

07-15-2002



OFFICE OF THE COMMISSIONER OF PATENTS AND TRADEMARKS

102154324

Form PTO-1595 (Rev. 03/01)

RECORDATION FORM COVER SHEET

U.S. DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office

OMB No. 0051-0027 exp. 5/31/2002

PATENTS ONLY

Tab settings

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Network Photonics, Inc.

07/10/02

2. Name and address of receiving party(ies)

Name: Venture Lending & Leasing III, Inc., as Agent

Internal Address: _____

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance:

- Assignment
- Security Agreement
- Other _____
- Merger
- Change of Name

Street Address: 2010 North First Street

City: San Jose State: CA Zip: 95131

Execution Date: 6/3/02

Additional name(s) & address(es) attached? Yes No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

60/363,724 10/087,040 09/954,662
10/093,844 10/118,070 10/099,392
10/098,805 10/095,794

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Russell D. Pollock, Esq.

Internal Address: _____

Street Address: Greene Radovsky Maloney & Share

Four Embarcadero Center, Suite 4000

City: San Francisco State: CA Zip: 94111

6. Total number of applications and patents involved: 12

7. Total fee (37 CFR 3.41).....\$ 480.00

- Enclosed
- Authorized to be charged to deposit account

8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Russell D. Pollock
Name of Person Signing

Signature

July 3, 2002
Date

Total number of pages including cover sheet, attachments, and documents: 134

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

07/12/2002 TBIAZ1 00000165 60363724

01 FC:581

480.00 DP

PATENT
REEL: 013069 FRAME: 0764

4. Application numbers continued

10/093,843

10/150,810

10/126,189

10/147,181

INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement (this "Agreement") is made as of June 3, 2002, by and between NETWORK PHOTONICS, INC., a Delaware corporation ("Grantor"), and VENTURE LENDING & LEASING III, INC., as Agent ("Secured Party") for certain lenders as hereinafter described ("Lenders").

RECITALS

A. Pursuant to a Loan Agreement of even date herewith (the "Loan Agreement") among Grantor, as borrower, and Secured Party and Lenders, Lenders have agreed to make certain advances of money and to extend certain financial accommodations to Grantor (the "Loans") in the amounts and manner set forth in the Loan Agreement. All capitalized terms used herein without definition shall have the meanings ascribed to them in the Loan Agreement.

B. Lenders are willing to make the Loans to Grantor, but only upon the condition, among others, that Grantor shall grant to Secured Party, for the ratable benefit of Lenders, a security interest in substantially all of Grantor's personal property whether presently existing or hereafter acquired. To that end, Grantor has executed in favor of Secured Party the Loan Agreement granting a security interest in all Collateral, and is executing this Agreement with respect to certain items of Intellectual Property, in particular.

NOW, THEREFORE, THE PARTIES HERETO AGREE AS FOLLOWS:

1. Grant of Security Interest. As collateral security for the prompt and complete payment and performance of all of Grantor's present or future Obligations, Grantor hereby grants a security interest and mortgage to Secured Party, as security, in and to Grantor's entire right, title and interest in, to and under the following Intellectual Property, now owned or hereafter acquired by Grantor or in which Grantor now holds or hereafter acquires any interest (all of which shall collectively be called the "Collateral" for purposes of this Agreement):

(a) Any and all copyrights, whether registered or unregistered, held pursuant to the laws of the United States, any State thereof or of any other country; all registrations, applications and recordings in the United States Copyright Office or in any similar office or agency of the United States, and State thereof or any other country; all continuations, renewals, or extensions thereof; and any registrations to be issued under any pending applications, including without limitation those set forth on Exhibit A attached hereto (collectively, the "Copyrights");

(b) All letters patent of, or rights corresponding thereto in, the United States or any other country, all registrations and recordings thereof, and all applications for letters patent of, or rights corresponding thereto in, the United States or any other country, including, without limitation, registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country; all reissues, continuations, continuations-in-part or extensions thereof; all petty patents, divisionals, and patents of addition; and all patents to be issued under any such applications, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the "Patents");

(c) All trademarks, trade names, corporate names, business names, trade styles, service marks, logos, other source or business identifiers, prints and labels on which any of the foregoing have appeared or appear, designs and general intangibles of like nature, now existing or hereafter adopted or acquired, all registrations and recordings thereof, and any applications in connection therewith, including, without limitation, registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country or any political subdivision thereof, and reissues, extensions or renewals thereof, and the entire goodwill of the business of Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the "Trademarks");

(d) Any and all claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(e) All licenses or other rights to use any of the Copyrights, Patents or Trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(f) All amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents; and

(g) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

Notwithstanding the foregoing the term "Collateral" shall not include: (a) "intent-to-use" trademarks at all times prior to the first use thereof, whether by the actual use thereof in commerce, the recording of a statement of use with the United States Patent and Trademark Office or otherwise or (b) any License, contract, instrument or chattel paper or the property subject to any such License or contract in which Grantor has any right, title or interest if and to the extent such License, contract, instrument or chattel paper includes a provision containing a restriction on assignment such that the creation of a security interest in the right, title or interest of Grantor therein or the property subject thereto would be prohibited and would, in and of itself, cause or result in a default thereunder enabling another person party to such License, contract, instrument or chattel paper to enforce any remedy with respect thereto; provided, however, that the foregoing exclusion shall not apply if (i) such prohibition has been waived or such other person has otherwise consented to the creation hereunder of a security interest in such License, contract, instrument or chattel paper, or (ii) such prohibition would be rendered ineffective pursuant to Sections 9-406(d), 9-407(a) or 9-408(a) of the UCC, as applicable and as then in effect in any relevant jurisdiction, or any other applicable law (including the Bankruptcy Code) or principles of equity); provided further that immediately upon the ineffectiveness, lapse or termination of any such provision, the term "Collateral" shall include, and Grantor shall be deemed to have granted a security interest in, all its rights, title and interests in and to such contract, instrument or chattel paper as if such provision had never been in effect; and provided further that the foregoing exclusion shall in no way be construed so as to limit, impair or otherwise affect Secured Party's unconditional continuing security interest in and to all rights, title and interests of Grantor in or to any payment obligations or other rights to receive monies due or to become due under any such contract, instrument or chattel paper and in any such monies and other proceeds of such contract, instrument or chattel paper.

2. Covenants and Warranties. Grantor represents, warrants, covenants and agrees as follows:

(a) To the best of its knowledge, Grantor is now the sole owner of the Collateral, except for non-exclusive licenses granted by Grantor to its customers in the ordinary course of business;

(b) During the term of this Agreement, Grantor will not transfer or otherwise encumber any interest in the Collateral, except for non-exclusive licenses granted by Grantor in the ordinary course of business or as set forth in this Agreement;

(c) To its knowledge, each of the Patents is valid and enforceable, and no part of the Collateral has been judged invalid or unenforceable, in whole or in part, and no claim has been made that any part of the Collateral violates the rights of any third party;

(d) Grantor shall deliver to Secured Party within thirty (30) days of the last day of each fiscal quarter, a report signed by Grantor, in form reasonably acceptable to Secured Party, listing any applications or registrations that Grantor has made or filed in respect of any patents, copyrights or trademarks and the status of any outstanding applications or registrations. Grantor shall promptly advise Secured Party of any material change in the composition of the Collateral that is a Copyright, Trademark or Patent, including but not limited to any subsequent ownership right of the Grantor in or to any Trademark, Patent or Copyright not specified in this Agreement. Upon Secured Party's receipt of the foregoing report, Grantor authorizes Secured Party to modify, in its sole discretion, this Agreement without first obtaining Grantor's approval of or signature to such modification by amending Exhibits A, B and C, hereof, as

appropriate, to include reference to any right, title or interest in any Copyrights, Patents or Trademarks acquired by Grantor after the execution hereof or to delete any reference to any right, title or interest in any Copyrights, Patents or Trademarks in which Grantor no longer has or claims any right, title or interest.

(e) Grantor shall in its sole but reasonable commercial judgment (i) protect, defend and maintain the validity and enforceability of the Trademarks, Patents and Copyrights (ii) promptly advise Secured Party in writing of material infringements of the Trademarks, Patents and Copyrights and (iii) not allow any Trademarks, Patents or Copyrights to be abandoned, forfeited or dedicated to the public without the written consent of Lenders, which consent shall not be unreasonably withheld;

(f) Grantor shall apply for registration (to the extent not already registered) with the United States Patent and Trademark Office or the United States Copyright Office, as applicable: (i) those intellectual property rights listed on Exhibits A, B and C hereto within sixty (60) days of the date of this Agreement; and (ii) those additional intellectual property rights developed or acquired by Grantor from time to time in connection with any product or service, prior to the sale or licensing of such product or the rendering of such service to any third party (including without limitation revisions or additions to the intellectual property rights listed on such Exhibits A, B and C), except with respect to such rights that Grantor determines in its sole but reasonable commercial judgment need not be registered to protect its own business interests. Grantor shall, from time to time, execute and file such other instruments, and take such further actions as Secured Party may reasonably request from time to time to perfect or continue the perfection of Secured Party's interest in the Collateral. Grantor shall give Secured Party notice of all such applications or registrations;

(g) Grantor shall not enter into any agreement that would materially impair or conflict with Grantor's obligations hereunder without Lenders' prior written consent, which consent shall not be unreasonably withheld. Grantor shall not permit the inclusion in any material contract to which it becomes a party of any provisions that could or might in any way prevent the creation of a security interest in Grantor's rights and interests in any property included within the definition of the Collateral acquired under such contracts; and

3. Further Assurances. On a continuing basis, Grantor will make, execute, acknowledge and deliver, and file and record in the proper filing and recording places in the United States, all such instruments, including appropriate financing and continuation statements and collateral agreements and filings with the United States Patent and Trademark Office and the Register of Copyrights, and take all such action as may reasonably be deemed necessary or advisable, or as requested by Secured Party, to perfect Secured Party's security interest in all Copyrights, Patents and Trademarks and otherwise to carry out the intent and purposes of this Agreement, or for assuring and confirming to Secured Party the grant or perfection of a security interest in all Collateral.

4. Events of Default. The occurrence of any of the following shall constitute an Event of Default under this Agreement:

(a) An Event of Default under the Loan Agreement; or

(b) Grantor materially breaches any warranty or agreement made by Grantor in this Agreement and, as to any breach that is capable of cure, Grantor fails to cure such breach within thirty (30) days of Grantor's discovery of such breach or within 30 days after given notice of such breach by Secured Party, whichever is earlier.

5. Amendments. This Agreement may be amended only by a written instrument signed by both parties hereto, except for amendments permitted under Section 3 hereof to be made by Secured Party alone.

6. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute the same instrument.

7. Termination; Release of Collateral. Upon the payment in full of the Obligations and if the Lenders have no further obligations under their Commitment, the security interest granted hereby shall terminate and all rights to the Collateral shall revert to Borrower. Upon such termination, Secured Party shall, at the request of Grantor and at Grantor's expense, execute and deliver to Grantor a proper instrument or instruments (including Uniform Commercial Code termination statements and documents suitable for recordation in the United States

Patent and Trademark Office, the United States Copyright Office, and similar domestic and foreign authorities) acknowledging the satisfaction and termination of this Agreement, and shall duly assign, transfer and deliver to Grantor such of the Collateral as may be in the possession the Secured Party and has not theretofore been sold or otherwise applied or released pursuant to this Agreement.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first above written.

GRANTOR:

Address of Grantor:

NETWORK PHOTONICS, INC.

4775 Walnut Street
Boulder, Colorado 80301
Attn: Chief Financial Officer

By: Merle McCree
Its: VP Finance & Administration

SECURED PARTY:

Address of Secured Party:

VENTURE LENDING & LEASING III, INC., as Agent
for Lenders

2010 North First Street, Suite 310
San Jose, CA 95131
Attn: President

By: _____
Its: _____

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first above written.

GRANTOR:

Address of Grantor:

NETWORK PHOTONICS, INC.

4775 Walnut Street
Boulder, Colorado 80301
Attn: Chief Financial Officer

By: _____

Its: _____

SECURED PARTY:

Address of Secured Party:

VENTURE LENDING & LEASING III, INC., as Agent
for Lenders

2010 North First Street, Suite 310
San Jose, CA 95131
Attn: President

By:  _____

Name: Ronald W. Swenson
Its: CEO

Network Photonics Patent Status

<u>Name</u>	<u>Patent Application</u>	<u>Application #</u>	<u>Filing Date</u>	<u>Patent Attny.</u>
Weverka, Robert T. Roth, Richard S.	Wavelength Router	09/442,061 19930-000100	11/16/99	D. Slone
Georgis, Steven P. Weverka, Robert T.	Wavelength Monitor for WDM Systems	09/551,256 19930-000200	4/18/00	D. Slone
Weaver, Samuel P. Weverka, Robert T. Roth, Richard S.	Linear Optical Beam Translator for Optical Routing	09/658,158 19930-000500	9/8/00	P. Boucher
Anderson, Robert	Binary Switch for An Optical Wavelength Router	09/745,760 19930-000600	12/20/00	P. Boucher
Anderson, Robert	1X2 Optical Wavelength Router	09/745,459 19930-000700	12/20/00	P. Boucher
Anderson, Robert Weaver, Samuel	Wavelength Router with Staggered Input/Output Fibers	09/747,064 19930-000800	12/20/00	P. Boucher
Fabiny, Larry Sarto, Tony	Diffraction Grating with Reduced Polarization-Dependent Loss	09/615,300 19930-000900	7/13/00 (Notice of Allowance)	P. Boucher

7/3/2002

- 1 -

<u>Name</u>	<u>Patent Application</u>	<u>Application #</u>	<u>Filing Date</u>	<u>Patent Attny.</u>
Muller, Lilac Arnett, Kenn Fabiny, Larry Pister, Kristofer	Grating Fabrication Process Using Combined Crystalline-Dependent and Crystalline-Independent Etching (<i>Continuation-in-Part</i>)	09/669,758 19930-000910	9/26/00	P. Boucher
Fabiny, Larry	Diffraction Grating with Reduced Polarization-Dependent Loss	09/748,687 19930-000920	12/21/00	P. Boucher
Fabiny, Larry	Reduction of Polarization-Dependent Loss From Grating Used in Double-Pass Configuration	09/706,489 19930-001000	11/3/00	P. Boucher
Fabiny, Larry	Reduction of Polarization-Dependent Loss From Grating Used in Double-Pass Configuration (<i>Continuation-in-Part</i>)	10/076,182 19930-001010	2/12/02	P. Boucher
Silveira, Paulo Sarto, Tony Fabiny, Larry Voitel, Marko	Reduction of Polarization-Dependent Loss in Double-Pass Configurations	19930-001020	6/12/02	P. Boucher
Weaver, Samuel	Variable Wavelength Attenuator for Spectral Grooming Using Micromirror Routing	60/363,724 19930-001100	Provisional App. 3/11/02	P. Boucher
Weaver, Samuel Cahill, Raymond	Focal Length Dispersion Compensation For Field Curvature	09/782,882 19930-001200	2/13/01	P. Boucher

7/3/2002

<u>Name</u>	<u>Patent Application</u>	<u>Application #</u>	<u>Filing Date</u>	<u>Patent Attny.</u>
Wendland, R.G. Jr.	Athermalization of a Wavelength Routing Element	6,381,387 19930-001300	Patent Issued 4/30/02	D. Gibby
Michalicek, Adrian	Hidden Flexure Ultra Planar Routing Element	09/859,069 19930-001400	5/15/01	R. Barrett
Wendland, Ronald	Folded Flexure Optical Routing Element	19930-002000	6/3/02	R. Barrett
Muller, Lilac Staple, Bevan	A Method to Reduce Release Time of Micromachined Devices	60/252,784 19930-002200	Provisional App. 11/22/00	P. Boucher
Muller, Lilac Staple, Bevan	A Method to Reduce Release Time of Micromachined Devices	09/837,362 19930-002210	4/18/01	P. Boucher
Staple, Bevan Miller, David Muller, Lilac	Method for Reducing Leaching in Metal-Coated MEMS	09/799,916 19930-002300	3/5/01	P. Boucher
Anderson, David	Optical Surface-Mount Lens Cell	09/899,013 19930-002400	7/3/01	P. Boucher
Staple, Bevan Roth, Richard	MEMS-Based Noncontacting Free-Space Optical Switch	09/899,002 19930-002500	7/3/01	P. Boucher
Buzzetta, Victor Staple, Bevan Marinelli, David	Free-Space Optical Wavelength Routing Element Based on Stepwise Controlled Tilting Mirrors	09/899,000 19930-002600	7/3/01	P. Boucher
Buzzetta, Victor	Two-Dimensional Free-Space Optical Wavelength Routing Element Based on Stepwise Controlled Tilting Mirrors	09/899,001 19930-002700	7/3/01	P. Boucher

7/3/2002

<u>Name</u>	<u>Patent Application</u>	<u>Application #</u>	<u>Filing Date</u>	<u>Patent Attny.</u>
Miller, David Muller, Lilac Anderson, Bob	Systems and Methods for Overcoming Stiction	10/087,040 19930-002800	2/28/02	D. Hamilton
Anderson, David	Methods and Apparatus for Providing A Multi-Stop Micromirror	09/899,014 19930-003000	7/3/01	D. Hamilton
Staple, Bevan Anderson, David Muller, Lilac	Systems and Methods for Overcoming Stiction Using a Lever	09/898,988 19930-003100	7/3/01	D. Hamilton
Muller, Lilac	Bistable Micromirror with Contactless Stops	09/899,004 19930-003200	7/3/01	P. Boucher
Anderson, Bob Staple, Bevan Roth, Richard	Micromirror Array Having Adjustable Mirror Angles	09/880,230 19930-003500	6/12/01	P. Boucher
Wahler, Ronald Bortolini, Edward	Dual Wave Optical Shared Protection Ring	09/954,662 19930-003600	9/12/01	P. Boucher
Roberts, Joseph	MEMS Die Holder	09/941,325 19930-004000	8/28/01	P. Boucher
Copeland, Kent	Multimirror Stack for Vertical Integration of MEMS Devices in Two-Position Retroreflectors	09/941,998 19930-004400	8/28/01 (Notice of Allowance)	P. Boucher

7/3/2002

<u>Name</u>	<u>Patent Application</u>	<u>Application #</u>	<u>Filing Date</u>	<u>Patent Attny.</u>
Bortolini, Ed Barthel, Dirk Weverka, Ted Iraschko, Rainer Morley, George	Optical Wavelength Cross Connect Architectures Using Wavelength Routing Elements	10/093,844 19930-004500	3/08/02	P. Boucher
Fabiny, Larry	Wavelength Routing Element with Transmission Diffraction Grating	09/992,087 19930-005500	11/12/01	P. Boucher
Fabiny, Larry Arnett, Kenneth	High-Efficiency Low-Polarization-Dependent- Loss Lamellar Diffraction-Grating Profile and Production Process	09/992,849 19930-005600	11/12/01	P. Boucher
Iraschko, Rainer MacGregor, Michael Morley, George Stamatelakis, Demetrius Whaler, Ronald	Survivable Ring Transmission System With Multiple Protection Classes	10/118,070 19930-005700	4/5/02	P. Boucher
Cizek, Nicholas Weaver, Samuel	One-To-M Wavelength Routing Element	10/099,392 19930-005800	3/13/02	P. Boucher
Cizek, Nicholas	Two-By-Two Optical Routing Element Using Two Position MEMS Mirrors	10/098,805 19930-005900	3/13/02	G. Branch
Staple, Bevan Anderson, Robert	Methods for Affirming Switched Status of MEMS-Based Devices	10/080,789 19930-006100	2/21/02	P. Boucher

7/3/2002

<u>Name</u>	<u>Patent Application</u>	<u>Application #</u>	<u>Filing Date</u>	<u>Patent Attny.</u>
Alaimo, Chris Bortolini, Edward DeFrancesco, Marc Honea, Keith Marinelli, David Mechels, Steve Rice, James Weverka, Robert T. Wood, Christopher Kaliski, Bob Kiruluta, Andrew	Tunable DWDM Demultiplexer	10/095,794 19930-007300	3/11/02	P. Boucher
Bortolini, Ed	Methods for Performing In-Service Upgrades of Optical Wavelength Cross Connects	10/093,843 19930-007500	3/8/02	P. Boucher
Bortolini, Ed Barthel, Dirk Weverka, Ted Weaver, Samuel Silveira, Paulo	Bidirectional Wavelength Cross Connect Architectures Using Wavelength Routing Elements	10/150,810 19930-007900	5/17/02	G. Branch
Alaimo, Chris Barthel, Dirk Morley, George David Bortolini, Ed Urie, Richard	Multi-City DWDM Wavelength Link Architectures and Methods for Upgrading	10/126,189 19930-008000	4/19/02	P. Boucher
Weverka, Ted Bortolini, Edward Urie, Richard Clark, Phillip	Variable-Density Optical Cross-Connect Architectures with Upgrades	10/147,181 19930-008200	5/15/02	P. Boucher

7/3/2002

GREENE RADOVSKY MALONEY & SHARE LLP

ATTORNEYS AT LAW

A LIMITED LIABILITY PARTNERSHIP

FOUR EMBARCADERO CENTER

SUITE 4000

SAN FRANCISCO, CA 94111-4100

TELEPHONE: (415) 981-1400

FACSIMILE: (415) 777-4961

E-MAIL:

mrhoads@grmslaw.com

July 5, 2002

VIA CERTIFIED MAIL

RETURN RECEIPT REQUESTED

ITEM NO. 7000 0520 0016 9423 8746

Commissioner for Patents and Trademarks
Box Assignments
Washington, D.C. 20231

Re: Venture Lending & Leasing III, Inc.:
Assignments of Security Interest
in Patents & Trademarks of Network Photonics, Inc.

Dear Sir or Madam:

Enclosed please find Recordation Form Cover Sheets and related enclosures to record a security interest in patents of Network Photonics, Inc. in favor of Venture Lending & Leasing III, Inc., as Agent, along with checks to cover the filing fees.

If there are any questions or comments, please do not hesitate to contact me.

Very truly yours,



Mary V. Rhoads
Legal Assistant

MVR/jk

Enclosures

cc: Ms. Debbie Hernandez (w/enc.)
Russell D. Pollock, Esq. (w/out enc.)
Lara S. Krpata, Esq. (w/out enc.)

43251/0838
7/5/02/MVR/230130.1

RECORDED: 07/10/2002

PATENT
REEL: 013069 FRAME: 0778