PATENT ASSIGNMENT

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SUBMISSION TYPE:		NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT	
CONVEYING PARTY DATA			
		lame	Execution Date
Sharp Laboratories of America, Inc. 09/04/2009			09/04/2009
RECEIVING PARTY DATA			
Name: Sharp Kabushiki Kaisha			
Street Address:	22-22, Nagaike-cho, Abeno-ku, Osaka-shi		
City:	Osaka		
State/Country:	JAPAN		
Postal Code:	545-8522		
PROPERTY NUMBERS Total: 1			
Property Type		Number	
PCT Number: JP085		55154	
PCT Number: JP0855154 CORRESPONDENCE DATA			
Fax Number:	(360)817-8505	5	
Fax Number:		s when the fax attempt is unsuccessful.	
Fax Number: <i>Correspondence will</i> Phone:	<i>be sent via US Mail w</i> 360 834-8754	hen the fax attempt is unsuccessful.	
Fax Number: <i>Correspondence will</i> Phone: Email:	<i>be sent via US Mail w</i> 360 834-8754 dripma@sharg	<i>when the fax attempt is unsuccessful.</i> plabs.com	
Fax Number: <i>Correspondence will</i> Phone: Email: Correspondent Name	<i>be sent via US Mail w</i> 360 834-8754 dripma@sharp e: David C. Ripm	<i>when the fax attempt is unsuccessful.</i> plabs.com a	
Fax Number: <i>Correspondence will</i> Phone: Email: Correspondent Name Address Line 1:	<i>be sent via US Mail</i> w 360 834-8754 dripma@sharp 5750 NW Pac	<i>then the fax attempt is unsuccessful.</i> blabs.com a fic Rim Blvd.	
Fax Number: <i>Correspondence will</i> Phone: Email: Correspondent Name	<i>be sent via US Mail</i> w 360 834-8754 dripma@sharp 5750 NW Pac	<i>when the fax attempt is unsuccessful.</i> plabs.com a	
Fax Number: <i>Correspondence will</i> Phone: Email: Correspondent Name Address Line 1:	<i>be sent via US Mail w</i> 360 834-8754 dripma@sharp 5750 NW Paci Camas, WAS	<i>then the fax attempt is unsuccessful.</i> blabs.com a fic Rim Blvd.	
Fax Number: <i>Correspondence will</i> Phone: Email: Correspondent Name Address Line 1: Address Line 4:	<i>be sent via US Mail w</i> 360 834-8754 dripma@sharp 5750 NW Paci Camas, WASH	<i>when the fax attempt is unsuccessful.</i> plabs.com a fic Rim Blvd. HINGTON 98607	

CORPORATE-TO-CORPORATE ASSIGNMENT

WHEREAS, Sharp Laboratories of America, Inc. (hereinafter "SLA"), a corporation of the State of Washington, having a place of business at 5750 NW Pacific Rim Boulevard, Camas, Washington 98607, is, by an assignment document recorded in the assignment records of the United States Patent and Trademark Office (hereinafter "USPTO"), at Reel / Frame: 019020 / 0923 (hereinafter "said inventor first assignment to SLA"), the record owner of an invention entitled:

SYSTEMS AND METHODS FOR IMPROVING REFERENCE SIGNALS FOR SPATIALLY MULTIPLEXED CELLULAR SYSTEMS

invented by John M. Kowalski (hereinafter "said first invention"), including a US patent application filed by SLA on March 14, 2007, serial no. 11/686,251, pertaining thereto (hereinafter "the first US application");

WHEREAS, SLA, is, by an assignment document recorded in the assignment records of the USPTO, at Reel / Frame: 020043 / 0283 (hereinafter "said inventor second assignment to SLA"), the record owner of an invention entitled:

SYSTEMS AND METHODS FOR GENERATING SEQUENCES THAT ARE NEAREST TO A SET OF SEQUENCES WITH MINIMUM AVERAGE CROSS-CORRELATION

invented by John M. Kowalski (hereinafter "said second invention"), including a US patent application filed by SLA on October 30, 2007, serial no. 11/928,092, pertaining thereto (hereinafter "the second US application");

WHEREAS, Sharp Kabushiki Kaisha (hereinafter "Sharp"), a Japanese Corporation, having an address at 22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka, 545-8522, Japan, is the parent company and owner of SLA;

WHEREAS, Sharp filed, in the Japanese Patent Office, on March 13, 2008, a PCT application, in the name of Sharp, namely

Application No. PCT/JP2008/055154

(hereinafter "said PCT application") which pertains to said first invention and said second invention; said PCT application having a title corresponding to the title of the second US application and claiming priority to the first US application and the second US application; and

WHEREAS, Sharp is interested in recording its ownership of said PCT application in the assignment records of the USPTO, and wishes to make one or more national stage filings of said PCT application in the United States and other countries, and may wish to file additional patent applications in the United States and other countries claiming priority to said PCT application;

PATENT REEL: 023198 FRAME: 0713

NOW THEREFORE, for good and valuable consideration acknowledged by SLA to have been received in full from Sharp:

- 1. SLA hereby sells, assigns, transfers and conveys unto Sharp all rights of ownership in and to said PCT application, including all national stage filings of said PCT application, and all applications for patents, certificates of invention or other government grants on said invention which result from or claim priority to said PCT application, and any patents, certificates of invention or other government grants issuing therefrom. This assignment is retroactive to the filing date of the first US application.
- 2. This Assignment does not transfer ownership of any other rights conveyed to SLA by said inventor first assignment to SLA and by said inventor second assignment to SLA. In particular, SLA retains all rights in and to the first US application and the second US application, and any continuations, divisionals, and continuationsin-part thereof which SLA may file in the USPTO, and any US patents issuing therefrom.
- SLA hereby covenants and agrees to cooperate with Sharp to enjoy 3. to the fullest extent the right, title and interest herein conveyed.

The terms and covenants of this Assignment shall inure to the benefit of Sharp, its successors, assigns and other legal representatives, and shall be binding upon SLA. its successors, assigns and other legal representatives.

The undersigned is authorized to act on behalf of SLA.

Sharp Laboratories of America, Inc. <

Dated: September 4, 2009

David C. Ripma, Registration No. 27.67 Patent Counsel

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