### PATENT ASSIGNMENT

# Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE: **NEW ASSIGNMENT** NATURE OF CONVEYANCE: SECURITY AGREEMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
OMNIGUIDE, INC.	08/24/2012

### **RECEIVING PARTY DATA**

Name:	ROS ACQUISITION OFFSHORE LP					
Street Address:	c/o Orbimed Advisors LLC					
Internal Address:	01 Lexington Avenue, 54th Floor					
City:	New York					
State/Country:	NEW YORK					
Postal Code:	10022					

#### PROPERTY NUMBERS Total: 22

Property Type	Number
Application Number:	13165262
Application Number:	11366345
Application Number:	13515787
Patent Number:	6625364
Patent Number:	7072553
Patent Number:	6563981
Patent Number:	6728439
Patent Number:	6879386
Patent Number:	6816243
Patent Number:	6895154
Patent Number:	6801698
Patent Number:	6898359
Patent Number:	7142756
Patent Number:	7190875
	DATENT

Patent Number:	6788864
Patent Number:	7854149
Patent Number:	7231122
Patent Number:	7310466
Patent Number:	7167622
Patent Number:	7331954
Patent Number:	7991258
Patent Number:	7349589

#### **CORRESPONDENCE DATA**

Fax Number: 2125646083 Phone: 212(947)-7200

Email: jdougherty@nationalcorp.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Correspondent Name: Joseph Dougherty

Address Line 1: National Corporate Research
Address Line 2: 10 E. 40th Street, 10th FL
Address Line 4: New York, NEW YORK 10016

ATTORNEY DOCKET NUMBER:	N356089
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NAME OF SUBMITTER: | Jonathan R. Larson

#### Total Attachments: 10

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### PATENT SECURITY AGREEMENT

This PATENT SECURITY AGREEMENT, dated as of August 24, 2012 (this <u>Agreement</u>"), is made by OmniGuide, Inc., a Delaware corporation (the "<u>Grantor</u>"), in favor of ROS Acquisition Offshore LP, a Cayman Islands exempted limited partnership (together with its successors, transferees or assignees, the "<u>Secured Party</u>").

#### WITNESSETH:

WHEREAS, pursuant to a Credit Agreement, dated as of August 24, 2012 (as amended, supplemented or otherwise modified from time to time, the "<u>Credit Agreement</u>"), by and between the Borrower and the Secured Party, the Secured Party has extended the Commitment to make Loans to the Borrower;

WHEREAS, in connection with the Credit Agreement, the Grantor has executed and delivered a Pledge and Security Agreement, dated as of August 24, 2012 (as amended, supplemented or otherwise modified from time to time, the "Security Agreement");

WHEREAS, pursuant to the Credit Agreement and pursuant to clause (d) of Section 4.5 of the Security Agreement, the Grantor is required to execute and deliver this Agreement and to grant to the Secured Party a continuing security interest in all of the Patent Collateral (as defined below) to secure all Obligations; and

WHEREAS, the Grantor has duly authorized the execution, delivery and performance of this Agreement; and

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor agrees, for the benefit of the Secured Party, as follows:

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- SECTION 1. <u>Definitions</u>. Unless otherwise defined herein or the context otherwise requires, terms used in this Agreement, including its preamble and recitals, have the meanings provided in the Security Agreement.
- SECTION 2. <u>Grant of Security Interest</u>. The Grantor hereby assigns, pledges, hypothecates, charges, mortgages, delivers, and transfers to the Secured Party, and hereby grants to the Secured Party, a continuing security interest in all of the following property, whether now or hereafter existing or acquired by the Grantor (the "<u>Patent Collateral</u>"):
- (a) all of its letters patent and applications for letters patent throughout the world, including each patent and patent application referred to in <u>Item A</u> of <u>Schedule I</u>;
- (b) all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the items described in <u>clause (a)</u>;
- (c) all of its patent licenses, and other agreements providing the Grantor with the right to use any items of the type referred to in <u>clauses (a)</u> and <u>(b)</u> above, including each patent license referred to in <u>Item B</u> of <u>Schedule I</u>; and
- (d) all Proceeds of, and rights associated with, the foregoing (including license royalties and Proceeds of infringement suits), the right to sue third parties for past, present or future infringements of any patent or patent application, and for breach or enforcement of any patent license.
- SECTION 3. Security Agreement. This Agreement has been executed and delivered by the Grantor for the purpose of registering the security interest of the Secured Party in the Patent Collateral with the United States Patent and Trademark Office and corresponding offices in other countries of the world. The security interest granted hereby has been granted as a supplement to, and not in limitation of, the security interest granted to the Secured Party under the Security Agreement. The Security Agreement (and all rights and remedies of the Secured Party thereunder) shall remain in full force and effect in accordance with its terms.
- SECTION 4. Release of Liens. Upon (i) the Disposition of Patent Collateral in accordance with the Credit Agreement or (ii) the occurrence of the Termination Date, the security interests granted herein shall automatically terminate with respect to (A) such Patent Collateral (in the case of clause (i)) or (B) all Patent Collateral (in the case of clause (ii)). Upon any such Disposition or termination, the Secured Party will, at the Grantor's sole expense, deliver to the Grantor, without any representations, warranties or recourse of any kind whatsoever, all Patent Collateral held by the Secured Party hereunder, and execute and deliver to the Grantor such Documents as the Grantor shall reasonably request to evidence such termination.
- SECTION 5. <u>Acknowledgment</u>. 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 Security Agreement, the terms and provisions of which (including the remedies provided for therein) are incorporated by reference herein as if fully set forth herein.

SECTION 6. Loan Document. This Agreement is a Loan Document executed pursuant to the Credit Agreement and shall (unless otherwise expressly indicated herein) be construed, administered and applied in accordance with the terms and provisions thereof, including Article X thereof.

SECTION 7. Counterparts. This Agreement may be executed by the parties hereto in several counterparts, each of which shall be deemed to be an original and all of which shall constitute together but one and the same agreement.

3

IN WITNESS WHEREOF, each of the parties here to has caused this Agreement to be duly executed and delivered by its Authorized Officer as of the date first above written.

OMNIGUIDE, INC.

Name

Name: Scott Flora

Title: President

ROS ACQUISITION OFFSHORE LP By ROS Acquisition Offshore GP Ltd., its General Partner By OrbiMed Advisors, LLC, its investment manager

By:\_\_\_\_

Name: Samuel D. Isaly Title: Managing Member IN WITNESS WHEREOF, each of the parties here to has caused this Agreement to be duly executed and delivered by its Authorized Officer as of the date first above written.

OMNIGUIDE, INC.

Ву	*	 ***************************************	
•	Name:		
•	Title:		

ROS ACQUISITION OFFSHORE LP By ROS Acquisition Offshore GP Ltd., its General Partner By OrbiMed Advisors, LLC, its investment manager

Name: Samuel D. Isaly
Title: Managing Member

Signature Page to Patent Security Agreement

# Item A Patents

# **Issued Patents**

Country	Patent No.	Issue Date	Inventor(s)	<u>Title</u>
USA	6625364	9/23/2003	Steven G. Johnson	LOW-LOSS PHOTONIC CRYSTAL
			Mihai Ibanescu	WAVEGUIDE HAVING LARGE CORE
			Ori Weisberg	RADIUS
			Yoel Fink	
			John D. Joannopoulos	
			Maksim Skorobogatiy	
			Torkel Engeness	
			Marin Soljacic	
			Steven A. Jacobs	
USA	7072553	7/4/2006	Steven G. Johnson	LOW-LOSS PHOTONIC CRYSTAL
			Mihai Ibanescu	WAVEGUIDE HAVING LARGE CORE
			Ori Weisberg	RADIUS
			Yoel Fink	
			John D. Joannopoulos	
			Maksim Skorobogatiy	
			Torkel Engeness	
			Marin Soljacic	
			Steven A. Jacobs	
USA	6563981	5/13/2003	Ori Weisberg	ELECTROMAGNETIC MODE
			Steven G. Johnson	CONVERSION IN PHOTONIC
			John D. Joannopoulos	CRYSTAL MULTIMODE
			Michael Shapiro	WAVEGUIDES
			Yoel Fink	
			Mihai Ibanescu	
USA	6728439	4/27/2004	Ori Weisberg	ELECTROMAGNETIC MODE
			Steven G. Johnson	CONVERSION IN PHOTONIC
			John D. Joannopoulos	CRYSTAL MULTIMODE
			Michael Shapiro	WAVEGUIDES
			Yoel Fink	
			Mihai Ibanescu	
USA	6879386	4/12/2005	Max Shurgalin	OPTICAL WAVEGUIDE
			Yoel Fink	MONITORING
			Steven G. Johnson	
			Mihai Ibanescu	
USA	6816243	11/9/2004	Max Shurgalin	OPTICAL WAVEGUIDE
			Yoel Fink	MONITORING
			Steven G. Johnson	
			Mihai Ibanescu	
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Country	Patent No.	Issue Date	Inventor(s)	<u>Title</u>
USA	6895154	5/17/2005	Steven G. Johnson	PHOTONIC CRYSTAL OPTICAL
			Mihai Ibanescu	WAVEGUIDES HAVING TAILORED
			Ori Weisberg	DISPERSION PROFILES
			Yoel Fink	
			John D. Joannopoulos	
			Maksim Skorobogatiy	
			Torkel Engeness	
			Marin Soljacic	
			Steven A. Jacobs	
TICA	(001/00	10/5/2004		HIGH INDEX CONTRACT FIRED
USA	6801698	10/5/2004	Wesley A. King	HIGH INDEX-CONTRAST FIBER
			Emilia Anderson	WAVEGUIDES AND APPLICATIONS
			Marin Soljacic	
			Mihai Ibanescu	
			Torkel Engeness	
			Maksim Skorobogatiy	
			Steven G. Johnson	
			Ori Weisberg	
			Yoel Fink	
			Rokan Ahmad	
			Lori Pressman	
USA	6898359	5/24/2005	Marin Soljacic	HIGH INDEX-CONTRAST FIBER
		0,2,,2000	Mihai Ibanescu	WAVEGUIDES AND APPLICATIONS
			Torkel Engeness	With Eddine Edition of
			Maksim Skorobogatiy	
			Steven G. Johnson	
			Ori Weisberg	
			Yoel Fink	
			Rokan Ahmad	
			Lori Pressman	
			Wesley A. King	
			Emilia Anderson	
			John D. Joannopoulos	
USA	7142756	11/28/2006	Emilia Anderson	HIGH INDEX-CONTRAST FIBER
			Wesley A. King	WAVEGUIDES AND APPLICATIONS
			Yoel Fink	
			Lori Pressman	
USA	7190875	3/13/2007	Emilia Anderson	HIGH INDEX-CONTRAST FIBER
			Wesley A. King	WAVEGUIDES AND APPLICATIONS
			Yoel Fink	
			Lori Pressman	
USA	6788864	9/7/2004	Rokan Ahmad	HIGH INDEX-CONTRAST FIBER
USA	0700004	31112004		WAVEGUIDES AND APPLICATIONS
	1		Marin Soljacic	WAVEGUIDES AND APPLICATIONS
	1		Mihai Ibanescu	
			Torkel Engeness	
			Maksim Skorobogatiy	
			Steven G. Johnson	
			Ori Weisberg	
			Yoel Fink	
			Lori Pressman	
			Wesley A. King	
			Emilia Anderson	
	1		John D. Joannopoulos	
USA	7854149	12/21/2010	Vladimir Fuflyigin	DIELECTRIC WAVEGUIDE AND
		12.21.2010		METHOD OF MAKING THE SAME
				METHOD OF MAKING THE SAME

Country	Patent No.	Issue Date	Inventor(s)	<u>Title</u>
USA	7231122	6/12/2007	Ori Weisberg	PHOTONIC CRYSTAL WAVEGUIDES
			Steven A. Jacobs	AND SYSTEMS USING SUCH
			Maksim Skorobogatiy	WAVEGUIDES
			Steven G. Johnson	
		12110120	Uri Kolodny	
USA	7310466	12/18/2007	Yoel Fink	PHOTONIC CRYSTAL WAVEGUIDES
			Vladimir Fuflyigin	AND SYSTEMS USING SUCH
			Rokan Ahmad	WAVEGUIDES
			Emilia Anderson	
			Barry Farnsworth Yelena Kahn	
			Aaron Micetich	
			Peter Prideaux	
			Uri Kolodny	
USA	7167622	1/23/2007	Burak Temelkuran	PHOTONIC CRYSTAL FIBERS AND
COIL	7107022	1/23/2007	Charalambos	MEDICAL SYSTEMS INCLUDING
			Anastassiou	PHOTONIC CRYSTAL FIBERS
			David Torres	
			Gil Shapira	
			Max Shurgalin	
			Gregor Dellamann	
			Ori Weisberg	
			Steven A. Jacobs	
			Tairan Wang	
			Uri Kolodny	
			Robert Payne	
TIGA	7221051	2/10/2000	Yoel Fink	DIAGRANIA CONTACTAL EXPERIENCE AND
USA	7331954	2/19/2008	Burak Temelkuran	PHOTONIC CRYSTAL FIBERS AND
			Charalambos Anastassiou	MEDICAL SYSTEMS INCLUDING PHOTONIC CRYSTAL FIBERS
			David Torres	PHOTONIC CRISTAL FIBERS
			Gil Shapira	
			Max Shurgalin	
			Gregor Dellamann	
			Ori Weisberg	
			Steven A. Jacobs	
			Tairan Wang	
			Uri Kolodny	
			Jesse Rusk	
			Robert Payne	
			Yoel Fink	
USA	7991258	8/2/2011	Burak Temelkuran	PHOTONIC CRYSTAL FIBERS AND
			Charalambos	MEDICAL SYSTEMS INCLUDING
			Anastassiou	PHOTONIC CRYSTAL FIBERS
			David Torres	
			Gil Shapira	
			Max Shurgalin Gregor Dellamann	
			Ori Weisberg	
			Steven A. Jacobs	
			Tairan Wang	
			Uri Kolodny	
			Jesse Rusk	
			Robert Payne	
	1	ı	Yoel Fink	

Country	Patent No.	Issue Date	Inventor(s)	<u>Title</u>
USA	7349589	3/25/2008	Burak Temelkuran	PHOTONIC CRYSTAL FIBERS AND
			Charalambos	MEDICAL SYSTEMS INCLUDING
			Anastassiou	PHOTONIC CRYSTAL FIBERS
			David Torres	
			Gil Shapira	
			Max Shurgalin	
			Gregor Dellamann	
			Ori Weisberg	
			Steven A. Jacobs	
			Tairan Wang	
			Uri Kolodny	
			Robert Payne	
			Yoel Fink	
			Gokhan Ulu	
China	ZL02804094.5	8/9/2006	Steven G. Johnson	LOW-LOSS PHOTONIC CRYSTAL
			Mihai Ibanescu	WAVEGUIDE HAVING LARGE CORE
			Ori Weisberg	RADIUS
			Yoel Fink	
			John D. Joannopoulos	
			Maksim Skorobogatiy	
			Torkel Engeness	
			Marin Soljacic	
			Steven A. Jacobs	

## **Pending Patent Applications**

Country	Application No.	Filing Date	Inventor(s)	Title
USA	13/165262	6/21/2011	Burak Temelkuran	PHOTONIC CRYSTAL FIBERS
			Charalambos Anastassiou	AND MEDICAL SYSTEMS
			David Torres	INCLUDING PHOTONIC
			Gil Shapira	CRYSTAL FIBERS
			Max Shurgalin	
			Gregor Dellamann	
			Ori Weisberg	
			Steven A. Jacobs	
			Tairan Wang	
			Uri Kolodny	
			Jesse Rusk	
			Robert Payne	
			Yoel Fink	
USA	11/366345	3/2/2006	James Goell	PHOTONIC CRYSTAL FIBERS
			Marin Soljacic	AND MEDICAL SYSTEMS
			Steven A. Jacobs	INCLUDING PHOTONIC
			Tairan Wang	CRYSTAL FIBERS
			Gokhan Ulu	
			Burak Temelkuran	
			Steven G. Johnson	

Country	Application No.	Filing Date	Inventor(s)	Title
USA	13/515787	6/13/2012	Max Shurgalin	TWO-PART SURGICAL
			Vladimir Fuflyigin	WAVEGUIDE
			Douglas Woodruff	
			Mihai Ibanescu	
			Lori Pressman	
			Charalambos Anastassiou	
			Soura Bhattacharyya	
			Yoel Fink	

## Item B Patent Licenses

Licensor	Licensee	Issue Date	Expiration Date	Patent No.
MITT	O	11/12/2007	7/14/2024	7 205 724
				7,295,734
				7,567,740
				7,805,029
				6,130,780
				6,903,873
		8/26/1999		2320257
	OmniGuide	1/19/2005		1057072
MIT	OmniGuide	1/19/2005	2/19/2019	1057072
MIT	OmniGuide	1/19/2005	2/19/2019	1057072
MIT	OmniGuide	6/2/2005	2/19/2019	3654836
MIT	OmniGuide	10/8/2002	10/14/2019	6,463,200
MIT	OmniGuide	8/5/2003	10/14/2019	6,603,911
MIT	OmniGuide	2/14/2007	10/14/2019	2346733
MIT	OmniGuide	8/17/2005	10/14/2019	1121614
MIT	OmniGuide	8/17/2005	10/14/2019	1121614
MIT	OmniGuide	8/17/2005	10/14/2019	1121614
MIT	OmniGuide	4/27/2005	10/14/2019	3643774
MIT	OmniGuide	12/25/2007	7/16/2022	7,311,962
MIT	OmniGuide	11/5/2008	7/16/2022	1579984
MIT	OmniGuide	11/5/2008	7/16/2022	1579984
MIT	OmniGuide	11/5/2008	7/16/2022	1579984
MIT	OmniGuide	11/5/2008	7/16/2022	4808376
MIT	OmniGuide	9/18/2007	7/16/2022	7,272,285
	OmniGuide	8/8/1995	1/13/2014	5440664
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	OmniGuide	10/22/1996	8/8/2015	5567471
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	MIT	MIT OmniGuide NIT OmniGuide	MIT         OmniGuide         11/13/2007           MIT         OmniGuide         7/28/2009           MIT         OmniGuide         9/28/2010           MIT         OmniGuide         10/10/2000           MIT         OmniGuide         6/7/2005           MIT         OmniGuide         1/19/2005           MIT         OmniGuide         1/19/2005           MIT         OmniGuide         1/19/2005           MIT         OmniGuide         6/2/2005           MIT         OmniGuide         6/2/2005           MIT         OmniGuide         8/5/2003           MIT         OmniGuide         8/5/2003           MIT         OmniGuide         8/17/2005           MIT         OmniGuide         8/17/2005           MIT         OmniGuide         8/17/2005           MIT         OmniGuide         8/17/2005           MIT         OmniGuide         11/5/2008           MIT         OmniGuide         11/5/2008           MIT         OmniGuide         11/5/2008           MIT         OmniGuide         11/5/2008           MIT         OmniGuide         9/18/2007           Rutgers, The         OmniGuide	MIT         OmniGuide         11/13/2007         7/14/2024           MIT         OmniGuide         7/28/2009         7/14/2024           MIT         OmniGuide         9/28/2010         7/14/2024           MIT         OmniGuide         10/10/2000         2/19/2019           MIT         OmniGuide         6/7/2005         2/19/2019           MIT         OmniGuide         8/26/1999         2/19/2019           MIT         OmniGuide         1/19/2005         2/19/2019           MIT         OmniGuide         1/19/2005         2/19/2019           MIT         OmniGuide         1/19/2005         2/19/2019           MIT         OmniGuide         1/19/2005         2/19/2019           MIT         OmniGuide         6/2/2005         2/19/2019           MIT         OmniGuide         10/8/2002         10/14/2019           MIT         OmniGuide         8/5/2003         10/14/2019           MIT         OmniGuide         8/17/2005         10/14/2019           MIT         OmniGuide         8/17/2005         10/14/2019           MIT         OmniGuide         8/17/2005         10/14/2019           MIT         OmniGuide         8/17/2005         10/14/20

PATENT REEL: 028841 FRAME: 0127

**RECORDED: 08/24/2012**