Kartik Venkataraman
099147177	Taiwan R.O.C.	11/22/2010	Capturing and Processing of Images Using Monolithic Camera Array with Heterogeneous Imagers	Kartik Venkataraman
8,866,920	United States of America	11/22/2010	Capturing and Processing of Images Using Monolithic Camera Array with Heterogeneous Imagers	Kartik Venkataraman
9,049,411	United States of America	8/13/2014	Camera Arrays Incorporating 3 x 3 Imager Configurations	Kartik Venkataraman
9,124,815	United States of America	8/13/2014	Capturing and Processing of Images Including Occlusions Captured by Arrays of Luma and Chroma Cameras	Kartik Venkataraman
9,094,661	United States of America	8/13/2014	Systems and Methods for Generating Depth Maps Using A Set of Images Containing A Baseline Image	Kartik Venkataraman
9,055,233	United States of America	8/13/2014	Systems and Methods for Synthesizing Higher Resolution Images Using a Set of Images Containing a Baseline Image	Kartik Venkataraman
9,191,580	United States of America	8/13/2014	Capturing and Processing of Images Including Occlusions Captured by Camera Arrays	Kartik Venkataraman
9,049,381	United States of America	8/13/2014	Systems and Methods for Normalizing Image Data Captured by Camera Arrays	Kartik Venkataraman
9,188,765	United States of America	5/5/2015	Capturing and Processing of Images Including Occlusions Focused on an Image Sensor by a Lens Stack Array	Kartik Venkataraman
8,231,814	United States of America	3/17/2011	Fabrication Process for Mastering Image Lens Arrays	Jacques Duparre

Patent /Application No.	Country/ Jurisdiction	Filing Date (mm-dd-yyyy)	Title of Patent and First Named Inventor	First Named Inventor
13/445,551	United States of America	4/12/2012	Fabrication Process for Mastering Imaging Lens Arrays	Jacques Duparre
117570010	European Patent Office	3/17/2011	Fabrication Process for Mastering Image Lens Arrays	Jacques Duparre
2013500207	Japan	3/17/2011	Fabrication Process for Mastering Image Lens Arrays	Jacques Duparre
1020127027121	Republic of Korea	3/17/2011	Fabrication Process for Mastering Image Lens Arrays	Jacques Duparre
PCT/US11/28835	PCT	3/17/2011	Fabrication Process for Mastering Image Lens Arrays	Jacques Duparre
184118	Singapore	3/17/2011	Fabrication Process for Mastering Image Lens Arrays	Jacques Duparre
13/106,797	United States of America	5/12/2011	Imager Arrays Including an M x N Array of Focal Planes in which Different Types of Focal Planes are Distributed Around a Reference Focal Plane	Bedabrata Pain
2011800312879	China	5/12/2011	Architectures for Imager Arrays and Array Cameras	Bedabrata Pain
117813139	European Patent Office	5/12/2011	Architectures for Imager Arrays and Array Cameras	Bedabrata Pain
2013510321	Japan	11/9/2012	Architectures for Imager Arrays and Array Cameras	Bedabrata Pain
1020127032552	Republic of Korea	5/12/2011	Architectures for Imager Arrays and Array Cameras	Bedabrata Pain
PCT/US11/036349	PCT	5/12/2011	Architectures for Imager Arrays and Array Cameras	Bedabrata Pain
2012082699	Singapore	5/12/2011	Architectures for Imager Arrays and Array Cameras	Bedabrata Pain
10201503516V	Singapore	5/12/2011	Architectures for Imager Arrays and Array Cameras	Bedabrata Pain
8,305,456	United States of America	5/11/2012	Systems and Methods for Transmitting and Receiving Array Camera Image Data	Andrew Kenneth John McMahon
2012800293995	China	5/11/2012	Systems and Methods for Transmitting Array Camera Data	Andrew Kenneth John McMahon
8,692,893	United States of America	11/2/2012	Systems and Methods for Transmitting and Receiving Array Camera Image Data	Andrew Kenneth John McMahon
9,197,821	United States of America	4/7/2014	Systems and Methods for Transmitting and Receiving Array Camera Image Data	Andrew Kenneth John McMahon
127829356	European Patent Office	5/11/2012	Systems and Methods for Transmitting Array Camera Data	Andrew Kenneth John McMahon
2014510522	Japan	5/11/2012	Systems and Methods for Transmitting Array Camera Data	Andrew Kenneth John McMahon
1020137032457	Republic of Korea	5/11/2012	Systems and Methods for Transmitting Array Camera Data	Andrew Kenneth John McMahon
PCT/US2012/037670	PCT	5/11/2012	Systems and Methods for Transmitting Array Camera Data	Andrew Kenneth John McMahon

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8,928,793	United States of America	5/12/2011	Imager Array Interfaces	Andrew Kenneth John McMahon
14/589,263	United States of America	1/5/2015	Imager Array Interfaces	Andrew Kenneth John McMahon
14/880,907	United States of America	10/12/2015	IMAGER ARRAY INTERFACES	Andrew Kenneth John McMahon
8,804,255	United States of America	6/28/2012	Optical Arrangements for Use with an Array Camera	Jacques Duparre
13/832,120	United States of America	3/15/2013	Optical Arrangements for Use with an Array Camera	Jacques Duparre
14/705,919	United States of America	5/6/2015	Array Cameras Incorporating Optics with Modulation Transfer Functions Greater than Sensor Nyquist Frequency for Capture of Images used In Super-Resolution Processing	Jacques Duparre
14/705,925	United States of America	5/6/2015	Array Cameras Incorporating Monolithic Array Camera Modules with High MTF Lens Stacks for Capture of Images Used in Super-Resolution Processing	Jacques Duparre
9,128,228	United States of America	5/19/2014	Optical Arrangements for Use with an Array Camera	Jacques Duparre
14/456,813	United States of America	8/11/2014	Optical Arrangements for Use with an Array Camera	Jacques Duparre
128042660	European Patent Office	6/25/2012	Optical Arrangements for Use with an Array Camera	Jacques Duparre
2014518889	Japan	6/25/2012	Optical Arrangements for Use with an Array Camera	Jacques Duparre
1020137035076	Republic of Korea	6/25/2012	Optical Arrangements for Use with an Array Camera	Jacques Duparre
PCT/US2012/044014	PCT	6/25/2012	Optical Arrangements for Use with an Array Camera	Jacques Duparre
2013093141	Singapore	6/25/2012	Optical Arrangements for Use with an Array Camera	Jacques Duparre
PCT/US2014/28447	PCT	3/14/2014	Optical Arrangements for Use with an Array Camera	Jacques Duparre
13/650,039	United States of America	10/11/2012	Lens Stack Arrays Including Adaptive Optical Elements	Jacques Duparre
2012800575879	China	10/11/2012	Lens Stack Arrays Including Adaptive Optical Elements	Jacques Duparre
14/868,942	United States of America	9/29/2015	Lens Stack Arrays Including Adaptive Optical Elements	Jacques Duparre
128398211	European Patent Office	10/11/2012	Lens Stack Arrays Including Adaptive Optical Elements	Jacques Duparre
2014535886	Japan	10/11/2012	Lens Stack Arrays Including Adaptive Optical Elements	Jacques Duparre
1020147012405	Republic of Korea	10/11/2012	Lens Stack Arrays Including Adaptive Optical Elements	Jacques Duparre
PCT/US12/59813	PCT	10/11/2012	Lens Stack Arrays Including Adaptive Optical Elements	Jacques Duparre

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Patent /Application No.	Country/ Jurisdiction	Filing Date (mm-dd-yyyy)	Title of Patent and First Named Inventor	First Named Inventor
11201401363U	Singapore	10/11/2012	Lens Stack Arrays Including Adaptive Optical Elements	Jacques Duparre
14/102,493	United States of America	12/10/2013	Systems and Methods for Controlling Aliasing in Images Captured by an Array Camera for use in Super Resolution Processing Using Pixel Apertures	Shree Nayar
PCT/US12/56151	PCT	9/19/2012	Systems and Methods for Controlling Aliasing in Images Captured by an Array Camera for use in Super Resolution Processing Using Pixel Apertures	Kartik Venkataraman
13/623,091	United States of America	9/19/2012	Systems and Methods for Determining Depth From Multiple Views of a Scene that Include Aliasing Using Hypothesized Fusion	Kartik Venkataraman
14/933,561	United States of America	11/5/2015	Systems and Methods for Determining Depth From Multiple Views of a Scene that Include Aliasing Using Hypothesized Fusion	Priyam Chatterjee
PCT/US12/56166	PCT	9/19/2012	Systems and Methods for Determining Depth From Multiple Views of a Scene that Include Aliasing Using Hypothesized Fusion	Kartik Venkataraman
61/540,188	United States of America	9/28/2011	JPEG-DX: A Backwards-compatible, Dynamic Focus Extension to JPEG	Kartik Venkataraman
9,129,183	United States of America	9/28/2012	Systems and Methods For Encoding Light Field Image Files	Kartik Venkataraman
14/667,495	United States of America	3/24/2015	Systems and Methods For Encoding Light Field Image Files	Kartik Venkataraman
9,036,928	United States of America	9/4/2014	Systems and Methods for Encoding Structured Light Field Image Files	Kartik Venkataraman
9,031,343	United States of America	10/2/2014	Systems and Methods for Encoding Light Field Image Files Having a Depth Map	Kartik Venkataraman
9,031,335	United States of America	9/9/2014	Systems and Methods for Encoding Light Field Image Files Having Depth and Confidence Maps	Kartik Venkataraman
9,031,342	United States of America	9/9/2014	Systems and Methods For Encoding Refocusable Light Field Image Files	Kartik Venkataraman
14/667,503	United States of America	3/24/2015	Systems and Methods For Encoding Light Field Image Files Having Low Resolution Images	Kartik Venkataraman
2012800557669	China	9/28/2012	Systems and Methods for Encoding and Decoding Light Field Image Files	Kartik Venkataraman
128350410	European Patent Office	9/28/2012	Systems and Methods for Encoding and Decoding Light Field Image Files	Kartik Venkataraman
2708CHENP2014	India	9/28/2012	Systems and Methods for Encoding and Decoding Light Field Image Files	Kartik Venkataraman
2014533435	Japan	9/28/2012	Systems and Methods for Encoding and Decoding Light Field Image Files	Kartik Venkataraman

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Patent /Application No.	Country/ Jurisdiction	Filing Date (mm-dd-yyyy)	Title of Patent and First Named Inventor	First Named Inventor
1020147011449	Republic of Korea	9/28/2012	Systems and Methods for Encoding and Decoding Light Field Image Files	Kartik Venkataraman
PCT/US12/58093	PCT	9/28/2012	Systems and Methods for Encoding and Decoding Light Field Image Files	Kartik Venkataraman
8,542,933	United States of America	9/28/2012	Systems and Methods for Decoding Light Field Image Files	Kartik Venkataraman
8,831,367	United States of America	7/31/2013	Systems and Methods for Decoding Light Field Image Files	Kartik Venkataraman
9,036,931	United States of America	9/4/2014	Systems and Methods for Decoding Structured Light Field Image Files	Kartik Venkataraman
9,042,667	United States of America	10/2/2014	Systems and Methods for Decoding Light Field Image Files Using a Depth Map	Kartik Venkataraman
9,025,894	United States of America	9/9/2014	Systems and Methods for Decoding Light Field Image Files Having Depth Confidence Maps	Kartik Venkataraman
9,025,895	United States of America	9/9/2014	Systems and Methods for Decoding Refocusable Light Field Image Files	Kartik Venkataraman
14/667,492	United States of America	3/24/2015	Systems and Methods for Decoding Light Field Image Files Having Low Resolution Images	Kartik Venkataraman
13/773,284	United States of America	2/21/2013	Systems and Methods for the Manipulation of Captured Light Field Image Data	Andrew Kenneth John McMahon
14/705,914	United States of America	5/6/2015	Systems and Method for Performing Depth Based Image Editing	Andrew Kenneth John McMahon
14/883,121	United States of America	10/14/2015	Systems and Methods for the Manipulation of Captured Light Field Image Data	Andrew Kenneth John McMahon
137517140	European Patent Office	2/21/2013	Systems and Methods for the Manipulation of Captured Light Field Image Data	Andrew Kenneth John McMahon
PCT/US2013/027146	PCT	2/21/2013	Systems and Methods for the Manipulation of Captured Light Field Image Data	Andrew Kenneth John McMahon
14/042,275	United States of America	9/30/2013	Generating Images from Light Fields Utilizing Virtual Viewpoints	Semyon Nisenzon
2013800505495	China	9/30/2013	Generating Images from Light Fields Utilizing Virtual Viewpoints	Ankit K Jain
14/876,024	United States of America	10/6/2015	Generating Images from Light Fields Utilizing Virtual Viewpoints	Semyon Nisenzon
138416136	European Patent Office	9/30/2013	Generating Images from Light Fields Utilizing Virtual Viewpoints	Ankit K Jain
PCT/US13/62720	PCT	9/30/2013	Generating Images from Light Fields Utilizing Virtual Viewpoints	Ankit K Jain
14/028,278	United States of America	9/16/2013	Systems and Methods for Correcting User Identified Artifacts in Light Field Images	Kartik Venkataraman
PCT/US2013/059991	PCT	9/16/2013	Systems and Methods for Correcting User Identified Artifacts in Light Field Images	Kartik Venkataraman

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13/975,159	United States of America	8/23/2013	Feature Based High Resolution Motion Estimation from Low Resolution Images Captured Using an Array Source	Dan Lelescu
201380049828X	China	8/23/2013	Feature Based High Resolution Motion Estimation from Low Resolution Images Captured Using an Array Source	Dan Lelescu
14/933,871	United States of America	11/5/2015	Feature Based High Resolution Motion Estimation from Low Resolution Images Captured Using an Array Source	Dan Lelescu
138317680	European Patent Office	8/23/2013	Feature Based High Resolution Motion Estimation from Low Resolution Images Captured Using an Array Source	Dan Lelescu
1488DELNP2015	India	8/23/2013	Feature Based High Resolution Motion Estimation from Low Resolution Images Captured Using an Array Source	Dan Lelescu
PCT/US2013/056502	PCT	8/23/2013	Feature Based High Resolution Motion Estimation from Low Resolution Images Captured Using an Array Source	Dan Lelescu
13/761,040	United States of America	2/6/2013	Systems and Methods for Extending Dynamic Range of Imager Arrays by Controlling Pixel Analog Gain	Andrew Kenneth John McMahon
PCT/US2013/024987	PCT	2/6/2013	Systems and Methods for Extending Dynamic Range of Imager Arrays by Controlling Pixel Analog Gain	Andrew Kenneth John McMahon
14/204,990	United States of America	3/11/2014	Systems and Methods for Image Data Compression	Andrew Kenneth John McMahon
14/887,845	United States of America	10/20/2015	Systems and Methods for Image Data Compression	Andrew Kenneth John McMahon
9,210,392	United States of America	5/1/2013	Camera Modules Patterned with PI Filter Groups	Semyon Nisenzon
2013800292037	China	5/1/2013	Camera Modules Patterned with pi Filter Groups	Semyon Nisenzon
137852208	European Patent Office	5/1/2013	Camera Modules Patterned with pi Filter Groups	Semyon Nisenzon
2015510443	Japan	5/1/2013	Camera Modules Patterned with pi Filter Groups	Semyon Nisenzon
PCT/US2013/039155	PCT	5/1/2013	Camera Modules Patterned with pi Filter Groups	Semyon Nisenzon
13/782,920	United States of America	3/1/2013	Systems and Methods for Manufacturing Camera Modules Using Active Alignment of Lens Stack Arrays and Sensors	Jacques Duparre

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2013800410955	China	6/14/2013	Systems and Methods for Manufacturing Camera Modules Using Active Alignment of Lens Stack Arrays and Sensors	Jacques Duparre
138104294	European Patent Office	6/14/2013	Systems and Methods for Manufacturing Camera Modules Using Active Alignment of Lens Stack Arrays and Sensors	Jacques Duparre
2015520272	Japan	6/14/2013	Systems and Methods for Manufacturing Camera Modules Using Active Alignment of Lens Stack Arrays and Sensors	Jacques Duparre
1020157002415	Republic of Korea	6/14/2013	Systems and Methods for Manufacturing Camera Modules Using Active Alignment of Lens Stack Arrays and Sensors	Jacques Duparre
PCT/US2013/046002	PCT	6/14/2013	Systems and Methods for Manufacturing Camera Modules Using Active Alignment of Lens Stack Arrays and Sensors	Jacques Duparre
14/195,675	United States of America	3/3/2014	Passive Alignment of Array Camera Modules Constructed from Lens Stack Arrays and Sensors Based Upon Alignment Information Obtained During Manufacture of Array Camera Modules Using an Active Alignment Process	Jacques Duparre
PCT/US2014/025904	PCT	3/13/2014	Systems and Methods for Using Alignment to Increase Sampling Diversity of Cameras in an Array Camera Module	Jacques Duparre
9,143,711	United States of America	11/13/2013	Systems and Methods for Array Camera Focal Plane Control	Andrew Kenneth John McMahon
14/855,715	United States of America	9/16/2015	Systems and Methods for Array Camera Focal Plane Control	Andrew Kenneth John McMahon
PCT/US2013/069932	PCT	11/13/2013	Systems and Methods for Array Camera Focal Plane Control	Andrew Kenneth John McMahon
14/200,629	United States of America	3/7/2014	Systems and Methods for Synthesizing High Resolution Images Using Image Deconvolution Based on Motion and Depth Information	Thang Duong
14/199,977	United States of America	3/6/2014	Systems and Methods for Providing an Array Projector	Jacques Duparre
PCT/US2014/021439	PCT	3/6/2014	Systems and Methods for Providing an Array Projector	Jacques Duparre
9,100,635	United States of America	6/28/2013	Systems and Methods for Detecting Defective Camera Arrays and Optic Arrays	Jacques Duparre
2013800402380	China	6/28/2013	Systems and Methods for Detecting Defective Camera Arrays, Optic Arrays and Sensors	Jacques Duparre

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Patent /Application No.	Country/ Jurisdiction	Filing Date (mm-dd-yyyy)	Title of Patent and First Named Inventor	First Named Inventor
14/805,412	United States of America	7/21/2015	Systems and Methods for Detecting Defective Camera Arrays and Optic Arrays	Jacques Duparre
138102298	European Patent Office	6/28/2013	Systems and Methods for Detecting Defective Camera Arrays, Optic Arrays and Sensors	Jacques Duparre
2015520605	Japan	6/28/2013	Systems and Methods for Detecting Defective Camera Arrays, Optic Arrays and Sensors	Jacques Duparre
1020157002308	Republic of Korea	6/28/2013	Systems and Methods for Detecting Defective Camera Arrays, Optic Arrays and Sensors	Jacques Duparre
PCT/US2013/048772	PCT	6/28/2013	Systems and Methods for Detecting Defective Camera Arrays, Optic Arrays and Sensors	Jacques Duparre
8,619,082	United States of America	8/21/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras that Contain Occlusions using Subsets of Images to Perform Depth Estimation	Florian Ciurea
2013305770	Australia	8/21/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
2881131	Canada	8/21/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
2013800487355	China	8/21/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
8,780,113	United States of America	12/30/2013	Systems and Methods for Performing Depth Estimation using Image Data from Multiple Spectral Channels	Florian Ciurea
9,123,117	United States of America	10/28/2014	Systems and Methods for Generating Depth Maps and Corresponding Confidence Maps Indicating Depth Estimation Reliability	Florian Ciurea
14/329,754	United States of America	7/11/2014	Systems and Methods for Measuring Depth Using an Array of Independently Controllable Cameras	Florian Ciurea
9,123,118	United States of America	10/28/2014	System and Methods for Measuring Depth Using an Array Camera Employing a Bayer Filter	Florian Ciurea
14/526,392	United States of America	10/28/2014	Systems and Methods for Estimating Depth and Visibility from a Reference Viewpoint for Pixels in a Set of Images Captured from Different Viewpoints	Florian Ciurea
9,147,254	United States of America	10/28/2014	Systems and Methods for Measuring Depth in the Presence of Occlusions Using a Subset of Images	Florian Ciurea

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Patent /Application No.	Country/ Jurisdiction	Filing Date (mm-dd-yyyy)	Title of Patent and First Named Inventor	First Named Inventor
9,129,377	United States of America	10/28/2014	Systems and Methods for Measuring Depth Based Upon Occlusion Patterns in Images	Florian Ciurea
138309455	European Patent Office	8/21/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
1020157006433	Republic of Korea	8/21/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
PCT/US13/56065	PCT	8/21/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
PCT/US13/56053	PCT	8/21/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
11201500910R	Singapore	8/21/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
14/186,871	United States of America	2/21/2014	Systems and Methods for Generating Compressed Light Field Representation Data Using Captured Light Fields, Array Geometry, and Parallax Information	Kartik Venkataraman
PCT/US2014/017766	PCT	2/21/2014	Systems and Methods for Generating Compressed Light Field Representation Data Using Captured Light Fields, Array Geometry, and Parallax Information	Kartik Venkataraman
14/188,521	United States of America	2/24/2014	Thin Form Factor Computational Array Cameras and Modular Array cameras	Kartik Venkataraman
14/188,524	United States of America	2/24/2014	Thin Form Factor Computational Array Cameras and Modular Array Cameras	Kartik Venkataraman
PCT/US2014/018084	PCT	2/24/2014	Thin Form Factor Computational Array Cameras and Modular Array Cameras	Kartik Venkataraman
8,866,912	United States of America	3/10/2013	System and Methods for Calibration of an Array Camera Using a Single Captured Image	Robert Mullis
9,124,864	United States of America	10/20/2014	System and Methods for Calibration of an Array Camera	Robert Mullis
14/841,651	United States of America	8/31/2015	System and Methods for Calibration of an Array Camera	Robert Mullis
14/776,509	United States of America	3/11/2014	Array Camera Architecture Implementing Quantum Film Image Sensors	Jacques Duparre
PCT/US2014/023762	PCT	3/11/2014	Array Camera Architecture Implementing Quantum Film Image Sensors	Jacques Duparre

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Patent /Application No.	Country/ Jurisdiction	Filing Date (mm-dd-yyyy)	Title of Patent and First Named Inventor	First Named Inventor
14/441,503	United States of America	5/7/2015	Array Camera Architecture Implementing Quantum Dot Color Filters	Kartik Venkataraman
PCT/US2014/024407	PCT	3/12/2014	Array Camera Architecture Implementing Quantum Dot Color Filters	Kartik Venkataraman
14/776,553	United States of America	3/12/2014	Systems and Methods for Reducing Motion Blur in Images or Video in Ultra Low Light with Array Cameras	Gabriel Molina
PCT/US2014/025100	PCT	3/12/2014	Systems and Methods for Reducing Motion Blur in Images or Video in Ultra Low Light with Array Cameras	Gabriel Molina
14/773,748	United States of America	9/8/2015	Systems and Methods for Measuring Scene Information While Capturing Images Using Array Cameras	Florian Ciurea
PCT/US2014/022118	PCT	3/7/2014	Systems and Methods for Measuring Scene Information While Capturing Images Using Array Cameras	Florian Ciurea
14/773,742	United States of America	9/8/2015	Systems and Methods for High Dynamic Range Imaging Using Array Cameras	Florian Ciurea
PCT/US2014/022123	PCT	3/7/2014	Systems and Methods for High Dynamic Range Imaging Using Array Cameras	Florian Ciurea
14/145,734	United States of America	12/31/2013	Extended Color Processing on Pelican Array Cameras	Robert Mullis
PCT/US2014/018116	PCT	2/24/2014	Extended Color Processing on Pelican Array Cameras	Robert Mullis
14/216,968	United States of America	3/17/2014	Systems and Methods for Stereo Imaging with Camera Arrays	Kartik Venkataraman
14/705,885	United States of America	5/6/2015	Systems and Methods for Estimating Depth Using Stereo Array Cameras	Kartik Venkataraman
14/705,903	United States of America	5/6/2015	Systems and Methods for Estimating Depth using Ad Hoc Stereo Array Cameras	Kartik Venkataraman
147/630,875	European Patent Office	3/17/2014	Systems and Methods for Stereo Imaging with Camera Arrays	Kartik Venkataraman
	Japanese Patent Office	3/17/2014	Systems and Methods for Stereo Imaging with Camera Arrays	Kartik Venkataraman
PCT/US2014/030692	PCT	3/17/2014	Systems and Methods for Stereo Imaging with Camera Arrays	Kartik Venkataraman
14/207,254	United States of America	3/12/2014	Systems and Methods for Synthesizing Images from Image Data Captured by an Array Camera Using Restricted Depth of Field Depth Maps in which Depth Estimation Precision Varies	Kartik Venkataraman

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PCT/US2014/024947	PCT	3/12/2014	Systems and Methods for Synthesizing Images from Image Data Captured by an Array Camera Using Restricted Depth of Field Depth Maps in which Depth Estimation Precision Varies	Kartik Venkataraman
9,124,831	United States of America	3/10/2014	System and Methods for Calibration of an Array Camera	Robert Mullis
14/841,694	United States of America	8/31/2015	System and Methods for Calibration of an Array Camera	Robert Mullis
PCT/US2014/022774	PCT	3/10/2014	System and Methods for Calibration of an Array Camera	Robert Mullis
9,100,586	United States of America	3/14/2014	Systems and Methods for Photmetric Normalization in Array Cameras	Andrew Kenneth John McMahon
14/814,291	United States of America	7/30/2015	Systems and Methods for Photmetric Normalization in Array Cameras	Andrew Kenneth John McMahon
PCT/US2014/029052	PCT	3/14/2014	Systems and Methods for Photmetric Normalization in Array Cameras	Andrew Kenneth John McMahon
9,106,784	United States of America	3/13/2013	Systems and Methods for Controlling Aliasing in Images Captured by an Array Camera for use in Super-Resolution Processing	Dan Lelescu
14/814,297	United States of America	7/30/2015	Systems and Methods for Controlling Aliasing in Images Captured by an Array Camera for use in Super-Resolution Processing	Dan Lelescu
PCT/US2014/024903	PCT	3/12/2014	Systems and Methods for Controlling Aliasing in Images Captured by an Array Camera for use in Super-Resolution Processing	Dan Lelescu
14/555,279	United States of America	11/26/2014	Array Camera Configurations Incorporating Multiple Constituent Array Cameras	Kartik Venkataraman
14/555,368	United States of America	11/26/2014	Array Camera Configurations Incorporating Constituent Array Cameras and Constituent Cameras	Kartik Venkataraman
PCT/US2014/067740	PCT	11/26/2014	Array Camera Configurations Incorporating Multiple Constituent Array Cameras	Kartik Venkataraman
14/500,979	United States of America	9/29/2014	Systems and Methods for Depth-Assisted Perspective Distortion Correction	Samuel Yang
PCT/US2014/058142	PCT	9/29/2014	Systems and Methods for Depth-Assisted Perspective Distortion Correction	Samuel Yang
9,185,276	United States of America	11/7/2014	Methods of Manufacturing Array Camera Modules Incorporating Independently Aligned Lens Stacks	Errol Mark Rodda
14/536,552	United States of America	11/7/2014	Array Camera Modules Incorporating Independently Aligned Lens Stacks	Errol Mark Rodda

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14/536,554	United States of America	11/7/2014	Array Cameras Incorporating Independently Aligned Lens Stacks	Errol Mark Rodda
PCT/US2014/064693	PCT	11/7/2014	Methods of Manufacturing Array Camera Modules Incorporating Independently Aligned Lens Stacks	Errol Mark Rodda
14/547,048	United States of America	11/18/2014	Systems and Methods for Estimating Depth from Projected Texture using Camera Arrays	Kartik Venkataraman
PCT/US2014/066229	PCT	11/18/2014	Systems and Methods for Estimating Depth from Projected Texture using Camera Arrays	Kartik Venkataraman
14/484,154	United States of America	9/11/2014	Systems and Methods for Correcting for Warpage of a Sensor Array in an Array Camera Module by Introducing Warpage into a Focal Plane of a Lens Stack Array	Jacques Duparre
14/642,637	United States of America	3/9/2015	System and Methods for Depth Regularization and Semiautomatic Interactive Matting Using RGB-D Images	Manohar Srikanth
PCT/US2015/019529	PCT	3/9/2015	System and Methods for Depth Regularization and Semiautomatic Interactive Matting Using RGB-D Images	Manohar Srikanth
14/593,369	United States of America	1/9/2015	Array Cameras Including an Array Camera Module Augmented with a Separate Camera	Kartik Venkataraman
14/724,447	United States of America	5/28/2015	Autofocus System for a Conventional Camera That Uses Depth Information from an Array Camera	Kartik Venkataraman
PCT/US2015/032467	PCT	5/26/2015	Autofocus System for a Conventional Camera That Uses Depth Information from an Array Camera	Kartik Venkataraman
14/561,925	United States of America	12/5/2014	Array Cameras and Array Camera Modules Including Spectral Filters Disposed Outside of a Constituent Image Sensor	Errol Mark Rodda
PCT/US2015/053013	PCT	9/29/2015	Systems and Methods for Dynamic Calibration of Array Cameras	Florian Ciurea
14/690,346	United States of America	4/17/2015	Systems and Methods for Performing High Speed Video Capture and Depth Estimation Using Array Cameras	Kartik Venkataraman
PCT/US2015/026545	PCT	4/17/2015	Systems and Methods for Performing High Speed Video Capture and Depth Estimation Using Array Cameras	Kartik Venkataraman
61/281,662	United States of America	11/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heterogeneous Imagers	Kartik Venkataraman
61/263,339	United States of America	11/20/2009	Capturing and Processing of Images Using Monolithic Camera Array with Heterogeneous Imagers	Kartik Venkataraman

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61/314,776	United States of America	3/17/2010	Fabrication Process for Mastering Image Lens Arrays	Jacques Duparre
61/334,011	United States of America	5/12/2010	Architectures for System On Chip Array Cameras	Bedabrata Pain
61/484,920	United States of America	5/11/2011	Systems and Methods for Transmitting Array Camera Data	Andrew Kenneth John McMahon
61/502,158	United States of America	6/28/2011	Optical Arrangements for Use with an Array Camera	Jacques Duparre
61/545,929	United States of America	10/11/2011	Lens Stack Arrays Including Adaptive Optical Elements	Jacques Duparre
61/536,500	United States of America	9/19/2011	Alaising Enhanced Super Resolution Processing Through Use of Pixel Apertures	Kartik Venkataraman
61/540,188	United States of America	9/28/2011	JPEG-DX: A Backwards-compatible, Dynamic Focus Extension to JPEG	Kartik Venkataraman
61/601,413	United States of America	2/21/2012	Method and Apparatus for Manipulation of Light Field Images	Andrew Kenneth John McMahon
61/707,691	United States of America	9/28/2012	Synthesizing Images From Light Fields Utilizing Virtual Viewpoints	Ankit K Jain
61/701,044	United States of America	9/14/2012	Method and Apparatus for Selection, Detection, and Correction of Depth Related Artifacts in Light Field Images	Kartik Venkataraman
61/692,547	United States of America	8/23/2012	Feature Based High Resolution Motion Estimation from Low Resolution Images Captured Using An Array Source	Dan Lelescu
61/595,611	United States of America	2/6/2012	Systems and Methods for Extending Dynamic Range of Imager Arrays by Controlling Pixel Analog Gain	Andrew Kenneth John McMahon
61/776,751	United States of America	3/11/2013	Systems and Methods for Image Data Compression	Andrew Kenneth John McMahon
61/641,165	United States of America	5/1/2012	Camera Modules Patterned with pi Filter Groups	Semyon Nisenzon
61/666,852	United States of America	6/30/2012	Systems and Methods for Manufacturing Camera Modules Using Active Alignment of Lens Stack Arrays and Sensors	Jacques Duparre
61/772,443	United States of America	3/4/2013	Passive Alignment of Array Camera Modules Constructed from Lens Stack Arrays and Sensors Based Upon Alignment Information Obtained During Manufacture of Array Camera Modules Using an Active Alignment Process	Jacques Duparre
61/780,436	United States of America	3/13/2013	Systems and Methods for Using Alignment to Increase Sampling Diversity of Cameras in an Array Camera Module	Jacques Duparre
61/725,934	United States of America	11/13/2012	Systems and Methods for Array Camera Focal Plane Control	Andrew Kenneth John McMahon

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61/772,315	United States of America	3/4/2013	Systems and Methods for Array Camera Focal Plane Control	Andrew Kenneth John McMahon
61/788,078	United States of America	3/15/2013	Systems and Methods for Synthesizing High Resolution Images using Image Deconvolution Based on Motion and Depth Information	Thang Duong
61/801,733	United States of America	3/15/2013	Systems and Methods for Providing ar Array Projector	Jacques Duparre
61/665,724	United States of America	6/28/2012	Systems and Methods for Screening Lenses for use in Array Cameras Based on a Modulation Transfer Function Screening Using an ROI-Based Criterion for the Overall Array	Jacques Duparre
61/691,666	United States of America	8/21/2012	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
61/780,906	United States of America	3/13/2013	Systems and Methods for Parallax Detection and Correction in Images Captured Using Array Cameras	Kartik Venkataraman
61/767,520	United States of America	2/21/2013	Systems and Methods for Generating Captured Light Field Image Data Using Captured Light Fields	Kartik Venkataraman
61/786,976	United States of America	3/15/2013	Systems and Methods for Generating Captured Light Field Image Data Using Captured Light Fields	Kartik Venkataraman
61/768,523	United States of America	2/24/2013	Thin form factor Computational Array Cameras using Non-monolithic Assemblies	Kartik Venkataraman
61/780,479	United States of America	3/13/2013	Array Camera Architecture Implementing Quantum Film Image Sensors	Jacques Duparre
61/786,533	United States of America	3/15/2013	Array Camera Architecture Implementing Quantum Dot Color Filters	Kartik Venkataraman
61/783,441	United States of America	3/14/2013	Systems and Methods for Reducing Motion Blur in Images or Video in Ultra Low Light with Array Cameras	Gabriel Molina
61/775,395	United States of America	3/8/2013	Systems and Methods for Measuring Scene Information While Capturing Images Using Array Cameras	Florian Ciurea
61/786,218	United States of America	3/14/2013	Systems and Methods for High Dynamic Range Imaging Using Array Cameras	Florian Ciurea
61/798,602	United States of America	3/15/2013	Extended Color Processing on Pelican Array Cameras	Robert Mullis
61/798,673	United States of America	3/15/2013	Systems and Methods for Stereo Imaging with Camera Arrays	Kartik Venkataraman

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61/780,974	United States of America	3/13/2013	Systems and Methods for Synthesizing Images from Image Data Captured by an Array Camera Using Depth Maps in Which Depth Estimation Precision and Spatial Resolution Vary	Kartik Venkataraman
61/780,748	United States of America	3/13/2013	Systems and Methods for Calibration of an Array Camera	Robert Mullis
61/785,797	United States of America	3/14/2013	Systems and Methods for Photmetric Normalization in Array Cameras	Andrew Kenneth John McMahon
61/909,308	United States of America	11/26/2013	Stereo Array Configuration for a Zoom Camera	Kartik Venkataraman
61/883,927	United States of America	9/27/2013	Automatic Depth Assisted Face Perspective Correction for Mobile Device Cameras	Samuel Yang
61/901,378	United States of America	11/7/2013	Non-Monolithic 3 x 3 Array Module with Discrete Sensors and Discrete Lenses	Errol Mark Rodda
61/904,947	United States of America	11/15/2013	Array Camera Modules and Methods of Manufacturing Array Camera Modules Incorporating Independently Aligned Lens Stacks	Errol Mark Rodda
61/905,423	United States of America	11/18/2013	Structured Lighting System for Depth Acquisition in Texture-less Regions Using Camera Arrays	Kartik Venkataraman
61/976,335	United States of America	4/7/2014	Sensor Array Warpage compensation by Intentionally Introducing Warpage into the Lens Array	Jacques Duparre
61/949,999	United States of America	3/7/2014	Depth Regularization and Semiautomatic Interactive Matting using RGB-D Images	Manohar Srikanth
62/003,015	United States of America	5/26/2014	Array Camera Augmented with External Image Sensor (Cyclops)	Kartik Venkataraman
62/014,021	United States of America	6/18/2014	Channel-Wise Structured (Organic) Color Filter Array Embedded in Image Sensor Cover Glass	Errol Mark Rodda
62/094,392	United States of America	12/19/2014	Optical Systems for Cameras Incorporating Lens Elements Formed Separately and Subsequently Bonded to Low CTE Substrates	Errol Mark Rodda
62/219,528	United States of America	9/16/2015	Optical Systems for Cameras Incorporating Lens Elements Formed Separately and Subsequently Bonded to Low CTE Substrates	Errol Mark Rodda
62/057,196	United States of America	9/29/2014	Adaptive Geometric Calibration for Array Cameras	Florian Ciurea
62/067,913	United States of America	10/23/2014	Considerations for Implementation of a Fast Focus Function Using a Camera Array for Depth to Augment Conventional Camera	Kartik Venkataraman

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62/072,295	United States of America	10/29/2014	Considerations for Implementation of a Fast Focus Function Using a Camera Array for Depth to Augment Conventional Camera	Kartik Venkataraman
62/106,168	United States of America	1/21/2015	Adaptive Geometric Calibration for Array Cameras	Florian Ciurea
62/106,161	United States of America	1/21/2015	Efficient Methods for Parallax/Depth Estimation for Computation Array Camera's on Mobile Processors	Nageswara Rao Gunupudi
62/149,636	United States of America	4/19/2015	Multi-Baseline Camera Array System Architecture for Depth Augmentation in VR/AR Applications	Kartik Venkataraman
14/943,009	United States of America	11/16/2015	Capturing and Processing of Images Including Occlusions Focused on an Image Sensor by a Lens Stack Array	Kartik Venkataraman
14/936,199	United States of America	11/9/2015	Systems and Methods for Transmitting and Receiving Array Camera Image Data	Andrew Kenneth John McMahon
9,214,013	United States of America	9/16/2013	Systems and Methods for Correcting User Identified Artifacts in Light Field Images	Kartik Venkataraman
14/967,742	United States of America	12/14/2015	Systems and Methods for Correcting User Identified Artifacts in Light Field Images	Kartik Venkataraman
14962943	United States of America	12/8/2015	Systems and Methods for Extending Dynamic Range of Imager Arrays by Controlling Pixel Analog Gain	Andrew Kenneth John McMahon
14/952,195	United States of America	11/25/2015	Camera Modules Patterned with Pi Filter Groups	Semyon Nisenzon
61/054694	United States of America	5/20/2008	Monolithic Integrated Array of Heterogeneous Image Sensors	Kartik Venkataraman