502640963 01/17/2014

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2687571

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date	
ANDREY B. MATSKO	09/17/2013	
ANATOLIY SAVCHENKOV	09/17/2013	
DAVID SEIDEL	09/18/2013	
LUTE MALEKI	09/17/2013	
VLADIMIR ILCHENKO	09/18/2013	

RECEIVING PARTY DATA

Name:	OEWAVES, INC.
Street Address:	465 N. HALSTEAD STREET
Internal Address:	SUITE 140
City:	PASADENA
State/Country:	CALIFORNIA
Postal Code:	91107

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13902929

CORRESPONDENCE DATA

 Fax Number:
 (858)720-5819

 Phone:
 858-720-5700

Email: share@perkinscoie.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: BING AI

Address Line 1: PERKINS COIE LLP
Address Line 2: PO BOX 1247

Address Line 4: SEATTLE, WASHINGTON 98111-1247

ATTORNEY DOCKET NUMBER: 009067-8054.US02

PATENT

502640963 REEL: 031994 FRAME: 0969

NAME OF SUBMITTER:	BING AI
Signature:	/Bing Ai/
Date:	01/17/2014
Total Attachments: 15 source=Declaration-Assignments#page1.tif source=Declaration-Assignments#page2.tif source=Declaration-Assignments#page3.tif source=Declaration-Assignments#page4.tif source=Declaration-Assignments#page5.tif source=Declaration-Assignments#page6.tif source=Declaration-Assignments#page7.tif source=Declaration-Assignments#page8.tif source=Declaration-Assignments#page9.tif source=Declaration-Assignments#page10.tif source=Declaration-Assignments#page11.tif source=Declaration-Assignments#page12.tif source=Declaration-Assignments#page13.tif source=Declaration-Assignments#page13.tif source=Declaration-Assignments#page14.tif source=Declaration-Assignments#page15.tif source=Declaration-Assignments#page15.tif	f f f

Docket No.: 009067-8054.US02

Confirmation No.: 9729

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Andrey B. Matsko et al.

Application No.: 13/902,929

Filed: May 27, 2013

For: WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY INVENTOR UNDER RULE 37 CFR §1.63 EFFECTIVE ON STEPTEMBER 16, 2012

- I, David Seidel of Alta Loma, California, hereby declare that:
- 1. I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

the specification of which was filed at the U.S. Patent and Trademark Office on May 27, 2013, as Application Serial No. 13/902,929.

2. I believe the following persons are additional original joint inventors of the above-identified patent application:

Andrey B. Matsko of Pasadena, California;

Anatoliy Savchenkov of Glendale, California;

Lute Maleki of Pasadena, California; and

Vladimir Ilchenko of Arcadia, California.

09067-8054.US02/LEGAL27588879.1

Serial No.: 13/902,929 Filed: May 27, 2013

Page : 2 of 3

3. I made, authorized to make, or will make or authorize to make the above-identified patent application at the U.S. Patent and Trademark Office.

- 4. I have reviewed and understand the contents of the above-identified patent application including the claims.
- 5. I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.
- 6. I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

7. ASSIGNMENT

I hereby assign to **OEwaves**, **Inc.**, a corporation of Delaware, having a place of business at 465 N. Halstead Street, Suite 140, Pasadena, California, 91107 and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent, entitled **WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS**, filed May 27, 2013, and assigned U.S. Serial Number 13/902,929.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

Serial No.: 13/902,929 Filed: May 27, 2013

Page: 3 of 3

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

- 8. I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to **OEwaves**, Inc. as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns.
- 9. I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor:	David Seidel
Inventor's signature:	
Date: <u> </u>	8/2013

Perkins Coie LLP P.O. Box 1247

Seattle, Washington 98111-1247

Telephone: (858) 720-5700 Facsimile: (206) 359-7198

Docket No.: 009067-8054.US02

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Andrey B. Matsko et al.

Application No.: 13/902,929

Confirmation No.: 9729

Filed: May 27, 2013

For: WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY INVENTOR UNDER RULE 37 CFR §1.63 EFFECTIVE ON STEPTEMBER 16, 2012

- I, Vladimir Ilchenko of Arcadia, California, hereby declare that:
- 1. I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

the specification of which was filed at the U.S. Patent and Trademark Office on May 27, 2013, as Application Serial No. 13/902,929.

2. I believe the following persons are additional original joint inventors of the above-identified patent application:

Andrey B. Matsko of Pasadena, California; Anatoliy Savchenkov of Glendale, California; David Seidel of Alta Loma, California; and Lute Maleki of Pasadena, California.

09067-8054.US02/LEGAL27588879.1

Serial No.: 13/902,929 Filed: May 27, 2013

Page: 2 of 3

3. I made, authorized to make, or will make or authorize to make the above-identified patent application at the U.S. Patent and Trademark Office.

- 4. I have reviewed and understand the contents of the above-identified patent application including the claims.
- 5. I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.
- 6. I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

7. ASSIGNMENT

I hereby assign to **OEwaves**, **Inc.**, a corporation of Delaware, having a place of business at 465 N. Halstead Street, Suite 140, Pasadena, California, 91107 and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent, entitled **WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS**, filed May 27, 2013, and assigned U.S. Serial Number **13/902,929**.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

Serial No.: 13/902,929 Filed: May 27, 2013

Page: 3 of 3

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

- 8. I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to **OEwaves**, **Inc.** as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns.
- 9. I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor:	Vladimir Ilchenko
Inventor's signature:	br
Date:	9/18/2013

Perkins Coie LLP P.O. Box 1247

Seattle, Washington 98111-1247

Telephone: (858) 720-5700 Facsimile: (206) 359-7198

Docket No.: 009067-8054.US02

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Andrey B. Matsko et al.

Application No.: 13/902,929

Confirmation No.: 9729

Filed: May 27, 2013

For: WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY INVENTOR UNDER RULE 37 CFR §1.63 EFFECTIVE ON STEPTEMBER 16, 2012

- I, Andrey B. Matsko of Pasadena, California, hereby declare that:
- 1. I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

the specification of which was filed at the U.S. Patent and Trademark Office on May 27, 2013, as Application Serial No. 13/902,929.

2. I believe the following persons are additional original joint inventors of the above-identified patent application:

Anatoliy Savchenkov of Glendale, California:

David Seidel of Alta Loma, California;

Lute Maleki of Pasadena, California; and

Vladimir Ilchenko of Arcadia, California.

Serial No.: 13/902,929 Filed: May 27, 2013

Page : 2 of 3

3. I made, authorized to make, or will make or authorize to make the above-identified patent application at the U.S. Patent and Trademark Office.

- 4. I have reviewed and understand the contents of the above-identified patent application including the claims.
- 5. I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.
- 6. I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

7. ASSIGNMENT

I hereby assign to **OEwaves**, **Inc.**, a corporation of Delaware, having a place of business at 465 N. Halstead Street, Suite 140, Pasadena, California, 91107 and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent, entitled **WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS**, filed May 27, 2013, and assigned U.S. Serial Number 13/902,929.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

Serial No.: 13/902,929 Filed: May 27, 2013

Page : 3 of 3

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

- 8. I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to **OEwaves**, **Inc.** as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns.
- 9. I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor: Andrey B. Matsko	
Inventor's signature: AB Matsko	
Date: September 17, 2013	

Perkins Cole LLP P.O. Box 1247 Seattle, Washington 98111-1247

Telephone: (858) 720-5700 Facsimile: (206) 359-7198

Docket No.: 009067-8054,US02

(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Andrey B. Matsko et al.

Application No.: 13/902,929 Confirmation No.: 9729

Filed: May 27, 2013

For: WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY INVENTOR UNDER RULE 37 CFR §1.63 EFFECTIVE ON STEPTEMBER 16, 2012

- I, Anatoliy Savchenkov of Glendale, California, hereby declare that;
- 1. I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

the specification of which was filed at the U.S. Patent and Trademark Office on May 27, 2013, as Application Serial No. 13/902,929.

2. I believe the following persons are additional original joint inventors of the above-identified patent application:

Andrey B. Matsko of Pasadena, California;

David Seidel of Alta Loma, California;

Lute Maleki of Pasadena, California; and

Vladimir Ilchenko of Arcadia, California.

Serial No.: 13/902,929 Filed: May 27, 2013

Page : 2 of 3

3. I made, authorized to make, or will make or authorize to make the above-identified patent application at the U.S. Patent and Trademark Office.

- 4. I have reviewed and understand the contents of the above-identified patent application including the claims.
- 5. I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.
- 6. I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

7. ASSIGNMENT

I hereby assign to **OEwaves**, **Inc.**, a corporation of Delaware, having a place of business at 465 N. Halstead Street, Suite 140, Pasadena, California, 91107 and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent, entitled *WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS*, filed May 27, 2013, and assigned U.S. Serial Number **13/902,929**.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

Serial No.: 13/902,929 Filed: May 27, 2013

Page : 3 of 3

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

- 8. I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to **OEwaves**, **Inc.** as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns.
- 9. I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor:	Anatoliy Savchenkov
Inventor's signature:	<u> </u>
Date: 17 Sen 20	13

Perkins Coie LLP P.O. Box 1247 Seattle, Washington 98111-1247

Telephone: (858) 720-5700 Facsimile: (206) 359-7198

Docket No.: 009067-8054.US02 (PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Andrey B. Matsko et al.

Application No.: 13/902,929

Confirmation No.: 9729

Filed: May 27, 2013

For: WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

DECLARATION AND ASSIGNMENT BY INVENTOR UNDER RULE 37 CFR §1.63 EFFECTIVE ON STEPTEMBER 16, 2012

- I, Lute Maleki of Pasadena, California, hereby declare that:
- 1. I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS

the specification of which was filed at the U.S. Patent and Trademark Office on May 27, 2013, as Application Serial No. 13/902,929.

2. I believe the following persons are additional original joint inventors of the above-identified patent application:

Andrey B. Matsko of Pasadena, California;

Anatoliy Savchenkov of Glendale, California;

David Seidel of Alta Loma, California; and

Vladimir Ilchenko of Arcadia, California.

09067-8054-US02/LEGAL27588879.1

Docket No.: 009067-8054.US02 Inventor : Andrey B. Matsko et al.

Serial No.: 13/902,929 Filed : May 27, 2013 Page : 2 of 3

3. I made, authorized to make, or will make or authorize to make the above-identified patent application at the U.S. Patent and Trademark Office.

- 4. I have reviewed and understand the contents of the above-identified patent application including the claims.
- 5. I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.
- 6. I hereby acknowledge that any willful false statement made in the above declaration is punishable under 18 USC §1001 by fine or imprisonment of not more than five (5) years, or both.

7. ASSIGNMENT

I hereby assign to OEwaves, Inc., a corporation of Delaware, having a place of business at 465 N. Halstead Street, Suite 140, Pasadena, California, 91107 and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent, entitled WIDE-BAND RF PHOTONIC RECEIVERS AND OTHER DEVICES USING TWO OPTICAL MODES OF DIFFERENT QUALITY FACTORS, filed May 27, 2013, and assigned U.S. Serial Number 13/902,929.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

Inventor: Andrey B. Matsko et al.

Serial No.: 13/902.929 Filed : May 27, 2013

Page : 3 of 3

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

- 8. I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to OEwaves, Inc. as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns.
- 9. I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor:	Lute Maleki	1.	1 /		
Inventor's signature:	1	$/\!\!/\!\!\!/\!\!\!\!/$	/4//	*	~~~
Date:	9/17/	13_			

Perkins Coie LLP P.O. Box 1247

Seattle, Washington 98111-1247

Telephone: (858) 720-5700 Facsimile: (206) 359-7198

PATENT REEL: 031994 FRAME: 0985

Docket No.: 009067-8054.US02

RECORDED: 01/17/2014