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RECORDATION FORM COVER S

PATENTS ONL) 103568883 —	
To the Director of the U.S. Patents and Trademark Office: Please record the attached documents or the new address(es) below.	
Name of conveying party(ies):	2. Name and address of receiving party(ies)
Yeping Su Hao Pan	Name: Sharp Laboratories of America, Inc.
TIGO F BIT	Internal Address:
Additional name of conveying party(ies) attached? Yes No	
3. Nature of conveyance/Execution Dates(s):	Street Address: 5750 NW Pacific Rim Boulevard
Execution Date(s) July 20, 2009, July 17, 2009 Assignment	City: Camas
☐ Security Agreement ☐ Change of Name ☐ Joint Research Agreement	State: WA
Government Interest Assignment	Country: US Zip: 98607
Executive Order 9424, Confirmatory License Other	Additional Name(s) & address(es) attached? ☐ Yes ☒ No
4. Application or patent number(s):	This document is being filed together with a new application.
A. Patent Application No.(s)	B. Patent No.(s)
A 4.000	Lado T Van Milia
5. Name and address of party to whom correspondence concerning this document should be mailed:	6. Total number of applications and patents involved: 1
Name: Kevin L. Russell	7. Total fee (37 CFR 1.21(h) & 3.41) \$40
Internal Address: Chernoff, Vilhauer, McClung & Stenzel	Authorized to be charged by credit card
	Authorized to be charged to deposit account
Street Address: 601 S.W. Second Ave., Suite 1600	☐ Enclosed
	☐ None required (government interest not affecting title)
City: Portland	
State: OR Zip: 97204	8. Payment Information
Phone Number : 503-227-5631	a. Credit Card Last 4 Numbers 1123 Expiration Date 9/2010
Fax Number: 503-228-4373	b. Deposit Account Number 03-1550
Email Address:	Authorized User Name Chemoff, Vilhauer
9. Signature :	
Signature Kevin L. Russell	Total number of pages including cover

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:

Mail Stop Assignment Recordation Services, Director of the USPTO, P. 97722/2539 46536144 4650515

Name of Person Signing

REEL: 023029 FRAME: 0735

ASSIGNMENT

WHEREAS, the undersigned Yeping SU, a resident of Camas, Washington and Hao PAN, a resident of Camas, Washington, (hereinafter termed "Inventors") have invented certain new and useful improvements in:

"Multi-frame Approach for Image Upscaling"

and have executed a declaration and oath for an application for a United States patent disclosing and identifying the invention:

\boxtimes	Declaration executed on July 17, 2009 by Hao PAN and July 20, 2009 by Yeping SU	
	or	
	Having been previously filed and assigned Serial Number and filing date; and	

WHEREAS Sharp Laboratories of America, Inc., a corporation of the State of Washington, (hereinafter termed "Assignee"), having a place of business at 5750 NW Pacific Rim Boulevard, Camas, Washington 98607, wishes to acquire the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered by said Inventors (all collectively hereinafter termed "said invention"), and in and to any and all patents, certificates of invention and other forms of protection thereon (hereinafter termed "patents") applied for or granted in the United States and/or other countries.

NOW THEREFORE, for good and valuable consideration acknowledged by said Inventors to have been received in full from said Assignee:

1. Said Inventors hereby sell, assign, transfer and convey unto said Assignee, the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply in any and all countries of the world for patents, certificates of inventions or other government grants on said invention, including the right to apply for patents pursuant to the International Convention for the Protection of Industrial Property or pursuant to any other convention, treaty, agreement or understanding; (c) in and to any and all applications filed and any and all patents, certificates of inventions or other governmental grants granted on said invention in the United States or any other country, including each and every application filed and each and every patent granted on any application which is a division, substitution, or continuation of any of said applications; (d) in and to each and every reissue or extension of any of said patents; and (e) in and to each and every patent claim resulting from a reexamination certificate for any and all of said patents.

Assignment - SLA2588

PATENT

REEL: 023029 FRAME: 0736

- 2. Said Inventors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and other countries. Such cooperation by said Inventors shall include prompt production of pertinent facts and documents, giving of testimony, executing of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for complying with any duty of disclosure; (c) for prosecuting any of said applications; (d) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (e) for filing and prosecuting application for reissue of any of said patents; (f) for interference or other priority proceedings involving said invention; and (g) for legal proceedings involving said invention and any applications therefore and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, reexamination proceedings, compulsory licensing proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventors in providing such cooperation shall be paid for by said Assignee.
- 3. The terms and covenants of this Assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventors, said Inventors' heirs, legal representatives and assigns.
- 4. Said Inventors hereby warrant and represent that said Inventors have not entered and will not enter into any assignment, contract. or understanding in conflict with this Assignment.

IN WITNESS WHEREOF, the said Inventors have executed this Assignment on the date given below:

(1)

Yepina St

(Signature)

(2)Hao PAN (Signature)

RECORDED: 07/21/2009

(Date)